

# NEOF 2020-2026 Bibliography

## NEOF BIBLIOGRAPHY 2020 onwards

This is the list of refereed articles and theses supported by NEOF and by the Liverpool and Sheffield nodes of the NERC Biomolecular Analysis Facility (the predecessor to NEOF) since 2020. You can also access these publications via [NEOF Web of Science](#) page.

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Please note that the list of publications for **2026** will be completed in March **2027**.

### 2026

#### Refereed articles

1. Chen Y, Burke A, Chriscoli V, Yang M, Chang P, Li T, Zhang B, Goodacre R, Liu L-N (2026) Reprogramme the E. coli metabolism by engineering a functional carbon-fixation pathway. *Journal of Biological Engineering* **20**, 21. (10.1186/s13036-025-00612-x)
2. Dawson Pell FSE, Senar JC, Ortega-Segalerva A, Burke T, Hatchwell BJ (2026) Variable social organization and breeding system of a social parrot revealed by genetic analysis. *Ibis*. (10.1111/ibi.13457)
3. Hobson K, Sutherland C, Navarro Waggerhauser C *et al* (2026) Both forest cover and land management practices explain variation in recovering pine marten densities. *Wildlife Biology*. (10.1002/wlb3.01594)
4. Hoelzel AR, Garza JC, Clemento A, Gkafas GA, Steeds N, Gaither M, Peachment H, Regnier T, Gibb F (2026) Balancing selection maintains intraspecific diversity in a deep-sea fish. *Heredity* **135**, 13-22. (10.1038/s41437-025-00813-6)
5. Jackson JA, Begon M, Bradley JE, Friberg IM, Hyde S, Wanelik KM, Paterson S (2026) Exogenous amdoparvoviruses (Parvoviridae) in arvicoline voles: the molecular evolution and ecology of a novel host-viral association. *PLoS pathogens* **22**, e1013896. (10.1371/journal.ppat.1013896)
6. Jemmett AM, Ewen J, Adiya Yadamsuren A *et al* (2026) Challenges of introgression in conservation: non-invasive sampling and surveillance of genetic diversity of in-situ and ex-situ populations of the Critically Endangered Wild Camel in Mongolia. *Authorea*. (10.22541/au.175952334.41341868/v1) (in press)
7. Kosmopoulos JC, Pallier W, Malik AA *et al* (2026) Ecosystem health shapes viral ecology in peatland soils. *Nature Microbiology* **11**, 142–154. (10.1038/s41564-025-02199-x)
8. Lee C, Worsley SF, Davies CS, Komdeur J, Hildebrand F, Dugdale HL, Richardson DS (2026) Host immunogenetic variation and gut microbiome functionality in a wild vertebrate population. *Microbiome*. (10.21203/rs.3.rs-6790233/v1)(Accepted)
9. Nichols S, Estandía A, Young CM, Knowles LS, Palinauskas V, Okamura B, Clegg SM (2026) Host whole genome sequence data represent an untapped resource for characterising affiliated parasite diversity. *International Journal for Parasitology*, 104768. (10.1016/j.ijpara.2025.104768)
10. Nnorom M-A, Du B, Wang Z, Tian Z, Hough R, Avery L, Saroj D, Guo B (2026) Dynamics of the microbiome and antibiotic resistance in hyper-mesophilic anaerobic digestion of cattle manure assisted with granular activated carbon. *ACS Environmental Au*. (10.1021/acsenvironau.5c00239)
11. Pham N, Duploux A, See J *et al* (2026) A high-quality draft genome assembly of the Neotropical butterfly, *Batesia hypochlora* (Nymphalidae: Biblidinae). *BMC Genomics* **27**, 31. (10.1186/s12864-025-12394-z)
12. Price PD, Pepper J, Rogers TF, Wright AE, Slate J (2026) Molecular evolution of a sex-linked inversion polymorphism in zebra finches, *Genome Biology and Evolution* evag056. (10.1093/gbe/evag056)

13. Whiting-Fawcett F, Field KA, Bartonička T, Laine VN, Pikula J, Repke ME, Talmage S, Turner G, Zukal J, Paterson S, Lilley TM (2026) Bat species tolerant and susceptible to fungal infection show transcriptomic differences in late hibernation and healing. *J Exp Biol* **229**, jeb250903. (10.1242/jeb.250903)

## Theses

1. Granweiler J (2026) PhD Thesis (University of Manchester) Ecological flexibility in giraffes (*Giraffa giraffa*): assessing coping strategies to landscape heterogeneity, human disturbance, and food seasonality through behavioural and physiological data. (1759)
2. Hirons-Alecrim GW (2026) PhD Thesis (University of Sheffield) *Genomic and transcriptomic bases of nutrient uptake in facultative and obligate ant-plant symbioses*. (1417)
3. Lawan I (2026) PhD thesis (Heriot-Watt University) Ecotoxicity of Polycyclic Aromatic Hydrocarbons in the Circumtropical Marine Amphipod *Parhyale hawaiiensis*. (1757)
4. Scott M (2026) PhD thesis (University of Aberdeen) The role of transposable elements in driving evolution and adaptation in the deep sea. (1601)

**2025**

## Refereed articles

1. Aase-Remedios ME, Leite DJ, Janssen R, McGregor AP (2025) Assessing the Impact of Whole Genome Duplication on Gene Expression and Regulation During Arachnid Development. *Genome Biology and Evolution* **17**, evaf238. (10.1093/gbe/evaf238)
2. Akhmetkaliyeva S, Dean AP, Clarke LJ, Cook SJ, Ruiz Lopez S, Sparkes RB (2025) Past and present bacterial communities in deglaciating northern latitude catchments reveal varied soil carbon sequestration potential. *Science of The Total Environment* **969**, 178723. (10.1016/j.scitotenv.2025.178723)
3. Albery GF, Becker DJ, Firth JA *et al* (2025) Density-dependent network structuring within and across wild animal systems. *Nat Ecol Evol* **9**, 2002–2013. (10.1038/s41559-025-02843-z)
4. Barrett NJ, Burke A, Goodacre R, Peck LS (2025) Micromolecular adaptations in Antarctic echinoderms: Overlapping roles of organic osmolytes in osmoregulation and protein stability under low temperature. *Science of The Total Environment* **988**, 179820. (10.1016/j.scitotenv.2025.179820)
5. Bell AG, Vaughan ER, Kasprzyk-Hordern B *et al* (2025) Impacts of environmentally relevant concentrations of antibiotic cocktails on the skin microbiome of Eurasian carp (*Cyprinus carpio*). *Animal Microbiome* **7**, 73. (10.1186/s42523-025-00434-8)
6. Bentlage AA, Speelman FJD, Komdeur J, Burke T, Richardson DS, Dugdale HL (2025) Rainfall is associated with divorce in the socially monogamous Seychelles warbler. *Journal of Animal Ecology* **94**, 85–98. (10.1111/1365-2656.14216)
7. Benton CH, Delahay R, Shih B, Kao Rowland R, McDonald RA, Hodgson DJ (2025) Sociality and kinship constrain the free-mixing of pathogens in a wild mammal host population. *Proceedings of the Royal Society B* **292**, 20251242. (10.1098/rspb.2025.1242)
8. Borger MJ, Lee KGL, Weissing FJ, Richardson DS, Dugdale HL, Burke T, Pen I, Komdeur J (2025) A path analysis disentangling determinants of natal dispersal in a cooperatively breeding bird. *Journal of Evolutionary Biology* **38**, 1347–1358. (10.1093/jeb/voaf084)
9. Bradshaw SL, Rodriguez E, Wang H, Yu C-T, De Villiers de la Noue C, Hafezjee A, Pomiankowski A, Camus MF (2025) The metabolic costs of meiotic drive. *Proceedings of the Royal Society London* **B292**, 20250779. (10.1098/rspb.2025.0779)
10. Burton GP, Ceci P, MacKinnon L, Masters LE, Randrianarimanana NFH, Ryan P, Turnbull CGN, Ulian T, Vorontsova MS (2025) Phylogenetics and evolution of *Digitaria* grasses, including cereal crops fonio, raishan and Polish millet. *Annals of Botany* mcaf212. (10.1093/aob/mcaf212)
11. Case NT, Gurr SJ, Fisher MC *et al* (2025) Fungal impacts on Earth's ecosystems. *Nature* **638**, 49–57. (10.1038/s41586-024-08419-4)
12. Coates LM, Reynolds K, Carey-Wood M, Lastik D, Vennard C, Doherty J-F *et al* (2025) Dehydration does not drive host behavioural manipulation by hairworms. *PLoS One* **20**, e0332641. (10.1371/journal.pone.0332641)
13. Davies KTJ, Drinkwater R, Dávalos LM, Nesi N, Bertelsen MF, Rossiter SJ (2025) Reduced gene expression and missense mutations in the transporter protein SLC45A2 in a hypopigmented Egyptian rousette fruit bat (*Rousettus aegyptiacus*), *Journal of Heredity* esaf070. (10.1093/jhered/esaf070)
14. Day G, Bolderstone T, Conway GJ, Cross T, Davis T, Dolan M, Greening M, Neale C, Nicholson I, Nicholson K, Ward A, Ward N, Fox G, Harney E, Hipperson H, Maher K, Thompson J, Tucker R, Waters D, Durrant KL, Burke T, Slate J, Arnold KE (2025) The genomic signature of demographic decline in a long-distance migrant in a range-extreme population. *Molecular Ecology* e17805. (10.1111/mec.17805)
15. de Vries AR, Chadwick L, Carine M, Allaby RG (2025) Adhesive metagenomics: unlocking information on the assembly of historic herbaria. *Botanical Journal of the Linnean Society*, boaf096. (10.1093/botlinnean/boaf096)
16. Durant EK, Field KJ, Sallach JB, Moeskjær S, Williams A, Carter LJ (2025) Azole antifungal contaminants disrupt mycorrhizal function and risk agricultural sustainability. *Plants, People, Planet*. (10.1002/ppp3.70068)

17. Duxbury SJN, Raguideau S, Cremin K, Richards L, Medvecky M, Rosko J, Coates M, Randall K, Chen J, Quince C, Soyer OS (2025) Niche formation and metabolic interactions contribute to stable diversity in a spatially structured cyanobacterial community. *The ISME Journal* **19**, wraf126. (10.1093/ismejo/wraf126)
18. Elder FC, Fajardo-Escoffí JL, Carter L, Durant EK, Field KJ, Nightingale J, Sallach B, Garduño-Jiménez AL (2025) An integrated social and natural sciences case study for the reuse of organic wastes as soil amendments. *Plants, People, Planet*. (10.1002/ppp3.70141)
19. Eliza M, Hipperson H, Harrison E (2025) Different transcriptional impacts of prophage within the rhizobia-legume symbiosis. *Symbiosis* **96**, 249–260. (10.1007/s13199-025-01075-w)
20. Hatcher CR, Millett J (2025) Carnivorous sundews (*Drosera rotundifolia*) are more carnivorous in high-light bog microhabitats that are not also nutrient-rich. *Functional Ecology* **39**, 596–608. (10.1111/1365-2435.14719)
21. Hunter DC, Clobert J, Kathryn R, Elmer KR (2025) Parity-specific differences in spatial genetics and dispersal in the common lizard. *Journal of Evolutionary Biology* **38**, 70–82. (10.1093/jeb/voae133) (Joint NEOF/E)
22. Lackner WM, Izquierdo AA, Armstrong-James DPH, Fisher MC, verweij PE (2025) Azole fungicides and *Aspergillus* resistance - five EU agency report highlights the problem for the first time using a One Health approach. *npj Antimicrob Resist* **3**, 86. (10.1038/s44259-025-00140-0)
23. Lee CZ, Worsley SF, Davies CS, Silan E, Burke T, Komdeur J, Hildebrand F, Dugdale HL, Richardson DS (2025) Metagenomic analyses of gut microbiome composition and function with age in a wild bird; little change, except increased transposase gene abundance. *ISME Communications*, ycaf008. (10.1093/ismeco/ycaf008)
24. Llanos J, Hipperson H, Horsburgh G, Lappage MG, Maher KH, Burke T, Leake JR, Watt PJ (2025) Environmental DNA is more effective than hand sorting in evaluating earthworm biodiversity recovery under regenerative agriculture. *Science of The Total Environment* **968**, 178793. (10.1016/j.scitotenv.2025.178793)
25. MacDonald MA, Anderson GQA, Dunn JC, Grice PV, Peach WJ, Dos Remedios N, (...) Morris AJ (2025) Supplementary feeding of European Turtle Doves *Streptopelia turtur*: provisioned field plots are preferentially used and do not have higher frequency of the parasite *Trichomonas gallinae*. *Bird Study*, 1–10. (10.1080/00063657.2025.2535027)
26. Maeda-Obregon A, Clare EL, Zambrano L et al. (2025) Persisting at the Edge of Ecological Collapse: The Impact of Urbanization on Fish and Amphibian Communities From Lake Xochimilco. *Environmental DNA* **7**, e70147. (10.1002/edn3.70147)
27. Morinay J, Woodward BK, Russell AF, Sharp SP, Hatchwell BJ (2025) Ecological and demographic drivers of kin-directed cooperation in a social bird: Insights from a long-term study. *Journal of Animal Ecology* **00**, 1–16. (10.1111/1365-2656.14237)
28. Morris AJ, McKinney WP, Roberts SA, Sithampanathan S, Chaudhry Z, and Fisher MC (2025) Appearance of Environment-Linked Azole Resistance in the *Aspergillus fumigatus* Complex in New Zealand. *Mycoses* **68**, e70104. (10.1111/myc.70104)
29. Nichols S, Estandía A, Young C et al (2025) Host Whole Genome Sequence data represent an untapped resource for characterising affiliated parasite diversity. *Authorea*. (10.22541/au.174405286.65008416/v1)
30. Patterson C, Brennan A, Cowling H, González-Rodríguez A, Grether GF, Mendoza Cuenca L, Springer M, Vega-Sánchez YM, Drury J (2025) Spatiotemporal Dynamics of Non-Ecological Speciation in Rubyspot Damselflies (*Hetaerina* spp.) *Molecular Ecology* **34**, e17797. (10.1111/mec.17797)
31. Pillay K, Creer S, AM et al (2025) Dietary Differentiation Between Sympatric Ecotypes of *Astatotilapia calliptera* From Lake Masoko (Kisiba), Tanzania Revealed by Metabarcoding. *Environmental DNA* **7**, e70146. (10.1002/edn3.70146)
32. Price PD, Parkus SM, Lloyd VJ, Alston BT, Bradshaw SL, Bates S, Hughes MA, Paterson S, Burke T, Darolti I, Pomiankowski A, Wright AE (2025) Single-cell consequences of X-linked meiotic drive in stalk-eyed flies. *PLOS Genetics* **21**, e1011816. (10.1371/journal.pgen.1011816)
33. Rossato DO, Iserhard CA, Nakamura G, Duarte L, Nadeau N (2025) The effects of agroforestry and conventional banana plantations on multiple dimensions of butterfly

- diversity in the Atlantic Forest. *Biodiversity and Conservation* **34**, 2401–2424. (10.1007/s10531-025-03075-00)
34. Shams S, Ahmed S, Smaje D, Tengsuttiwat T, Lima C, Goodacre R, Muhamadali H (2025) Application of Infrared spectroscopy to study carbon-deuterium kinetics and isotopic spectral shifts at the single-cell level. *Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy* **327**, 125374. (10.1016/j.saa.2024.125374)
  35. Simons D-L, Hipperson H, Webb TJ, Spencer M, Horsburgh GJ, Mieszkowska N (2025) characterizing rocky intertidal biodiversity using Environmental DNA metabarcoding from local to national scales. *Environmental DNA* **7**, e70203. (10.1002/edn3.70203)
  36. Sleight VA, Clark MS, Yap-Chiongco MK, Turner F, Kocot KM (2025) Genomic, transcriptomic and epigenomic signatures of ageing and cold adaptation in the Antarctic clam *Laternula elliptica*. *Open Biology* **15**, 250009. (10.1098/rsob.250009)
  37. Speelman F, Burke T, Komdeur J, Richardson D, Dugdale HL (2025) Mate-switching is not associated with offspring fitness in a socially monogamous bird. *Proc Biol Sci* **292**, 20250577. (10.1098/rspb.2025.0577)
  38. Stevens EJ, Li JD, Hector TE, Drew GC, Hoang K, Greenrod STE, Paterson S, King KC (2025) Within-host competition causes pathogen molecular evolution and perpetual microbiota dysbiosis. *The ISME Journal* **19**, wraf071. (10.1093/ismejo/wraf071)
  39. Titelboim D, Dedman CJ, Hodgson RP, Knowles LS, Liu X, Lenzi L, Tudor J, Vamos E, Rickaby REM (2025) Exogenous diatoms ameliorate thermal bleaching of symbiont bearing benthic foraminifera. *Proceedings of the Royal Society B* 29220250596. (10.1098/rspb.2025.0596)
  40. van der Heijden ESM, Näsvalk K, Seixas FA *et al* (2025) Genomics of Neotropical biodiversity indicators: Two butterfly radiations with rampant chromosomal rearrangements and hybridization. *Proc. Natl. Acad. Sci. U.S.A.* **122**, e2410939122. (10.1073/pnas.2410939122)
  41. Wanelik KM, Begon M, Bradley JE *et al.* (2025) Superspreaders have lower gut microbial alpha-diversity and distinct gut microbial composition in a natural rodent population. *anim microbiome* **7**, 42. (10.1186/s42523-025-00411-1)
  42. Will I, Stevens EJ, King KC, Bates KA (2025) Host transcriptomics reveal reduction in defence-reproduction trade-offs during coinfection. *Molecular Ecology* e70124. (10.1111/mec.70124)
  43. Yilmaz B, Baertschi I, Meier KHU, Le Gac C, Jordi SBU, Black C, Li J, Lindholm AK; International Mouse Microbiota Investigators; König B, Sauer U, Stelling J, Macpherson AJ (2025) A global survey of taxa-metabolic associations across mouse microbiome communities. *Cell Host & Microbe* **33**, 1960–1976.e10. (10.1016/j.chom.2025.10.010)
  44. Yu H, Moore LJ, Barlow A. *et al.* (2025) Unexpected landscape-scale contemporary gene flow and fine-scale genetic diversity in rural hedgehogs. *Conservation Genetics* **26**, 391-401. (10.1007/s10592-025-01676-4)

## Theses

1. Aljaafari, SRS (2025) PhD thesis (University of Sheffield) Tuna fisheries in Oman: recent trends and insights from molecular diet studies. (1528)
2. Barnes (2025) PhD Thesis (University of Nottingham) The Ecological and Evolutionary Significance of Functional Variation in Mitochondria in the Three-spined Stickleback. (1259)
3. Bell GA (2025) PhD Thesis (University of Exeter) Composition, diversity and response dynamics of fish skin microbiomes under environmental stress, including antibiotic exposure. (1578)
4. Ben Qasem, Nasser (2025) PhD Thesis (University of Sheffield) Assessing the Efficiency of Environmental DNA and Metabarcoding for Conservation of the Barred Grass Snakes (*Natrix helvetica*). (1573)
5. Bradshaw S (2025) PhD Thesis (University College London) Fitness, trade-offs and life history: phenotypic effects of X-linked meiotic drive in the Malaysian stalk-eyed fly *Teleopsis dalmanni*. (1069, 1136, 1304)

6. Burton G (2025) PhD Thesis (Royal Botanic Gardens, Kew) Climate Resilience, Genetics and Ethnobotany of Fonio Millet (*Digitaria exilis*): Implementing an Interdisciplinary Research Framework with Underutilised Crops for Food Security. (1392)
7. Campbell LCE (2025) PhD Thesis (Durham University) The genomics of mutualistic dependence in the plant-associated ant genus *Phylidris*. (1407)
8. Cunningham C (2025) PhD Thesis (University of Reading) Interactions between Acute Oak Decline and woodland birds - examining behavioural, microbial and trophic level changes in response to a tree disease. (1522)
9. Kerry M (2025) PhD Thesis (University of Sheffield) Monitoring and Detecting Legionella within Evaporative Cooling Towers (1496)
10. Lee CZ (2025) PhD Thesis (University of East Anglia) Understanding the gut microbiome; the role of host senescence, sociality, and genetics.
11. Louch R (2025) PhD Thesis (University of Kent) Understanding the effects of conservation management, inbreeding and diet on reproductive fitness in a threatened bird species. (1405)
12. Maeda Obregon A (2025) PhD Thesis (University College London) Biodiversity assessment of fish and amphibian communities from the Valley of Mexico: An environmental DNA approach. (1275)
13. O'Brien K (2025) PhD Thesis (University of Bath) Unveiling microbial and helminth diversity in Southern Ocean penguins: insights from amplicon metabarcoding and metagenomics (1396)
14. Pain C (2025) PhD Thesis (University of Sheffield) Don't go out there! How interaction outside the host can affect the Rhizobia-Legume Symbiosis. (1640)
15. Phillips SJ (2025) PhD thesis (University of Liverpool) Using conservation genetics and scent deposits to inform recovery of a threatened UK mammal. (1627)
16. Purchase ML (2025) PhD Thesis (University of Warwick) Environmental microbes and soil-sourced gas fluxes: dynamics and disturbance in the Anthropocene. (1489)
17. Rees JW (2025) PhD Thesis (University of Leeds) Adaptation in an unpredictable world: consequences for insect responses to environmental stress. (1582)
18. Shaw B (2025) PhD Thesis (Loughborough University) Fungal endophyte diversity in carnivorous plants. (1465)
19. Simons D-L (2025) PhD Thesis (University of Liverpool) Monitoring intertidal biodiversity in a changing climate using visual and environmental DNA surveys. (1516)
20. Soe P (2025) PhD Thesis (University of Manchester) Genetic Diversity and Anthropogenic Habitat Loss in Southeast Asian Taxa: Integrating genomic, Ecological and Historical Approaches. (1527)
21. Speelman F (2025) PhD Thesis (University of Groningen) Socially monogamous partnerships in birds: Causes, consequences, and pair-bond strength. (1132)
22. Zhang R (2025) PhD Thesis (University of St Andrews) Linking Genetics, Biomechanics, Life-History, and Behaviour to Understand Rapid Animal Signal Evolution. (1409)

### Non refereed articles

1. Burke A (2025) A day in the life of... A NERC Environmental 'Omics Facility Research Associate. *The Biochemist* **47**, 22-25. ([10.1042/bio\\_2025\\_115](https://doi.org/10.1042/bio_2025_115))
2. Hipperson H, Maher KH, Horsburgh GJ, Knowles LS (2025) Amplicon PCR & Library Preparation for Illumina Sequencing. *protocols.io* ([10.17504/protocols.io.261gerqxol47/v1](https://doi.org/10.17504/protocols.io.261gerqxol47/v1))

**2024**

## Refereed articles

1. Allingham SM, Drake SJ, Ramsey A, Field CD, Nwaishi FC, Elliott DR (2024) Effects of burning on vegetation, soil physicochemistry and prokaryotic microbial communities in surface and subsurface peat. *Science of the Total Environment* **956**, 177318. (10.1016/j.scitotenv.2024.177318)
2. Attrill G, Boddy L, Dudley E, Greenfield B, Eastwood DC (2024) Transcriptomic and protein analysis of *Trametes versicolor* interacting with a *Hypholoma fasciculare* mycelium foraging in soil. *Fungal Ecology* **72**, 101385. (10.1016/j.funeco.2024.101385)
3. Bowles AMC *et al.* (2024) Metagenome-assembled genome of the glacier alga *Ancydonema* yields insights into the evolution of streptophyte life on ice and land. *New Phytologist* **244**, 1629–1643. (10.1111/nph.19860)
4. Chesterton E, Sparks AM, Burke T, Komdeur J, Richardson DS, Dugdale HL (2024) The impact of helping on helper life-history and fitness in a cooperatively breeding bird. *Evolution* **78**, 690–700. (10.1093/evolut/qpaa199)
5. Cicconardi F, Morris BJ, Martelossi J, Ray DA, Montgomery SH (2024) Novel sex-specific genes and diverse interspecific expression in the antennal transcriptomes of ithomiine butterflies. *Genome Biology and Evolution* **16**, evae218. (10.1093/gbe/evae218)
6. Çiftçi O, Zervas A, Lutz S, Feord H, Keusching C, Leya T, Tranter M, Anesio AM, Benning LG (2024) Long-Read–Based Hybrid Genome Assembly and Annotation of Snow Algal Strain CCCryo 101-99 (cf. *Sphaerocystis* sp., Chlamydomonadales). *Genome Biology and Evolution* **16**, evae140. (10.1093/gbe/evae140)
7. Dawson Pell FSE, Senar JC, Ortega-Segalerva A, Hatchwell BJ (2024) Cooperation and conflict in the building and maintenance of the compound nests of monk parakeets *Myiopsitta monachus*. *Animal Biodiversity and Conservation* **47**, 9–17. (10.32800/abc.2024.47.0009)
8. Dawson Pell FSE, Hatchwell BJ1, Ortega-Segalerva A & Senar JC (2024) Social associations are predicted by nest proximity but not kinship in a free-living social parrot. *Biological Journal of the Linnean Society* **143**, bla016. (10.1093/biolinnean/bla016)
9. Day G, Fox G, Hipperson H, Maher K, Tucker R, Horsburgh G, Waters D, Durant K, Burke T, Slate J, Arnold K (2024) Revealing the Demographic History of the European Nightjar (*Caprimulgus europaeus*). *Ecology and Evolution* **14**, e70460. (10.1002/ece3.70460)
10. Dittrich C, Hoelzl F, Smith S, Fouilloux CA, Parker DJ, O'Connell LA, Knowles LS, Hughes M, Fewings A, Morgan R, Rojas B, Comeault AA (2024) Genome Assembly of the Dyeing Poison Frog Provides Insights into the Dynamics of Transposable Element and Genome-Size Evolution. *Genome Biology and Evolution* **16**, evae109. (10.1093/gbe/evae109)
11. Elsner-Gearing F, Kretzschmar P, Shultz S *et al.* (2024) Admixture and reproductive skew shape the conservation value of ex situ populations of the Critically Endangered eastern black rhino. *Conservation Genetics*. (10.1007/s10592-024-01611-z)
12. Halliwell C, Beckerman AP, Patrick SC & Hatchwell BJ2 (2024) Coordination of care reduces conflict and predation risk in a cooperatively breeding bird. *Evolution Letters* **8**, 764–773. (10.1093/evlett/qrae031)
13. Hooper R, Maher K, Moore K, McIvor G, Hosken D, Thornton A (2024) Ultimate drivers of forced extra-pair copulations in birds lacking a penis: jackdaws as a case-study. *Royal Society Open Science* **11**, 231226. (10.1098/rsos.231226)
14. Knight CG, Nicolitch O, Griffiths RI *et al.* (2024) Soil microbiomes show consistent and predictable responses to extreme events. *Nature* **636**, 690–696. (10.1038/s41586-024-08185-3)
15. Kunz CF *et al.* (2024) Genome evolution: Zygnematophyceae on ice. *New Phytologist* **244**, 1125–1127. (10.1111/nph.19960) (Commentary on Bowles 2024, **244**, 1629–1643).
16. Mackintosh C, Scott MF, Reuter M, Pomiankowski A (2024) Locally adaptive inversions in structured populations. *Genetics* **227**, iyaa073. (10.1093/genetics/iyaa073)

17. Maestri A *et al.* (2024) The bacterial defense system MADS interacts with CRISPR-Cas to limit phage infection and escape. *Cell Host & Microbe* **32**, 1412 - 1426.e11. (10.1016/j.chom.2024.07.005)
18. Marsh KJ *et al.* (2024) Parasite–gut microbiota associations in wild wood mice (*Apodemus sylvaticus*). *Frontiers in Microbiology* **15**, 1440427. (10.3389/fmicb.2024.1440427)
19. Marshall H, de la Filia AG, Cavalieri R, Mallon EB, Clark JM, Ross L (2024) Lack of paternal silencing and ecotype-specific expression in head and body lice hybrids. *Evolution Letters*, qrae003. (10.1093/evlett/qrae003)
20. Nevado B *et al.* (2024) Genomic changes and stabilization following homoploid hybrid speciation of the Oxford ragwort *Senecio squalidus*. *Current Biology* **34**, 4412-4423.e5. (10.1016/j.cub.2024.08.009) [Joint with NBAF-E]
21. Nowell RW, Rodriguez F, Hecox-Lea BJ, Mark Welch DB, Arkhipova IR, Barraclough TG, Wilson CG (2024) Bdelloid rotifers deploy horizontally acquired biosynthetic genes against a fungal pathogen. *Nature Communications* **15**, 1-17. (10.1038/s41467-024-49919-1)
22. Paliwal D, Rabiey M, Mauchline TH, Hassani-Pak K, Nauen R, Wagstaff C, Andrews S, Chris Bass C, Jackson RW (2024) Multiple toxins and a protease contribute to the aphid killing ability of *Pseudomonas fluorescens* PpR24. *Environmental Microbiology* **26**. (10.1111/1462-2920.16604)
23. Patterson C, Bonillas-Monge E, Brennan A, Grether G, Mendoza Cuenca L, Tucker R, Vega Sánchez Y, Drury J (2024) A chromosome-level genome assembly for the smoky rubyspot damselfly (*Hetaerina titia*). *Journal of Heredity* **115**, 103-111. (10.1093/jhered/esad070)
24. Perini L, Sipes K, Zervas A *et al.* (2024) Giant viral signatures on the Greenland ice sheet. *Microbiome* **12**, 91. (10.1186/s40168-024-01796-y)
25. Pick FC, Fish KE (2024) Emerging investigator series: optimisation of drinking water biofilm cell detachment and sample homogenisation methods for rapid quantification via flow cytometry. *Environmental Science: Water Research & Technology* **10**, 797-813. (10.1039/D3EW00553D)
26. Prince DC, Wirén A, Huggins TJ, Collins DH, Dalmay T, Bourke AFG (2024) Molecular basis of eusocial complexity: the case of worker reproductivity in bees. *Genome Biology and Evolution* **16**, evae269. (10.1093/gbe/evae269)
27. Raulo A, Bürkner PC, Finerty GE *et al.* (2024) Social and environmental transmission spread different sets of gut microbes in wild mice. *Nature Ecology and Evolution* **8**, 972–985. (10.1038/s41559-024-02381-0)
28. Rayner JG, Eichenberger F, Bainbridge JVA, Zhang S, Zhang X, Yusuf LH, Balenger SL, Gaggiotti OE, Bailey NW (2024) Competing adaptations maintain nonadaptive variation in a wild cricket population. *Proceedings of the National Academy of Sciences* **121**, e2317879121. (10.1073/pnas.2317879121)
29. Recknagel H, Leitão HG, Elmer KR (2024) Genetic basis and expression of ventral colour in polymorphic common lizards. *Molecular Ecology* **33**, e17278. (10.1111/mec.17278)
30. Ridgway AM, Hood EJ, Figueras Jimenez J, Nunes MDS, McGregor AP (2024) Sox21b underlies the rapid diversification of a novel male genital structure between *Drosophila* species. *Current Biology* **34**, 1-8. (10.1016/j.cub.2024.01.022)
31. Siozios S *et al.* (2024) Genome dynamics across the evolutionary transition to symbiosis. *Current Biology* **34**, 5659 - 5670.e7 (10.1016/j.cub.2024.10.044)
32. Speelman FJD, Burke T, Komdeur J, Richardson DS, Dugdale HL (2024) Causes and consequences of divorce in a long-lived socially monogamous bird. *Ecology Letters* **27**, e14471. (10.1111/ele.14471)
33. Steeds N, Zulqurnain Z, Regnier T, Gibb F, Stirling D, Hoelzel AR (2024) Intraspecific phenotypic differentiation by habitat depth in deep demersal fish species. *Frontiers in Marine Science* **11**.(10.3389/fmars.2024.1437952)
34. Sun PF, Lu MR, Liu YC *et al.* (2024) An acidophilic fungus promotes prey digestion in a carnivorous plant. *Nature Microbiology* **9**, 2522-2537. (10.1038/s41564-024-01766-y)
35. Tremlett C, Chapman M, Maher K, Keller A, Blüthgen N, Peh KH, Zamora-Gutierrez V (2024) High resource overlap and a consistently generalised pattern of interactions in a bat–flower network in a seasonally dry landscape. *Ecology and Evolution*, **14**, e70367.(10.1002/ece3.70367)

36. Waajen AC, Lima C, Goodacre R, Cockell CS (2024) Life on Earth can grow on extraterrestrial organic carbon. *Sci Rep* **14**, 3691. (10.1038/s41598-024-54195-6)
37. Watson BNJ, Capria L, Alseth EO, Pons BJ, Biswas A, Lenzi L, Buckling A, van Houte S, Westra ER, Meaden S (2024) CRISPR-Cas in *Pseudomonas aeruginosa* provides transient population-level immunity against high phage exposures. *ISME Journal* **18**, wrad039. (10.1093/ismejo/wrad039)
38. White OW, Walkington S, Carter H, Hughes L, Clark M, Mock T, Tarling GA, Clark MD (2024) Exome capture of Antarctic krill (*Euphausia superba*) for cost effective genotyping and population genetics with historical collections. *Molecular Ecology Resources* **24**, e14022. (10.1111/1755-0998.14022)
39. Williams RC, Perry WB, Lambert-Slosarska K, Fitcher B, Pellett C, Richardson-O'Neill I, Paterson S, Grimsley JMS, Wade MJ, Weightman AJ, Farkas K, Jones DL (2024) Examining the stability of viral RNA and DNA in wastewater: Effects of storage time, temperature, and freeze-thaw cycles. *Water Research* **259**, 121879. (10.1016/j.watres.2024.121879)
40. Wilson CG *et al* (2024) Recombination in bdelloid rotifer genomes: asexuality, transfer and stress. *Trends in Genetics* **40**, 422–436. (10.1016/j.tig.2024.02.001)
41. Worsley SF, Davies CS, Lee CZ, Mannarelli M-E, Burke T, Komdeur J, Dugdale HL, Richardson DS (2024) Longitudinal gut microbiome dynamics in relation to age and senescence in a wild animal population. *Molecular Ecology* **33**, e17477. (10.1111/mec.17477)
42. Wright RCT, Wood AJ, Bottery MJ, Muddiman KJ, Paterson S, Harrison E, Brockhurst MA, Hall JPJ (2024) A chromosomal mutation is superior to a plasmid-encoded mutation for plasmid fitness cost compensation. *PloS Biology* (10.1371/journal.pbio.3002926)
43. Yusuf LH, Pascoal S, Moran PA, Bailey NW (2024) Testing the genomic overlap between intraspecific mating traits and interspecific mating barriers. *Evolution Letters* **8**, 902-915. (10.1093/evlett/qrae042)
44. Zhang X, Blaxter M, Wood JMD, Tracey A, McCarthy S, Thorpe P, Rayner JG, Zhang S, Sikkink KL, Balenger SL, Bailey NW (2024) Temporal genomics in Hawaiian crickets reveals compensatory intragenomic coadaptation during adaptive evolution. *Nature Communications* **15**, 5001. (10.1038/s41467-024-49344-4)

## Theses

1. Barrett NJ (2024) PhD Thesis (University of Cambridge) Evaluating the resilience of Antarctic echinoderms to Southern Ocean freshening: Short and long-term responses. (1506)
2. Bates S (2024) PhD Thesis (University College London) Fertility and genomic consequences of meiotic drive in *Teleopsis dalmanni*. <https://discovery.ucl.ac.uk/id/eprint/10177153> (1304)
3. Blackmore LM (2024) PhD thesis (University of East Anglia) Floral enhancement of field margins in agricultural landscapes: from pollinator assemblages to hoverfly feeding ecology. (1196)
4. Jemmett AM (2024) PhD Thesis (University of Kent, The Institute of Zoology, ZSL) Conservation genetics and population surveys of the critically endangered wild camel *Camelus ferus* in Mongolia. (10.22024/UniKent/01.02.105529) (1257)
5. Major T (2024) PhD thesis (Bangor University) The ecology, biogeography, and taxonomy of isolated snake populations. (1242)
6. Patterson CW (2024) PhD thesis (Durham University) Interspecific behavioural interference and range dynamics: genomic analysis of rubyspot damselflies. (<http://etheses.dur.ac.uk/15756/>) (1274)
7. Price PD (2024) PhD Thesis (University of Sheffield) Conflict and competition in the evolution of sexual traits. (<https://etheses.whiterose.ac.uk/id/eprint/36140/>) (1352)
8. Ridgway A (2024) PhD Thesis (Oxford Brookes University) The genetic mechanisms that coordinate the development and morphological divergence of *Drosophila* genital structures. (10.24384/340x-nt42) (927, 1301)

9. Scutt S (2024) PhD Thesis (University of Sheffield) Evaluating the Public Health Risks of Urban Flooding Events. (<https://etheses.whiterose.ac.uk/id/eprint/35429/>) (1361)
10. Smith B (2024) PhD thesis (University of Glasgow) Evolution and Plasticity in Geothermal Three-spined Sticklebacks (*Gasterosteus aculeatus*). (<https://theses.gla.ac.uk/84261/>) (1053/ 1120)
11. Stonehouse J (2024) PhD Thesis (The University of Sheffield) The genomics of adaptation to climate in European great tit (*Parus major*) populations. (<https://etheses.whiterose.ac.uk/id/eprint/35320/>) (1403)
12. Whiting-Fawcett F (2024) PhD thesis (University of Liverpool) Across the Atlantic: Searching for the origins of disease tolerance in three *Myotis* bats.
13. Yu H (2024) PhD thesis (Nottingham Trent University) Conservation and population genetics of British hedgehogs (*Erinaceus europaeus*). <https://irep.ntu.ac.uk/id/eprint/53824/> (1265)

#### **Non-refereed**

1. Macdonald DW (November 2023) A Commentary on Current Policy; A preamble to Badger Trust's report 'Tackling Bovine TB. Together: Towards Sustainable, Scientific and Effective bTB Solutions'
2. Mable BK, Griffiths R, Griffiths K (2024) History of molecular biology work in the Graham Kerr Building (1996-2024). *The Glasgow Naturalist* **28**, 160-164. (10.37208/tgn28S18)

**2023**

## Refereed articles

1. Aase-Remedios ME, Janssen R, Leite DJ, Sumner-Rooney L, McGregor AP (2023) Evolution of the spider homeobox gene repertoire by tandem and whole genome duplication. *Molecular Biology and Evolution* **40**, msad239. (10.1093/molbev/msad239)
2. Barão-Nóbrega JAL, González-Jáuregui M, Padilla-Paz S *et al.* (2023) Characterising a genetic stronghold amidst pervasive admixture: Morelet's crocodiles (*Crocodylus moreletii*) in central Yucatan. *Conservation Genetics* **24**, 893–903. (10.1007/s10592-023-01544-z)
3. Bassano I, Ramachandran VK, Khalifa MS, Lilley CJ, Brown MR, van Aerle R, Denise H, Rowe W, George A, Cairns E, Wierzbicki C, Pickwell ND, Carlile M, Holmes N, Payne A, Loose M, Burke TA, Paterson S, Wade MJ, Grimsley JMS (2023) Evaluation of variant calling algorithms for wastewater-based epidemiology using mixed populations of SARS-CoV-2 variants in synthetic and wastewater samples. *Microbial Genomics* **9**, mgen000933. (10.1099/mgen.0.000933)
4. Bates S, Meade L, Pomiankowski A (2023) Meiotic drive does not impede success in sperm competition in the stalk-eyed fly, *Teleopsis dalmanni*. *Evolution* **77**, 2326–2333. (10.1093/evolut/qpad149)
5. Browett SS, Synnott R, O'Meara DB, Antwis RE, Bown KJ, Wangensteen OS, Dawson DA, Searle JB, Yearsley JM, McDevitt AD (2022) Resource competition drives an invasion-replacement event among shrew species on an island. *Journal of Animal Ecology* **92**, 698–709. (10.1111/1365-2656.13855)
6. Brunner FS, Payne A, Cairns E, Airey G, Gregory R, Pickwell ND, (...) Paterson S (2023) Utility of wastewater genomic surveillance compared to clinical surveillance to track the spread of the SARS-CoV-2 Omicron variant across England. *Water Research* **247**, 120804. (10.1016/j.watres.2023.120804)
7. Cicconardi F, Milanetti E, Pinheiro de Castro EC, Mazo-Vargas A, Van Belleghem SM, Ruggieri AA, Rastas P, Hanly J, Evans E, Jiggins CD, Owen McMillan W (2023) Evolutionary dynamics of genome size and content during the adaptive radiation of Heliconiini butterflies. *Nature Communications* **14**, 5620. (10.1038/s41467-023-41412-5)
8. Collins DH, Prince DC, Donelan JL, Chapman T, Bourke AFG (2023) Costs of reproduction are present but latent in eusocial bumblebee queens. *BMC Biology* **21**, 153. (10.1186/s12915-023-01648-5)
9. Couto A, Young FJ, Atzeni D, Marty S, Melo-Flórez L, Hebberecht L, Monllor M, Neal C, Cicconardi F, McMillan WO, Montgomery SH (2023) Rapid expansion and visual specialisation of learning and memory centres in the brains of Heliconiini butterflies. *Nature Communications* **14**, 4024. (10.1038/s41467-023-39618-8)
10. Dawson Pell FSE, Hatchwell BJ, Carrillo-Ortiz JG, Ortega-Segalerva A, Uribe F, Senar JC (2023) Dispersal behaviour and settlement in an invasive bird: dispersers prefer their natal habitat. *Animal Behaviour* **205**, 139–148. (10.1016/j.anbehav.2023.09.005)
11. de Jong M, van Rensburg AJ, Whiteford S, Yung CJ, Beaumont M, Jiggins C, Bridle J (2023) Rapid evolution of novel biotic interactions in the UK Brown Argus butterfly uses genomic variation from across its geographical range. *Molecular Ecology* **32**, 5742–5756. (10.1111/mec.17138) [Joint NBAF-E]
12. Dunn J, Thomas R, Hipperson H, Sheehan D, Orsman C, Mallord J, Goodman S (2022) Evidence for strain-specific virulence of *Trichomonas gallinae* in African columbiformes. *Parasitology* **150**, 206–211. (10.1017/S0031182022001652)
13. Ellis EE, Edmondson JL, Maher KH, Hipperson H, Campbell SA (2023) Negative effects of urbanisation on diurnal and nocturnal pollen-transport networks. *Ecology Letters* **26**, 1382–1393. (10.1111/ele.14261)
14. Fenn J, Taylor C, Goertz S, Wanelik KMM, Paterson S, Begon M, (...) Bradley J (2023) Discrete patterns of microbiome variability across timescales in a wild rodent population. *BMC Microbiology* **23**, 87. (10.1186/s12866-023-02824-x)
15. Field J, Savill C, Foster WA (2023) Brood parasites that care: alternative nesting tactics in a subsocial wasp. *American Naturalist* **202**, 655–666. (10.1086/726250)

16. Fisher AM, Airey G, Liu Y, Gemmell M, Thomas J, Bentley EG (...) Viney M (2023) The ecology of viruses in urban rodents with a focus on SARS-CoV-2. *Emerging Microbes & Infections* **12**, 2217940. (10.1080/22221751.2023.2217940)
17. Hanski E, Khanyari M, Li J *et al.* (2023) Gut microbiota of the critically endangered Saiga antelope across two wild populations in a year without mass mortality. *Scientific Report* **13**, 17236. (10.1038/s41598-023-44393-z)
18. Laine VN, Sävilammi T, Wahlberg N, Meramo K, Ossa G, Johnson JS, (...) Lilley, TM (2023) Whole-genome analysis reveals contrasting relationships among nuclear and mitochondrial genomes between three sympatric bat species. *Genome Biology and Evolution* **15**, evac175. (10.1093/gbe/evac175)
19. Lam DK, Frantz AC, Burke T, Geffen E, Sin SYW (2023) Both selection and drift drive the spatial pattern of adaptive genetic variation in a wild mammal. *Evolution* **77**, 221-238. (10.1093/evolut/qpac014)
20. Morland F, Ewen JG, Simons MJP, Brekke P, Hemmings N (2023) Early-life telomere length predicts life-history strategy and reproductive senescence in a threatened wild songbird. *Molecular Ecology* **32**, 4031–4043. (10.1111/mec.16981)
21. Nadal-Jimenez P, Parratt SR, Siozios S, Hurst G DD (2023) Isolation, culture and characterization of Arsenophonus symbionts from two insect species reveal loss of infectious transmission and extended host range. *Frontiers in Microbiology* **14**. (10.3389/fmicb.2023.1089143)
22. Ransome E, Hobbs F, Jones S, Coleman CM, Harris ND, Woodward G, Bell T, Trew J, Kolarević S, Kračun-Kolarević M, Savolainen V (2023) Evaluating the transmission risk of SARS-CoV-2 from sewage pollution. *Science of the Total Environment* **858**, 1-8. (10.1016/j.scitotenv.2022.159161)
23. Recknagel H, Harvey WT, Layton M, Elmer KR (2023) Common lizard microhabitat selection varies by sex, parity mode, and colouration. *BMC Ecology and Evolution* **23**, 47. (10.1186/s12862-023-02158-2)
24. San-Jose LM, Bestion E, Pellerin F, Richard M, Di Gesu L, Salmons J, Winandy L, Legrand D, Bonneaud C, Guillaume O, Calvez O, Elmer KR, Yurchenko AA, Recknagel H, Clobert J, Cote J (2023) Investigating the genetic basis of vertebrate dispersal combining RNA-seq, RAD-seq and quantitative genetics. *Molecular Ecology* **32**, 3060–3075. (10.1111/mec.16916)
25. Tan CCS, Trew J, Peacock TP *et al.* (2023) Genomic screening of 16 UK native bat species through conservationist networks uncovers coronaviruses with zoonotic potential. *Nature Communications* **14**, 3322. (10.1038/s41467-023-38717-w)
26. Taylor CHH, Friberg IMM, Jackson JAA, Arriero E, Begon M, Wanelik KMM, (...) Bradley JEE (2023) Living with chronic infection: Persistent immunomodulation during avirulent haemoparasitic infection in a wild rodent. *Molecular Ecology* **32**, 1197-1210. (10.1111/mec.16819)
27. Wainwright JB, Schofield C, Conway M, Phillips D, Martin-Silverstone E, Brodrick EA, Cicconardi F, How MJ, Roberts NW, Montgomery SH (2023) Multiple axes of visual system diversity in Ithomiini, an ecologically diverse tribe of mimetic butterflies. *Journal of Experimental Biology* **226**, jeb.246423. (10.1242/jeb.246423)
28. Wanelik KM, Raulo A, Troitsky T, Husby A, Knowles SCL (2023) Maternal transmission gives way to social transmission during gut microbiota assembly in wild mice. *Animal Microbiome* **5**, 29. (10.1186/s42523-023-00247-7).
29. Wanelik KM, Begon M, Bradley JE, Friberg IM, Jackson JA, Taylor CH, Paterson S (2023) Effects of an IgE receptor polymorphism acting on immunity, susceptibility to infection, and reproduction in a wild rodent. *eLife* **12**, e77666. (10.7554/elife.77666)
30. Wanelik KM, Begon M, Bradley JE, Friberg IM, Taylor CH, Jackson JA, Paterson S (2023) Early-life immune expression profiles predict later-life health and fitness in a wild rodent. *Molecular Ecology* **32**, 3471-3482. (10.1111/mec.16950)
31. Watson BNJ, Pursey E, Gandon S, Westra ER (2023) Transient eco-evolutionary dynamics early in a phage epidemic have strong and lasting impact on the long-term evolution of bacterial defences. *PLoS Biology* **21**, e3002122. (10.1371/journal.pbio.3002122)
32. Young RE, Dunn JC, Vaughan IP, Mallord JW, Orsman CJ, Ka M, Diallo MB, Sarr M, Lormée H, Eraud C, Kiss O, Thomas RC, Hamer KC, Goodman SJ, Symondson WOC

(2023) Investigating the association between diet and infection with *Trichomonas gallinae* in the European turtle dove (*Streptopelia turtur*). *Environmental DNA* **6**, e402. (10.1002/edn3.402)

## Theses

1. Akhmetkaliyeva S (2023) PhD Thesis (Manchester Metropolitan University) Carbon release during 21st century glacier recession: A positive feedback in the global carbon cycle? (1221)
2. Allingham S (2023) PhD Thesis (University of Derby) Landscape ecology of microbes in peatlands under different management regimes. (10.48773/9z0yv) (1272)
3. August K (2023) PhD Thesis (University of Aberdeen) Leaving the safety of the forest: The landscape-scale dynamics of a protected mobile species occupying areas with varying levels of protection. (1277)
4. Day G (2023) PhD thesis (University of York) The population genetics and breeding biology of the European nightjar. (1266)
5. de Vries AR (2023) PhD Thesis (University of Warwick) Oceanic island museomics: diversity, evolution and human impact on *Trochetiopsis* (Malvaceae) from Saint Helena. (1357)
6. Eliza M (2023) PhD Thesis (The University of Sheffield) Utilizing the soil microbiome for sustainable agriculture in the UK. <https://etheses.whiterose.ac.uk/id/eprint/35536/> (1182)
7. Ellis E (2023) PhD Thesis (University of Sheffield) Insects in the city: identifying the drivers influencing urban pollinator communities and the pollination services they provide. (1262)
8. Elsner-Gearing F (2023) PhD Thesis (University of Manchester) Conservation genomics of ex situ populations of black rhino (*Diceros bicornis*): Admixture and endangered species management. (1140)
9. Faulkner, KJ (2023) PhD thesis (University of Warwick) Climate change impacts on soil microbial community structure and function in temperate forests. (1397)
10. Halliwell C (2023) PhD Thesis (University of Sheffield) Cooperation, conflict and the coordination of care in the long-tailed tit, *Aegithalos caudatus*. (<https://etheses.whiterose.ac.uk/id/eprint/34195/>) (1146)
11. Hobson K (2023) PhD thesis (University of Aberdeen) Recovering native predators in multi-use landscapes: an ecological and social case study of the pine marten in the UK. (1063)
12. Lawson M (2023) PhD Thesis (University of York) An integrative approach to studying speciation in a recent adaptive radiation. (1278, 1423)
13. Major T (2024) PhD Thesis (Bangor University) The ecology, biogeography, and taxonomy of isolated snake populations (1242)
14. Martin R (2024) PhD Thesis (University of Wolverhampton) Back to the future? Unravelling current and potential future declines of the common toad, *Bufo bufo*, in the UK. (1570) <http://hdl.handle.net/2436/625764>
15. Monaghan J (2023) PhD Thesis (University of York) Hybridisation and genetic structure of woodland specialist ants in fragmented habitat. (1206)
16. Nguyen TTT (2023) PhD Thesis (University of Sheffield) Exploring phenotypic and transcriptomic responses of *Heliconius* butterflies to temperature across altitudes and between species. <https://etheses.whiterose.ac.uk/34939/> (1362)
17. Pillay K (2023) PhD thesis (Bangor University) Complementary uses of stable isotope and dietary metabarcoding analyses for trophic web determination in freshwater and estuarine tropical fishes. (1046)
18. Romaine L (2023) PhD thesis (University of Bristol) Social and genetic drivers of behaviour and life history in horseshoe bats. (33)
19. Wardell G (2023) PhD Thesis (The University of Sheffield) Exploring the ecological and evolutionary impacts of introducing exotic agricultural inoculants to native soil microbiomes. <https://etheses.whiterose.ac.uk/id/eprint/34384/> (1182)

## Non-refereed

1. Bowles AMC, Williams TA, Donoghue PCJ, Campbell DA, Williamson CJ (2023) Genome of the glacier alga *Ancydonema* and its insights into the evolution of streptophyte life on ice and land. *bioRxiv* (10.1101/2023.10.20.563300)
2. Cicconardi F, Morris B, Martelossi J, Ray DA, Montgomery S (2023) Novel sex-specific genes and diverse interspecific expression in the antennal transcriptomes of ithomiine butterflies. *Authorea Preprints*. (10.22541/au.169814415.57863611/v1)
3. Dittrich C, Hölzl F, Smith S, Fouilloux CA, Parker DJ, O'Connell LA, (...) & Comeault AA (2023) Genome assembly of the dyeing poison frog provides insights into the dynamics of transposable element and genome-size evolution. *bioRxiv*. (10.1101/2023.11.06.565769)
4. Fisher A *et al* (2023) The ecology of viruses in urban rodents with a focus on SARS-CoV-2. *BioRxiv* (10.1101/2023.01.07.523115)
5. Swift C (2023) MSc Thesis (Queen Mary University of London) *Tillandsia latifolia*, an extremophile that can tell the story of lomas, the Peruvian fog oases. (1401)
6. White O, Tarling G, Hughes L, Walkington S, Clark M (2023) Exome capture of Antarctic krill (*Euphausia superba*) for cost effective population genetics of historical collections *bioRxiv* (10.1101/2023.07.24.550387)

**2022**

## Refereed articles

1. Barão-Nóbrega JAL, González-Jaurégui M, Jehle R (2022) N-mixture models provide informative crocodile (*Crocodylus moreletii*) abundance estimates in dynamic environments. *PeerJ* **10**, e12906 (10.7717/peerj.12906)
2. Bradshaw SL, Meade L, Tarlton-Weatherall J, Pomiankowski A (2022) Meiotic drive adaptive testes enlargement during early development in the stalk-eyed fly. *Biology Letters* **18**, 20220352. (10.1098/rsbl.2022.0352)
3. Braga LPP, Orland C, Emilson EJS, Fitch AA, Osterholz H, Dittmar T, Basiliko N, Mykytczuk NCS, Tanentzap AJ (2022) Viruses direct carbon cycling in lake sediments under global change. *Proceedings of the National Academy of Sciences* **119**, e2202261119. (10.1073/pnas.2202261119)
4. Brunner FS, Brown MR, Bassano I, Denise H, Khalifa, MS, Wade MJ, (...) Paterson S (2022) City-wide wastewater genomic surveillance through the successive emergence of SARS-CoV-2 Alpha and Delta variants. *Water Research* **226**, 119306. (10.1016/j.watres.2022.119306)
5. Busana M, Weissing FJ, Hammers M, Bakker J, Dugdale HL, Raj-Pant S, Richardson DS, Burke T, Komdeur J (2022) Structural equation modeling reveals determinants of fitness in a cooperatively breeding bird. *Behavioral Ecology* **33**, 352-363. (10.1093/beheco/arab135)
6. Calero Preciado C, Soria-Carrasco V, Boxall J, Douterelo I (2022) Climate change and management of biofilms within drinking water distribution systems. *Frontiers in Environmental Science* **10**. (10.3389/fenvs.2022.962514)
7. Choo SW, Chong JL, Gaubert P, Hughes AC, O'Brien S, Chaber A-L, (...) Aziz MA (2022) A collective statement in support of saving pangolins. *The Science of the total environment* **824**, 153666. (10.1016/j.scitotenv.2022.153666)
8. Cuff JP, Tercel MPTG, Drake LE, Vaughan IP, Bell JR, Orozco-terWengel P, Müller CT, Symondson WOC (2022) Density-independent prey choice, taxonomy, life history, and web characteristics determine the diet and biocontrol potential of spiders (Linyphiidae and Lycosidae) in cereal crops. *Environmental DNA* **4**, 549-564. (10.1002/edn3.272)
9. Davies CS, Worsley SF, Maher KH et al (2022) Immunogenetic variation shapes the gut microbiome in a natural vertebrate population. *Microbiome* **10**, 41. (10.1186/s40168-022-01233-y)
10. Dimitriu T, Kurilovich E, Łapińska U, Severinov K, Pagliara S, Szczelkun MD, Westra ER (2022) Bacteriostatic antibiotics promote CRISPR-Cas adaptive immunity by enabling increased spacer acquisition. *Cell Host Microbe* **12**, 31-40.e5. (10.1016/j.chom.2021.11.014)
11. Drake LE, Cuff JP, Young RE, Marchbank A, Chadwick EA, Symondson WOC (2021) An assessment of minimum sequence copy thresholds for identifying and reducing the prevalence of artefacts in dietary metabarcoding data. *Methods in Ecology and Evolution* **13**, 694-710. (10.1111/2041-210X.13780)
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## Theses (12)

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2. Figueras Jimenez J (2022) PhD Thesis (Oxford Brookes University) Investigating the regulation and evolution of tartan during *Drosophila* male genital diversification. (1301)

3. Hanski, Eveliina (2022) PhD Thesis (University of Oxford) Host-microbiota interactions in mammals. (928)
4. Hillary L (2022) PhD Thesis (Bangor University) Community-scale viral ecology of agricultural soils and implications for biosolids disposal, wastewater treatment and public health. (1268)
5. Llanos J (2022) PhD Thesis (University of Sheffield) Assessing earthworm diversity and population dynamics in agroecosystems. (1145)
6. Mayberry J (2022) PhD Thesis (University of Aberdeen) Biodiversity: Testing new approaches to study and monitor arthropod diversity. (1199)
7. Minter M (2022) PhD Thesis (University of York) Buffering climate-driven extinctions in montane butterflies: are there genetic refuges? (1205)
8. Moore B (2022) PhD Thesis (University of Aberdeen) Landscape-scale Drivers of Insecticide Resistance in the UK Population of the English Grain Aphid, *Sitobion avenae*. (1164)
9. Pepper J (2022) PhD Thesis (University of Sheffield) Evolutionary Genomics of the Zebra Finch Z chromosome inversion polymorphism. (1029)
10. Price E (2022) PhD Thesis (University of Liverpool) Impacts of climate change on the planktonic food web in the European Arctic. (1129)
11. Sondhi Y (2022) PhD Thesis (Florida International University) Night and Day: Genetic and Behavioural Mechanisms of visual and Diel-niche Evolution in Lepidoptera. FIU Electronic Theses and Dissertations. 5206. <https://digitalcommons.fiu.edu/etd/5206> (1276)
12. Tew N (2022) PhD Thesis (University of Bristol) Floral resources and insect pollinator populations in urban landscapes. (1260)

#### Non-refereed outputs & Other outputs (8)

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35. van Houte S, Padfield D, Gomez P *et al* (2021) Compost spatial heterogeneity promotes evolutionary diversification of a bacterium. *Journal of Evolutionary Biology* **34**, 246– 255. (10.1111/jeb.13722).
36. van Lieshout SHJ, Sparks AM, Bretman A, Newman C, Buesching CD, Burke T, Macdonald DW, Dugdale HL (2021) Estimation of environmental, genetic and parental age effects on telomere length in a wild mammal. *Journal of Evolutionary Biology* **34**, 296-308. (10.1111/jeb.13728)
37. Wiberg RAW, Veltsos P, Snook RR, Ritchie MG (2021) Experimental evolution supports signatures of sexual selection in genomic divergence. *Evolution Letters* **5**, 214-229. (10.1002/evl3.220)
38. Worsley SF, Davies CS, Mannarelli ME, Hutchings MI, Komdeur J, Burke T, Dugdale HL, Richardson DS (2021) Gut microbiome composition, not alpha diversity, is associated with survival in a natural vertebrate population. *Animal Microbiome* **3**, 84. (10.1186/s42523-021-00149-6)
39. Zecherle LJ, Nichols HJ, Bar-David S, Brown RP, Hipperson H, Horsburgh GJ, Templeton AR (2021) Subspecies hybridization as a potential conservation tool in species reintroductions. *Evolutionary Applications* **14**, 1216-1224. (10.1111/eva.13191)
40. Zhang X, Rayner JG, Blaxter M, Bailey NW (2021) Rapid parallel adaptation despite gene flow in silent crickets. *Nature Communications* **12**, 1-15. (10.1038/s41467-020-20263-4) (Joint with NBAF-Edinburgh)

## 2021 Theses (13)

1. Afroz H (2021) PhD Thesis (University of Manchester) Microbial Transformation of Arsenic in Bengal Floodplain. (1131L)
2. Barão-Nóbrega JAL (2021) PhD Thesis (University of Salford) Habitat and population structure of the Morelet's crocodile (*Crocodylus moreletii*) in Calakmul Biosphere Reserve, Campeche, Mexico. (1191S)
3. Browett S (2021) PhD Thesis (University of Salford) Know your enemy: a molecular approach to determine how the pygmy shrew (*Sorex minutus*) in Ireland succumbs to the invasion of the greater white-toothed shrew (*Crocidura russula*). (1147S)
4. Calero Preciado C (2021) PhD Thesis (The University of Sheffield). The effects of climate change on the microbial ecology and water quality of drinking water distribution systems. (1056S)
5. Davies C (2021) PhD Thesis ((University of East Anglia) Pathogens and the maintenance of genetic variation in an island population of the Seychelles warbler (*Acrocephalus sechellensis*). <https://ueaeprints.uea.ac.uk/id/eprint/82680> (1092L, 1150S)
6. Dawson Pell FSE (2021) PhD Thesis (University of Sheffield) The causes and consequences of social and genetic structure in the monk parakeet *Myiopsitta monachus*. (1078)
7. Denton K (2021) PhD Thesis (University of Greenwich) The dietary ecology of *Myotis nattereri* and *Pipistrellus pipistrellus* in the context of ecosystem services within the agricultural matrix. (1049S)
8. Hooper R (2021) PhD Thesis (University of Exeter) A critical evaluation of the relationship intelligence hypothesis. (1152S)
9. Jones B (2021) PhD Thesis (University of Bangor) Metagenomics to determine land use effects on soil ecosystem services. (985L)
10. Khalilur Rahman O (2021) PhD Thesis (QMUL) Symbiotic systems of bats, bat flies, and gut bacteria in a fragmented forest. (1082S)

11. Lee K (2021) PhD Thesis (Nottingham Trent University) Untangling the roles of prey availability, habitat quality and predation as predictors of hedgehog abundance. (1137)
12. Raulo A (2021) PhD Thesis (University of Oxford) Transmission ecology of the gut microbiota in wild mice. (928L)
13. Rogers TF (2021) PhD Thesis (University of Sheffield) The role of sex-specific selection in genome evolution. (1074)

## 2021 Non-refereed outputs (10)

1. Dugdale HL, van Ommen S (2021) The Egg. Dugdale, Haren. ISBN: 979-8522190934
2. Dunn, J (2021) Turtle doves, trial plots and Trichomonas: understanding and conserving the UK's rarest dove. *British Birds* **114**, 196-209.
3. Hillary *et al* (2021) Diverse soil RNA viral communities have the potential to influence grassland ecosystems across multiple trophic levels. *BioRxiv* (10.1101/2021.06.28.448043)
4. Horsburgh G, Parsons P, Maher K, Paterson S, Burke T (2021) Sub-ARTIC Illumina SARS-CoV-2 Spike sequencing protocol (LoCost) v3.2. *Protocols.io* (10.17504/protocols.io.btpjnmkn)
5. Jeffries J, Paterson S, Loose M, van Aerle R (2021) Wastewater sequencing using the EasySeq™ RC-PCR SARS CoV-2 (Nimagen) V1.0 <https://www.protocols.io/view/wastewater-sequencing-using-the-easyseq-rc-pcr-sar-bx6dpra6> (see Child 2022 for updated V3)
6. Kujawska M, Raulo A, Baltrunaite L, Knowles SCL, Hall LJ (2021) *Bifidobacterium castoris* strains isolated from wild mice show evidence of frequent host switching and diverse carbohydrate metabolism potential. *BioRxiv*
7. Nowell RW, Barraclough TG, Wilson CG (2021) Bdelloid rotifers use hundreds of horizontally acquired genes against fungal pathogens. *bioRxiv* 2021.09.04.458992. (10.1101/2021.09.04.458992)
8. Parsons PJ, Horsburgh G, Maher K, Paterson S, Burke T (2021) Sub-ARTIC ONT SARS-CoV-2 Spike sequencing protocol (LoCost) V3.2. *Protocols.io* (10.17504/protocols.io.btvnnn5e)
9. Priyam A, Witwicka A, Brahma A, Stolle E, Wurm Y (2021) Parameter exploration improves the accuracy of long-read genome assembly. *BioRxiv* 2021.05.28.446135. (10.1101/2021.05.28.446135)
10. Wanelik KM, Begon M, Bradley JE, Friberg IM, Taylor CH, Jackson JA, Paterson S (2021) Early-life immune expression profiles predict later life health and fitness in a wild rodent. *BioRxiv*. (10.1101/2021.10.08.463659)

**2020**

## Refereed articles (58)

1. Becher H, Max R. Brown, Gavin Powell, Chris Metherell, Nick J. Riddiford, Alex D. Twyford (2020) Maintenance of Species Differences in Closely Related Tetraploid Parasitic *Euphrasia* (Orobanchaceae) on an Isolated Island. *Plant Communications* **1**, 100105. (10.1016/j.xplc.2020.100105)
2. Bianconi ME, Dunning LT, Curran EV, Hidalgo O, Powell RF, Mian S, Leitch IJ, Lundgren MR, Manzi S, Vorontsova MS, Besnard G, Osborne CP, Olofsson JK, Christin PA. Contrasted histories of organelle and nuclear genomes underlying physiological diversification in a grass species. *Proceedings of the Royal Society B* **287**, 20201960 (10.1098/rspb.2020.1960)
3. Boylan AA, Stewart DI, Graham JT, Burke IT (2020) The behaviour of low molecular weight organic carbon-14 containing compounds in contaminated groundwater during denitrification and iron-reduction. *Geomicrobiology Journal*. (10.1080/01490451.2020.1728442)
4. Bright Ross JG, Newman C, Buesching CD, Macdonald DW (2020) What lies beneath? Population dynamics conceal pace-of-life and sex ratio variation, with implications for resilience to environmental change. *Global Change Biology* **26**, 3307-3324. (10.1111/gcb.15106)
5. Broniewski JM, Meaden S, Paterson S, Buckling A, Westra ER (2020) The effect of phage genetic diversity on bacterial resistance evolution. *ISME Journal* **14**, 828-836. (10.1038/s41396-019-0577-7)
6. Chevallereau A, Meaden S, Fradet O, Landsberger M, Maestri A, Biswas A, Gandon S, van Houte S, Westra ER (2020) Exploitation of the cooperative behaviors of anti-CRISPR phages. *Cell Host Microbe* **27**, 189-198.e6. (10.1016/j.chom.2019.12.004)
7. Cole G, Ditchfield PW, Dulias K, Edwards CJ, Reynolds A, Waldron T (2020) Summary justice or the King's will? The first case of formal facial mutilation from Anglo-Saxon England. *Antiquity* **94**, 1263-1277. (10.15184/aqy.2020.176)
8. Cruz-López M, Fernández, G, Hipperson H *et al.* (2020) Allelic diversity and patterns of selection at the major histocompatibility complex class I and II loci in a threatened shorebird, the Snowy Plover (*Charadrius nivosus*). *BMC Evol Biol* **20**, 114. (10.1186/s12862-020-01676-7)
9. Czaja W, Bensasson D, Ahn HW, Garfinkel D, Bergman C (2019) Evolution of Ty1 copy number control in yeast by horizontal transfer and recombination. *Plos Genetics PLOS Genetics* **16**, e1008632 (10.1371/journal.pgen.1008632)
10. Davidson G, Raulo A, Knowles SCL (2020) Identifying microbiome-mediated behaviour in wild vertebrates. *Trends in Ecology and Evolution* **35**, 972-980. (10.1016/j.tree.2020.06.014)
11. Dawson Pell FSE, BJ Hatchwell, A Ortega-Segalerva, DA Dawson, GJ Horsburgh & JC Senar (2020) Microsatellite characterization and sex-typing in two invasive parakeet species, the monk parakeet, *Myopsitta monachus*, and the ring-necked parakeet, *Psittacula krameri*. *Molecular Biology Reports* **47**, 1543-1550. (10.1007/s11033-019-05215-6)
12. Doble CJ, Hipperson H, Salzburger W, Horsburgh G, Mwita C, Murrell DJ, Day JJ (2020) Testing the performance of eDNA metabarcoding for surveying highly diverse tropical fish communities: A case study from Lake Tanganyika. *Environmental DNA* (10.1002/edn3.43)
13. Doré H, Farrant GK, Guyet U, Humily F, Ratin M *et al* (2020) Evolutionary mechanisms of long-term genome diversification associated with niche partitioning in marine picocyanobacteria. *Frontiers in Microbiology* **11**, 2129. (10.3389/fmicb.2020.567431)
14. Dos Remedios N, Küpper C, Székely T, Zefania S, Burns F, Bolton M, Lee PLM (2020) Genetic structure among *Charadrius* plovers on the African mainland and islands of Madagascar and St Helena. *Ibis*, **162**, 104-118. (10.1111/ibi.12694)
15. Duntsch L, Tomotani BM, de Villemereuil P, Brekke P, Lee KD, Ewen JG, Santure AW (2020) Polygenic basis for adaptive morphological variation in a threatened Aotearoa | New Zealand bird, the hihi (*Notiomystis cincta*). *Proceedings of the Royal Society B* **287**, 20200948. (10.1098/rspb.2020.0948)

16. D'Urban Jackson J, Bruford MW, Székely T, DaCosta J, Sorenson MD, Edwards SV, Russo IRM, Maher K, Cruz-López M, Galindo-Espinosa D, De Sucre-Medrano AE, Cavitt J, Pruner R, Morales AL, Gonzalez O, Burke T, Küpper C (2020) Population differentiation and demography of the threatened snowy plover *Charadrius nivosus* estimated by four different genetic markers. *Conservation Genetics* (10.1007/s10592-020-01256-8).
17. Eberhart-Phillips LJ, Cruz-López M, Lozano-Angulo L, Del Ángel SG, Rojas-Abreu W, Bucio-Pacheco M, Küpper C (2020) CeutaOPEN, individual-based field observations of breeding snowy plovers *Charadrius nivosus*. *Sci Data* 7,149. (10.1038/s41597-020-0490-y)
18. Evans R, Beckerman AP, Wright RCT, McQueen-Mason S, Bruce NC, Brockhurst MA (2020) Eco-evolutionary dynamics set the tempo and trajectory of metabolic evolution in multispecies communities. *Current Biology* 30, 4984-4988.e4. (10.1016/j.cub.2020.09.028)
19. Fish KE\*, Reeves-Mclaren N, Husband S, Boxall JB (2020) Uncharted waters: the unintended impacts of residual chlorine on water quality and biofilms. *Biofilms and Microbiomes* 6, 34. (10.1038/s41522-020-00144-w)
20. Frost CL, Siozios S, Nadal-Jimenez P, Brockhurst MA, King KC, Darby AC, Hurst GDD (2020) The hypercomplex genome of an insect reproductive parasite highlights the importance of lateral gene transfer in symbiont biology. *mBio* 11, e02590-19. (10.1128/mBio.02590-19)
21. Garrett LJH, Myatt JP, Sadler JP, Dawson DA, Hipperson H, Colbourne JK, Dickey RC, Weber SB, Reynolds SJ (2020) Spatio-temporal processes drive fine-scale genetic structure in an otherwise panmictic seabird population. *Scientific Reports* 10, 20725. (10.1038/s41598-020-77517-w)
22. George PBL, Coelho KP, Creer S, Lebron I, Robinson DA, Jones DL (2020) Decoupled richness of generalist anaerobes and sulphate-reducing bacteria is driven by pH across land uses in temperate soils. *European Journal of Soil Science* 1-12. (10.1111/ejss.13040)
23. Giraldo-Deck L, Goymann W, Safari I, Dawson DA, Stocks M, Burke T, Lank D, Kuepper C (2020) Development of intraspecific size variation in black coucals, white-browed coucals and ruffs from hatching to fledging. *Journal of Avian Biology* 51. (10.1111/jav.02440)
24. Hagen JFD, Mendes CC, R. Booth S, Figueras Jimenez J, Tanaka KM, Franke FA, Baudouin-Gonzalez L, Ridgway AM, Arif S, Nunes MDS, McGregor AP (2020) Unravelling the genetic basis for the rapid diversification of male genitalia between *Drosophila* species. *Molecular Biology and Evolution* msaa232 (10.1093/molbev/msaa232)
25. Halimubieke N, Kupán K, Valdebenito JO et al. (2020) Successful breeding predicts divorce in plovers. *Scientific Reports* 10, 15576. (10.1038/s41598-020-72521-6)
26. Hamilton PB, Lockyer AE, Uren Webster TM, Studholme DJ, Paris JR, Baynes A, Nicol E, Dawson DA, Moore K, Farbos A, Jobling S, Stevens JR, Tyler CR (2020) Investigation into adaptation in genes associated with response to estrogenic pollution in populations of roach (*Rutilus rutilus*) living in English rivers. *Environmental Science & Technology* 54, 15935-15945. (10.1021/acs.est.0c00957)
27. Harvey HJ, Wildman RD, Mooney SJ, Avery SV (2020) Soil aggregates by design: Manufactured aggregates with defined microbial composition for interrogating microbial activities in soil microhabitats. *Soil Biology and Biochemistry* 148, 107870. (10.1016/j.soilbio.2020.107870)
28. Harvey HJ, Wildman RD, Mooney SJ, Avery SV (2020) Challenges and approaches in assessing the interplay between microorganisms and their physical micro-environments. *Computational and Structural Biotechnology Journal* 18, 2860-2866. (10.1016/j.csbj.2020.09.030)
29. Horrocks CA, Newsham KK, Cox F, Garnett MH, Robinson CH, Dungait JAJ (2020) Predicting climate change impacts on maritime Antarctic soils: a space-for-time substitution study. *Soil Biology & Biochemistry* 141, 107682. (10.1016/j.soilbio.2019.107682)
30. Hosegood J, Humble E, Ogden R, De Bruyn M, Creer S, Stevens GMW, Abudaya M, Bassos-Hull K, Bonfil R, Fernando D, Foote A, Hipperson H, Jabado RW, Kaden J, Moazzam M, Peel LR, Pollett S, Ponzo A, Poortvliet M, Salah J, Senn H, Stewart JD, Wintner S, Carvalho G (2020) Phylogenomics and species delimitation for effective conservation of manta and devil rays. *Molecular Ecology* 29, 4783-4796. (10.1111/mec.15683)

31. Jaron KS, Jens Bast, Reuben W Nowell, T Rhyker Ranallo-Benavidez, Marc Robinson-Rechavi, Tanja Schwander (2020) Genomic features of parthenogenetic animals. *J. Hered.* (10.1093/jhered/esaa031)
32. Lane JV, Jeavons R, Deakin Z, Sherley RB, Pollock CJ, Wanless RJ, Hamer KC (2020) Vulnerability of northern gannets to offshore wind farms; seasonal and sex-specific collision risk and demographic consequences. *Marine Environmental Research* **162**, 105196 (10.1016/j.marenvres.2020.105196)
33. Langley EJG, Adams G, Beardsworth CE, Dawson DA, Laker PR, van Horik JO, Whiteside MA, Wilson AJ, Madden JR (2020) Heritability and correlations among learning and inhibitory control traits *Behavioral Ecology* **31**, 798-806. (10.1093/beheco/araa029)
34. Leedale AE, EJM Robinson, RF Laughlan & BJ Hatchwell (2020) Helping decisions and kin recognition in long-tailed tits: is call similarity used to direct care towards kin? *Philosophical Transactions of the Royal Society of London, Series B* **375**, 20190565. (10.1098/rstb.2019.0565)
35. Leedale AE, M Simeoni, SP Sharp, JP Green, J Slate, RF Laughlan, EJM Robinson, BJ Hatchwell (2020). Cost, risk and avoidance of inbreeding in a cooperatively breeding bird. *Proceedings of the National Academy of Sciences* **117**, 15724-15730. (10.1073/pnas.1918726117)
36. Lieber L, Hall G, Hall J, Berrow S, Johnston E, Gubili C, Sarginson J, Francis M, Dufy C, Wintner SP, Doherty PD, Godley BJ, Hawkes LA, Witt MJ, Henderson SM, de Sabata E, Shivji MS, Dawson DA, Sims DW, Jones CS, Noble LR (2020) Spatio-temporal genetic tagging of a cosmopolitan planktivorous shark provides insight to gene flow, temporal variation and site-specific re-encounters. *Scientific Reports* **10**, 1661. (10.1038/s41598-020-58086-4)
37. Lilley TM, Wilson IW, Field KA, Reeder DA, Vodzak ME, Turner G, (...) Paterson S (2020) Genome-wide changes in genetic diversity in a population of *Myotis lucifugus* affected by white-nose syndrome. *G3-Genes Genomes Genetics* **10**, 2007-2020. (10.1534/g3.119.400966)
38. Llewellyn CA, Airs RL, Farnham G, Greig C (in press) Synthesis, regulation and degradation of carotenoids under low level UV-B radiation in the filamentous cyanobacterium *Chlorogloeopsis fritschii* PCC 6912. *Frontiers in Microbiology*. (10.3389/fmicb.2020.00163).
39. McDonald GC, Engel N, Ratão SS, Székely T, Kosztolányi A (2020) The impact of social structure on breeding strategies in an island bird. *Scientific Reports* **10**, 1387. (10.1038/s41598-020-70595-w)
40. Meade L, Finnegan SR, Kad R, Fowler K, Pomiankowski A (2020) Maintenance of fertility in the face of meiotic drive. *American Naturalist* **195**, 743-751. (10.1086/707372)
41. Meaden S, Capria L, Alseth E, Gandon S, Biswas A, Lenzi L, van Houte S, Westra ER (2020) Phage gene expression and host responses lead to infection-dependent costs of CRISPR immunity. *ISME Journal* **15**, 534-544. (10.1038/s41396-020-00794-w)
42. Monnin D, Jackson R, Kiers ET, Bunker M, Eilers J, Henry LM (2020) Parallel evolution in the integration of a co-obligate aphid symbiosis. *Current Biology* **30**, 1949-1957. (10.1016/j.cub.2020.03.011)
43. Murphy ARJ, Travis ER, Hibberd V, Porter D, Wellington EMH (2020) Evaluation of a fecal shedding test to detect badger social groups infected with *mycobacterium bovis*. *Journal of Clinical Microbiology* **59**, e01226-20. (10.1128/JCM.01226-20)
44. Newsham KK, Cox F, Sands CJ, Garnett MH, Magan N, Horrocks CA, Dungait JAJ, Robinson CH (2020) A previously undescribed Helotiales species that is superabundant in soil under maritime Antarctic higher plants. *Frontiers in Microbiology*, (10.3389/fmicb.2020.615608).
45. Orland C, Yakimovich KM, Mykytczuk NCS, Basiliko N, Tanentzap AJ (2020) Think global, act local: The small scale environment mainly influences microbial community development and function in lake sediment. *Limnology & Oceanography* **65**, S88-S100. (10.1002/lno.11370)
46. Padfield D, Vujakovic A, Paterson S, Griffiths R, Buckling A, Hesse E (2020) Evolution of diversity explains the impact of pre-adaptation of a focal species on the structure of a natural microbial community. *ISME journal* **14**, 2877-2889. (10.1038/s41396-020-00755-3)

47. Pascoal S, Risse JE, Zhang X, Blaxter M, Cezard T, Challis RJ, Gharbi K, Hunt J, Kumar S, Langan E, Liu X, Rayner JG, Ritchie MG, Snoek BL, Trivedi U, Bailey NW (2020) Field cricket genome reveals the footprint of recent, abrupt adaptation in the wild. *Evolution Letters* **4** (10.1002/evl3.148)
48. Price TAR, Windbichler N, Unckless RL, Sutter A, Runge J-N, Ross PA, Pomiankowski A, Nuckolls N, Montchamp-Moreau C, Mideo N, Martin OY, Manser A, Legros M, Larracuenta AM, Holman L, Godwin J, Gemmell N, Courret C, Buchman A, Barrett LG, Lindholm AG (2020) Resistance to natural and synthetic gene drive systems. *Journal of Evolutionary Biology* **33**, 1345-1360. (10.1111/jeb.13693)
49. Roberts KE, Meaden S, Sharpe S, Kay S, Doyle T, Wilson D et al (2020) Resource quality determines the evolution of resistance and its genetic basis. *Molecular Ecology* **29**, 4128-4142. (10.1111/mec.15621)
50. Rollie C, Chevallereau A, Watson BNJ, Chyou TY, Fradet O, McLeod I, Fineran PC, Brown CM, Gandon S, Westra ER (2020) Targeting of temperate phages drives loss of type I CRISPR-Cas systems. *Nature* **578**, 149-153. (10.1038/s41586-020-1936-2)
51. Sales NG, McKenzie MB, Drake J, Harper LR, Browett SS, Coscia I, Wangenstein OS, Baillie C, Bryce E, Dawson DA, Ochu E et al (2020) Fishing for mammals: Landscape-level monitoring of terrestrial and semi-aquatic communities using eDNA from riverine systems. *Journal of Applied Ecology* **57**, 707-716. (10.1111/1365-2664.13592)
52. Seaton FM, George PBL, Lebron I, Jones DL, Creer S, Robinson DA (2020) Soil textural heterogeneity impacts bacterial but not fungal diversity. *Soil Biology & Biochemistry* **144**, 107766. (10.1016/j.soilbio.2020.107766)
53. van Lieshout SH, Badás EP, Mason MW, Newman C, Buesching CD, Macdonald DW, Dugdale, HL (2020) Social effects on age-related and sex-specific immune cell profiles in a wild mammal. *Biology Letters* **16**, 20200234. (10.1098/rsbl.2020.0234)
54. van Lieshout SH, Sparks AM, Bretman A, Newman C, Buesching CD, Burke T et al (2020) Estimation of environmental, genetic and parental age at conception effects on telomere length in a wild mammal. *Journal of Evolutionary Biology* **34**, 296-308. (10.1111/jeb.13728)
55. van Lieshout SHJ, Froy H, Schroeder J, Burke TA, Simons MJP, Dugdale HL (2020) Slicing: A sustainable approach to structuring samples for analysis in long-term studies. *Methods in Ecology & Evolution* **11**, 418-430. (10.1111/2041-210X.13352)
56. Verspoor RL, TAR Price, N Wedell (2020) Selfish genetic elements and male fertility. *Philosophical Transactions of the Royal Society B* **375** (1813), 20200067. (10.1098/rstb.2020.0067)
57. Wanelik KM, Begon M, Arriero E, Bradley JE, Friberg IM, Jackson JA et al (2020) Transcriptome-wide analysis reveals different categories of response to a standardised immune challenge in a wild rodent. *Scientific Reports* **10**. (10.1038/s41598-020-64307-7)
58. Yakimovich KM, Orland C, Emilson EJS et al (2020) Lake characteristics influence how methanogens in littoral sediments respond to terrestrial litter inputs. *ISME Journal* **14**, 2153–2163. (10.1038/s41396-020-0680-9)
59. Yurchenko A, Recknagel H, Elmer KR (2020) Chromosome-level assembly of the common lizard (Lacertidae: *Zootoca vivipara*) genome. *Genome Biology and Evolution* **12**, 1953-1960. (10.1093/gbe/evaa161)
60. Zecherle L, Bar-David S, Nichols H, Templeton A, Hipperson H, Horsburgh G, Brown R (2020) Landscape resistance affects individual habitat selection but not genetic relatedness in a reintroduced desert ungulate. *Biological Conservation* **252**, 108845. (10.1016/j.biocon.2020.108845)

### Non-refereed articles

1. Brunner FS, Reynolds A, Wilson IW, Price S, Paterson S, Atkinson D, Plaistow SJ (2020) Quantifying multivariate genotype-by-environment interactions, evolutionary potential and its context-dependence in natural populations of the water flea, *Daphnia magna*. *BioRxiv* (10.1101/2020.12.28.424558)

### Theses (14)

1. Doble CJ (2020) PhD thesis (University College London) Testing the potential of environmental DNA methods for surveying Lake Tanganyika's highly diverse fish communities.
2. Drake L (2020) PhD Thesis (Cardiff University) Trophic ecology of the Eurasian otter, *Lutra lutra*. (uk.bl.ethos.818323) (1139)
3. Finnegan SR (2020) PhD Thesis (University College London) The effect of sex-ratio meiotic drive on sex, survival and size in the Malaysian stalk-eyed fly, *Teleopsis dalmanni*. (uk.bl.ethos.815993)
4. Garrett L (2020) PhD Thesis (University of Birmingham) From population to individual: Colony dynamics and structure in time and space of a highly social seabird.
5. Harris D (2020) PhD Thesis (University of Essex) The impacts of climate change on freshwater microbes: Insights from the field to the laboratory. (1193L) (<https://repository.essex.ac.uk/28202/>)
6. Marsh M (2020) PhD Thesis (University of Oxford) The wild mammalian microbiome: host-microbe interactions in a natural mouse model. (928L)
7. Mondain-Monval T (2020) PhD Thesis (Lancaster University) Understanding declines in the population size of migratory birds.
8. Najera Cortazar, LA (2020) PhD thesis, University of Leeds. Ecological genomics of *Myotis* bats and their ectoparasites in the Baja California peninsula.
9. Otsing E (2020) PhD Thesis (University of Tartu) Tree species effects on fungal richness and community structure.
10. Sendell-Price AT (2020) PhD thesis (University of Oxford) The genomics of diversification in South Pacific silvereyes (*Zosterops lateralis*). (uk.bl.ethos.813635)
11. Tremlett C (2020) PhD Thesis (University of Southampton) Pollination networks of nectarivorous bats in Mexico and dietary dependence upon the cultivated cactus *Stenocereus queretaroensis*. (1185)
12. van Eeckhoven J (2020) PhD thesis (University of Leeds) From control to constraint: a study of reproduction in the eusocial honeybee and the solitary red mason bee. (1202) (uk.bl.ethos.811254)
13. van Lieshout HJ (2020) PhD thesis (University of Leeds) Early-life effects on telomere dynamics in European badgers (*Meles meles*). (uk.bl.ethos.800478)
14. Zecherle L (2020) PhD Thesis (Liverpool John Moores University) Conservation genomics in species reintroductions: the Asiatic wild ass *equus hemionus* in Israel. (joint with NBAF-E1073) (uk.bl.ethos.815668)