

Andrew Fraser READ: CV

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Nationality: New Zealand (by birth); UK (by naturalisation, 2003); US (by naturalization, 2016).

Current Position: [Evan Pugh University Professor](#) of Biology and Entomology (since 2014); Eberly Professor of Biotechnology (since 2015); Director, Center for Infectious Disease Dynamics (since 2010).

Previous Positions

Alumni Professor in the Biological Sciences (2012-2014), Penn State University
Professor of Biology (2007-2011) and Entomology (2007-2014), Penn State University
Professor of Natural History, University of Edinburgh [Chair established 1767; 13th occupant] (1998-2007)
BBSRC Second Advanced Research Fellowship (1998)
BBSRC Advanced Research Fellowship (1993-1997)
Adjunct Professor in Evolutionary Ecology, University of Tromsø, Norway (1992-1997)
Lloyd's of London Tercentenary Fellowship (1991-1992)
Lecturer in Zoology, St Catherine's College, Oxford University (1989-90)
Junior Research Fellowship, Christ Church, Oxford (1988-1992)
Commonwealth Scholarship to Merton College, Oxford University (1985-1988)

Degrees:

D.Phil., University of Oxford (1985-89). [Evolutionary biology/zoology; Advisor: Prof. P. Harvey FRS]
BSc(Hons) 1st Class in Zoology, University of Otago, New Zealand (1981-84)

Awards:

Fellow, The Royal Society (elected 2015)
Fellow, American Academy of Microbiology (elected 2014)
Fellow, American Association for the Advancement of Science (elected 2012)
Eberly College of Science Distinguished Senior Scholar, Pennsylvania State University (2007)
Fellow, Institute for Advanced Studies, Berlin (Wissenschaftskolleg zu Berlin) (sabbatical 2006-7)
Fellow, Royal Society of Edinburgh (elected 2003)
Scientific Medal, Zoological Society of London (1999)
Young Investigator Award, American Society of Naturalists (1991)
Thomas Henry Huxley Award (for D.Phil. thesis), Zoological Society of London (1991)

Summary of academic interests. My group works on the ecology and evolutionary genetics of infectious disease, particularly the pathogen evolution that harms human health and well-being. Can public health strategies, like vaccination, provoke clinically harmful evolution? Will an emergent disease become more infectious? How can we best manage the evolution of drug resistance? Our work involves evolutionary biology, ecology, parasitology, microbiology and genomics. Currently, much of the work is aimed at finding drug regimens that retard resistance evolution, understanding the rare cases where vaccine resistance has evolved, malaria (drug resistance) and identifying drives of drug resistance in hospitals. Currently we mostly work with Marek's disease in poultry (vaccine resistance), myxoma virus in rabbits (virulence) and vancomycin-resistant *Enterococcus* (bacterial evolution in hospitals), with a little malaria and cancer on the side. I have taught zoology, evolutionary biology, microbiology, parasitology, ecology and statistics, and currently teach non-scientists to be better consumers of science.

GRANTS

(**=currently in play)

- **Merck Investigator Studies Program (2017-2018, pending contract negotiations). Observational study of doctor-patient communication to identify interventions to reduce inappropriate antibiotic use for respiratory tract infections in an emerging adult population. PIs: Read, MacGregor (Department of Communication Arts and Sciences, PSU), Zook (University Health Services, PSU). Total Award: c.\$160,000.
- **NIH/NIAID (2015-2020). *Variation in Resistance and Fitness to Artemisinins in African Malaria*. PI Jon Juliano, University of North Carolina; PSU subcontract PI: **Read**. PSU Subcontract c. \$150,000. R01AI121558
- **NIH, NIGMS and UK Biotechnology and Biological Research Council (2012-2017). *Vaccines as drivers of disease emergence: transmission ecology and virulence evolution*. PI: **Read**, Co-I: Nair (Pirbright Institute, UK), Dunn (PSU), Day (Queens, Canada). Funded as part of joint NSF-NIH-USDA Ecology and Evolution of Infectious Disease program as a US-UK collaboration. Total Award c.\$3mil. R01GM105244.
- CURE Epilepsy (2012-2014). *A murine model for preventing post-malarial epilepsy*. PI: Schiff (PSU UP), Co-I: **Read**, Gluckman, Drew (PSU UP), Stoute (PSU Hershey). Total award: \$350,000.
- Bill and Melinda Gates Foundation (2012-2014). *Diagnostic for malaria infection in humans*. PI: Mescher; Co-I: de Moraes, **Read**. Total Award c. \$800,000.
- European Commission (2012-2015). *A low-cost mosquito contamination device for sustainable malaria mosquito control*. PSU subcontract, PI: Thomas (PSU), Co-I: **Read**. Total award: c.\$1mill.
- **NIH, NIAID (2012-2017) *Genomic analysis of the canonical case of virulence evolution: Myxomatosis in Australia*. PI: **Read**, Co-I: Holmes (Sydney), Cattadori, Hudson (PSU), Kerr (CSIRO Canberra), Ghedin (U Pitt). Total award c.\$2.9 million. R01AI093804
- NIH, NIAID (2011-2013). *Effects of temperature on mosquito immunity and vector competence: do some like it hot?* PI: Thomas (PSU); Co-I: **Read**, Cox-Foster (PSU). Total Direct costs \$275,000. R21AI096036.
- NIH, NIAID. *Centre for the Study of Complex Malaria in India*. Total cost c.\$US10 mill. PI: Jane Carlton, NYU. U19A1089676-01. I am involved in two component projects:
- (i) *Using next-generation genomics to study antimalarial drug resistance in India*. (2010-2016). PSU subcontract PI: **Read**. Annual direct costs c.\$75,000. India budget ten-fold higher.
 - (ii) *Ecological and evolutionary determinants of malaria transmission and the advance towards sustainable insecticidal mosquito control*. (2010-2017) PSU subcontract, PI: Thomas, Co-I: **Read**. Annual direct costs c.\$90,000. India budget ten-fold higher.
- NIH, NIAID (2010-2015). *Within host selection of P. falciparum variants by artemisinin combination therapies*. PI: Jon Juliano, University of North Carolina; PSU subcontract PI: **Read**. PSU Subcontract Direct total \$345,208. R01AI089819.
- NIH, NIGMS R01 (2010-2014). *The evolutionary biology of chemotherapy against infectious agents: towards rational design of patient treatment regimens for resistance management*. PI: **Read** Total c.\$1,150,000. R01 GM089932.
- NIH, NIAID R21 (2010-2013) *Existing malaria control insecticides – without the evolution of insecticide-resistance mosquitoes?* PIs: **Read**, Co-I: Thomas (PSU). Total \$250,697. R21 AI088094
- Innovative Vector Control Consortium, Bill and Melinda Gates Foundation. (2010-2011). *Residual persistence and stability of candidate fungal biopesticides for IRS*. PIs: Thomas (PSU), **Read**. \$101,284.

- Bill and Melinda Gates Foundation (2010-2011). *Diagnostic for malaria infection*. PIs: M Mescher (PSU), C. de Morales (PSU), **Read**. \$US100,000.
- The Wellcome Trust. (2010-2013). *Elucidating within-host competition between malaria parasites using mathematical models and Bayesian statistics*. (£152,942; all funding in Edinburgh). PIs: N. Savill (U. Edinburgh), **Read**. Ref. 091078/Z/09/Z.
- NIH, Fogarty International Center, DHSS (2009-2013). *Intergovernmental Personnel Agreement for participation in Research and Policy for Infectious Disease Dynamics Program*. PI: **Read**. Total \$250,000.
- National Science Foundation/Ecology of Infectious Diseases Program. (2009-2013). *Quantifying the influence of environmental temperature on transmission of vector-borne diseases*. PI: M Thomas; Co-I: Crane, Mann, **Read** (PSU), Scott (UC Davis). Total c\$US 2.3mill. EF-0914384.
- Pennsylvania Department of Health Tobacco Settlement Funds (2008-2011). *Research infrastructure for new pesticide technologies for control of insect-borne diseases like malaria*. PI: **Read**. \$1,033,333
- Bill and Melinda Gates Foundation (2009-2010). *Giving mosquitoes a 'head cold' to stop odor-driven feeding on humans*. PIs: Baker, Thomas, **Read** (all PSU). \$US100,000.
- Grants prior to move to US**
- The Wellcome Trust. (2007-2009). *Host-parasite interactions elucidated by McMC-based Bayesian inference*. PIs: N. Savill, **Read**. £108,867. Ref. 082601.
- Royal Society of New Zealand, Strategic Relocation Fund. *Infectious disease evolution: strategies to overcome resistance, virulence and vaccine escape*. \$NZ9.7mill + matching funds from Otago University. PI: **Read**. Declined.
- Wissenschaftskolleg zu Berlin (2006-7). Teaching replacement grant (to enable sabbatical leave). PI: **Read** €60,000.
- BBSRC (2006-2010). *Studies leading to sustainable strategies for the control of Marek's disease: Is vaccination responsible for virulence evolution in Marek's disease?* PIs: **Read**, Nair (Institute of Animal Health, Compton, England). £713,930. Ref. BB/E003540/1.
- The Wellcome Trust. (2006-2009). *Maximising the short-term efficacy of fungal biopesticide control of malaria*. PIs **Read**, Thomas (CSIRO Canberra). Terminated by Wellcome Trust 03/08 following move to US. £343,951. Ref. GR079077MA
- The European Commission (2006-9). *The evolution of parasite virulence: ecological processes shaping virulence of Ophryocystis parasites in monarch butterflies and malaria parasites in mosquitoes*. PI: **Read**; Marie Curie International Fellowship to J de Roode. £169,426. Ref. FP6-2004-Mobility-6, Proposal No. 021353-Virulence Evolution.
- The Wellcome Trust (2005-2008). *Parasite evolution in response to blood-stage malaria vaccines*. PI: **Read**; studentship to V. Barclay. £47,087. Ref. 075468/Z/04/A.
- The Wellcome Trust (2004-2009). *Flow cytometry for immunology and parasitology*. PIs: Gray, Anderton, Maizels, Matthews and **Read**. £439,023. Ref. 075855/Z/04/Z.
- BBSRC (2004-2007). *Evolution of sex allocation in protozoan parasites*. PIs: **Read** & S. West; Recognised Researcher, S. Reece. £183,094. Ref. BB/C509915/1
- BBSRC (2004-2007). *Empirical immunology meets evolutionary ecology: the virulence of coinfection* [PIs: J. Allen, **Read** & S. Nee; Recognised Researcher, A. Graham]. £313,872. Ref. BB/C5087341.

The European Commission (2004-2005). *Genetically diverse infection, competition, and the evolution of parasite virulence*. PI: **Read**; Marie Curie Intr-European Fellowship to L. Råberg. €85,534. Ref. MEIF-CT-2003-501567.

The Wellcome Trust (2003-2006). *The role of inflammatory host cytokines and genetic diversity in the determination of malaria virulence*. PI: **Read**; studentship to G. Long. £50,175. Ref. 069299/Z/02/A

The Wellcome Trust (2003-2006). How does in-host competition affect transmission strategies in malaria parasites? PI: **Read**; studentship to A. Wargo. £107,453. Ref. 073094/Z/03/Z.

The Wellcome Trust (2002-2008). Programme Grant: *Parasite life history evolution in response to medical and veterinary intervention*. PI **Read**. £1,187,420. Ref 068292/Z/01/Z.

The Wellcome Trust (2002-2004). *Novel use of fungal entomopathogens for malaria control*. PI: **Read**. £130,038. Ref 068195/B/02/Z. (Supplement £1,750, ref 068195/B/02/A).

The Wellcome Trust (2002). *Centre for Infection Biology and Immunology* (for new Building – now Ashworth 3). PI's: Maizels, Robinson, Allen, Barton, Blaxter, Charlesworth, Gray, Keightley, Leigh Brown, Pemberton, **Read**. £4,734,289. Ref. 064641.

The Wellcome Trust (2001-03). *Developing optimal immunology*. PI's: **Read**, Allen, Nee. £84,335. Ref. 064121/Z/01/Z.

NERC (2000-3): *Does parasite-mediated selection generate dynamical gene frequency fluctuations in wild populations?* PI: **Read**; Recognized Researcher: T. Little. £264,017.

The Wellcome Trust (2001-02). *Do host-parasite arms races occur ex silico?* PI: **Read**. £82,276. Ref. 060770/Z/00/Z.

BBSRC (1997-8). *Evolutionary ecology of host responses to parasitic infection*. PI's: **Read**, Bryant (Stirling). £51,171.

BBSRC (1997-00). *Evolutionary causes and consequences of host responses to parasitic infection* [Fellowship support grant]; PI: **Read**. £138,018 + Read's salary.

The Leverhulme Trust (1997-00). *Evolutionary genetics of parasite virulence*. PI: **Read**. £105,270.

BBSRC (1996-00). *Testing mutational explanations of sexual reproduction*. PI's: **Read**, Barton, Viney; £198,116

The Leverhulme Trust (1996-97). *Is sexual reproduction by parasites an immune evasion strategy?* PI's: **Read**, Viney. £37,320

NERC (1995-98). *Immunocompetence versus ornamentation: an experimental study of sexually-selected breeding coloration and disease resistance in male sticklebacks*. PI's: Braithwaite, Huntingford (Glasgow) & **Read**. £134,270. GR3/10349.

BBSRC (previously AFRC) (1993-97). *Evolutionary ecology of parasite reproductive strategies* [Fellowship support grant]. PI: **Read**. £99,890 + Read's salary.

Leverhulme Trust (1990-4). *Sex allocation and virulence in malaria parasites*. PI's: **Read**, Keymer (Oxford); £97,750.

NERC (1989-92). *Heritability of male quality in great tits*. C. Perrins & **Read** (Oxford). £65,000.

Minor:

NESCent (2010 for 2011) *Catalysis Meeting: Evolution of Infectious Diseases: Integrating Empirical and Modeling Approaches*. PIs Reece, Mideo, **Read**, Savill. \$40,000.

BBSRC (2004, for 2006). International Fellowship Scheme, five month sabbatical visit for Prof. Troy Day, Queens University, Ontario. *The effects of medical intervention on pathogen evolution: integrating theory and data*. PI: **Read**. £6,000.

The Wellcome Trust (2001). Meeting grant: *Parasite Variation: Immunological and Ecological Significance*. 2001. PI's: **Read** and Viney. £2,000. Ref. 065132/Z/01/Z.

The Royal Society (1998). Equipment grant. PI: **Read**. £8,822.

Underwood Fund/BBSRC (1997). To host Prof. Curt Lively, University Indiana, for three month sabbatical. £4,350.
Nuffield Foundation (1995). Summer undergraduate bursary. PI: **Read**. £1,300.
Royal Society (1995). Equipment grant. PI: **Read**. £9,037.
NERC (1994) Small project grant: *Transmission and prevalence of blood parasites in red grouse in relation to grouse survival, parasite sex ratio and abundance of vectors*. PI's: Hudson (Game Conservancy) & **Read** (Oxford). £21,914.
University of Otago, New Zealand (1994). Grant for visit. NZ\$4,000.
Royal Society Research Grant (1991). Equipment grant. PI: **Read**. £10,000.
Oxford University Special Research Grant (1990). *Malaria sex ratios*. PI's: **Read**, Keymer (Oxford). £3,958.
Nuffield Foundation & Royal Society (1990). Study Visit/Travel Grant to Australia and PNG. £2,500.
Norwegian Research Council Visiting Grant (1990). PI's: Skorping (Tromso), **Read**. £6,000.
Leverhume Trust (1989-90): *Sex allocation and virulence in malaria parasites*. PI's: Keymer & **Read** (Oxford). £22,750.

PHD SUPERVISION

Current:

Johanna Ohm (2013-current). PSU Biology. Title TBC. Advisor: **Read**.
Monica Acosta (2012-current). PSU Biology. Title TBC. Advisor: **Read**.

Completed:

Penn State

Nina Wale (2011-2015). PSU Biology. *Evolution-proofing Antimicrobial Drugs Using Resource-depleting Chemotherapy*. Advisor: **Read**. [Currently post-doc, University of Michigan]
Megan Greischar (2009-2014, NSF, NIH). PSU Entomology. *Predicting the Consequences of Diverse Life History in Malaria Parasites: Synchrony and Transmission Investment*. Advisors: Bjørnstad, **Read**. [Currently post-doc, University of Toronto]
Katey Glunt (2008-2013, NIH). PSU Biology. *Understanding the Consequences of Sub-Lethal Insecticide Concentrations for Insecticide Resistance Management and Malaria Control*. Advisors: **Read**, Thomas. [Currently Research Fellow, Barcelona Centre for International Health].
Penny Lynch (2004-2013, self-funding) (Open University PhD). *Mathematical Modelling of the Effects of Health Interventions on the Evolution of Life History in Disease-Causing Organisms*. Supervisors: Dr U. Grimm (Mathematics, Open University) and **Read**. [Currently City of London analyst and part time post-doc with Mike Boots, UC Berkeley].

University of Edinburgh

Silvie Huijben (2006-2009, Darwin Trust studentship). *Experimental Studies on the Ecology and Evolution of Drug-Resistant Malaria Parasites*. Supervisor: **Read**. [Stayed on as post-doc after our move to the US, then Branco Weiss Fellowship at the Barcelona Center for International Health, Spain, now Assistant Professor, Arizona State University].
Vicki Barclay (2005-2008, WT studentship). *Studies Evaluating the Possible Evolution of Malaria Parasites in Response to Blood-stage Vaccination*. Supervisor: **Read**. [Stayed on as post-doc after our move to the US, then post-doc, Salathe group, Penn Stat, now Associate Director, Gene Therapy Program, University of Pennsylvania].

- Grainne Long (2003-2006, WT studentship). *The Role of Inflammatory Host Cytokines and Genetic Diversity in the Determination of Malaria Virulence*. Supervisors: **Read**, Allen, Graham. [After Early Development Career Fellow, MRC Epidemiology Unit, Cambridge University, UK, and post-docs at Penn State and University of Sheffield, now Epidemiologist/Real World Data Scientist, Roche Pharmaceuticals, Welwyn Garden City, UK].
- Katrina Grech (2003-2006, WT PGRA) (Open University PhD). *The Ecology and Evolution of Malaria: Laboratory Studies of Plasmodium chabaudi and its Rodent and Insect Hosts*. Supervisor: **Read**. [Currently Research Officer, Drug Modelling Program, University of New South Wales, Sydney after Research Scientist, Moredun Research Institute, Edinburgh].
- Andrew Wargo. (2003-2006, WT Prize Studentship & ORS). *How Does In-host Competition Affect Transmission Strategies in Malaria Parasites?* Supervisor: **Read**. [Currently Assistant Professor, Virginia Institute of Marine Science after post-doc, Dept Pathobiology, University of Washington, Seattle and at USGS Western Fisheries Research Center, Seattle].
- Jaap de Roode (2001-2004, Darwin Trust), PhD: *Within-host Competition and the Evolution of Malaria Parasites*. Supervisor: **Read**. [Currently, Associate Professor, Biology Department, Emory University, GA, USA after Marie Curie International Travelling Fellowship, Athens, GA, USA;].
- Meghan Gannon (2001-2004, NSF & ORS), PhD: *Plasticity in Reproductive Traits*. Supervisors: **Read**, Little, West. [Currently post-doc, Buffalo State College & Buffalo Museum of Science, NY, USA].
- Lucy Crooks (1996-2004 [2 years abeyance on health grounds]; MRC studentship), PhD: *Gametocyte Investment in Malaria*. Supervisor: **Read**. [Currently Senior Lecturer (Associate Prof), Genomics and Bioinformatics, Sheffield Hallam University, UK, after post-docs at Sanger Center, Cambridge, UK, Dept Animal Breeding and Genetics, Swedish University of Agricultural Sciences, Uppsala, and at the ETH Zurich].
- Sarah Reece (2000-2003; NERC), PhD: *Evolution and Ecology of Sex Allocation*. Supervisors: West, **Read**. [Professor of Evolutionary Parasitology and Royal Society Fellow, University of Edinburgh, after NERC and Wellcome Fellowships, University of Edinburgh, following lectureship, University of Stirling].
- Heather Ferguson (1999-2002; Science Faculty Scholarship & ORS), PhD: *The Ecology and Evolutionary Implications of Malaria Parasite Virulence in Mosquito Vectors*. Supervisor: **Read**. [Currently, Reader (Associate Prof) University of Glasgow, after BBSRC David Phillips Fellowship, University of Glasgow and Ifakara Health Research and Development Centre, Ifakara, Tanzania].
- Rebecca Timms (1997-2001; BBSRC studentship), PhD: *The Ecology and Evolution of Virulence in Mixed Infections of Malaria Parasites*. Supervisor: **Read**. [Currently Associate Director, Corporate Finance, Bank of Scotland].
- Katrina Lythgoe (1996-1999; BBSRC studentship), PhD: *Genetic Variation in Structured Populations: Space, Time and the Red Queen*. Supervisors: Barton, **Read**. [Currently Sir Henry Dale Research Fellow, University of Oxford, formerly held at Imperial College, London, after being editor *Trends in Ecology and Evolution*, following a Wellcome Travelling Fellowship at Dept. Biology, UC San Diego and with me in Edinburgh, and an MSc in Science Communication, Imperial College, London].
- Alan Gemmill (1995-1999; NERC studentship), PhD: *Experimental and Comparative Analyses of the Evolutionary Ecology of Parasitic Nematodes*. Supervisors: **Read**, Viney. [Currently Senior Research Officer, Austin & Repatriation Medical Centre, University of Melbourne].
- Angus Buckling (1995-1998; MRC studentship), PhD: *Ecological and Evolutionary Effects of Intervention Strategies on the Transmission of Malaria Parasites*. Supervisor: **Read**. [Currently Professor, University of Exeter, after Royal Society University Research Fellow and lecturer, Oxford University, following a lectureship, University of Bath].
- Louise Taylor (1993-1997; MRC studentship), PhD: *Epidemiological and Evolutionary Consequences of Mixed-Genotype Infections of Malaria Parasites*. Supervisor: **Read**. [Currently a part time editor and full time mother, following a Wellcome Research Fellow at Centre for Tropical Veterinary Medicine, University of Edinburgh].

Tromsø University, Norway

Per Arneberg (1993-1996; research assistantship, University of Tromsø, Norway), PhD: *Commonness and Rarity among Mammalian Nematodes. A Comparative Study of Parasite Abundance*. Supervisors: Skorping, **Read**. [Currently Research Scientist, Institute of Marine Research following Norwegian Research Council Fellowship, Tromsø University].

University of Oxford, England

Stephanie Schrag (1989-1993; Marshall Scholarship, Oxford), D.Phil. *Factors Influencing Selfing and Outcrossing Rates in the Freshwater Snail, Bulinus truncatus*. [Currently a Senior Research Epidemiologist, CDC Atlanta, after Post-doc, Department of Biology, Emory University, Atlanta, USA]. Supervisors: **Read**, Keymer.

Failed to complete: Rosie Allister (2005-2007; BBSRC studentship + vet supplement). *Evolution of drug resistance and virulence in trypanosomes*. Supervisors: **Read**, Matthews. Withdrew on grounds of ill health.

Supervisory committees

PSU: James Fraser (Molecular, Cellular and Integrative Biosciences, 2016-current), Lauren Quevillon (Biology, 2016-current), Duverney Chaverra-Rodríguez (Entomology, 2016-current), Juan Raygoza (Biochemistry and Molecular Biology, 2015-2016), Suprita Singh (Biochemistry and Molecular Biology, 2015-current), Utsav Pandey (Biochemistry and Molecular Biology, 2015-current), Elyse Munoz (Genetics, 2013-2017), Kezia Manlove (Biology, 2013-2016), Todd Bodmar (Biology, 2013-2015), Els Campbell (Biology, 2013-current), Raquel Loreto (Entomology, 2013-2016), Becky Hennig (Entomology, 2013-2015), John Parkinson (Biology, 2011-2014), Lindsay Beck-Johnson (Biology, 2009-2013), Maia Rabaa (Biology, 2010-2012), Rob Anderson (Entomology, 2009-2011), Ronnie Childs (Entomology, 2008-2011), Olivier Rolin (IID 2008-2012), Jennie Lavine (Entomology 2008-2011), Daniel Tyler (Tay) Pettay (Biology 2008-2011), Heather Simmons (Biology, 2007-2011), Cadhla Ramsden (Biology, 2007-2009), Sara Hester (BMB 2008-2012).

Edinburgh: A. Duncan, B. Craig, T. Lamb, R. Floyd, K. MacKenzie, L. Kruuk, C. Wade.

Oxford: R. Trevelyan, M. Sullivan.

RESEARCH ASSOCIATES, POST-DOCS AND SPONSORED POST-DOC FELLOWS

Current

Andy Bell (2003-2011; 2013-current). Senior Research Associate

Elsa Hansen (2013-current). Senior Research Associate

David Kennedy (2012-current).

Alumni

Eleanore Sternberg (2012-2014) [EU] Now Research Associate, Thomas Group, Penn State

Jessica Waite (2012-2015) [EU]. Now Research Manager, Thomas Group, Penn State

Jacqui Montgomery (2013-2014). [NIH]. Now Project Development Director, Eliminate Dengue, Monash University, Australia.

Courtney Murdock (2009-2014) [NSF]. Now Assistant Professor, University of Georgia, Athens, GA.

Lauren Cator (2011-2014) [PSU]. Now Assistant Professor, Imperial College, London.

Simon Blanford (2002-2014). [NIH]. Now house dad.

Laura Pollitt (2012-2013) [NIH]. Now statistician, Scottish Government, after Research Fellowship, University of Edinburgh.

Rahel Salathe (2011-current) [PSU]. Now full time mom.

Nicole Mideo (2012-2013). [NIH]. Now Assistant Professor, Toronto University.

Silvie Huijben (2009-2012). [NIH]. After Branco Weiss Fellowship at the Barcelona Center for International Health, Spain, now Assistant Professor, Arizona State University.

Krijn Paaijmanns (2008-2012). [NSF]. After Assistant Professor, Barcelona Center for International Health, now Assistant Professor, Arizona State University.

Sue Baigent (2008-2011). [BBSRC]. Pirbright Institute, UK. Now retired.

Vicki Barclay (2008-2011). [PSU]. After Post-doc, Salathe lab, PSU, now Associate Director, Gene Therapy Program, University of Pennsylvania.

Kathryn Crouch (2006-8). [BBSRC]. Now in business.

Petra Schneider (2006-2007). [Wellcome Trust]. Now Post-doctoral Fellow, University of Edinburgh.

Simmi Mahajan (2005-2007). [BBSRC]. Lost contact.

Damien Drew (2005- 2007). [BBSRC]. Now Senior Research Officer, Burnet Institute, Melbourne.

Lars Råberg (2004-2005). [Marie Curie Fellow]. Now Assistant Professor, University of Lund.

Katrina Lythgoe (2001-2002). [Wellcome Trust Travelling Fellowship]. Currently Sir Henry Dale Research Fellow, University of Oxford, formerly held at Imperial College, London, after being editor *Trends in Ecology and Evolution*, following a Wellcome Travelling Fellowship at Dept. Biology, UC San Diego, and an MSc in Science Communication, Imperial College, London.

Andrea Graham (2001-2004). [Wellcome Trust]. Now Associate Professor, Princeton University, after Leverhulme and BBSRC Fellowships at the University of Edinburgh.

Sylvain Gandon (2001- 2002). [Wellcome Trust Biomathematics Fellowship]. Now CNRS Research Director, Montpellier.

Sue Mitchell (2000-2004). [NERC]. Now Director, Spot-On Data Solutions, and Aeona, Executive Life Coaching and Leadership Development.

Tom Little (2000- 2002). [NSERC (Canada) then Wellcome Trust]. Now Full Professor, University of Edinburgh after SBS Research Fellowship and then Wellcome Trust Senior Research Fellow, University of Edinburgh.

Claus Wedekind (2000-2003) [Swiss Marie Curie Fellowship]. Now Associate Professor, University of Lausanne.

Marg Mackinnon (1998-2000). [Leverhulme]. Now Research Fellow, Wellcome Trust Unit, Kilifi, Kenya, after Dorothy Hodgkin Fellowship, Universities of Edinburgh and Cambridge.

Ana Rivero (1999-2000). [BBSRC]. Now a CNRS Research Director, Montpellier, after post-doc in Montpellier, then on a five year Research Fellowship, Spain.

Stu West (1997-1999) [BBSRC]. Now Full Professor (Established Chair), University of Oxford, having been a Royal Society and BBSRC Fellow and Personal Chair, University of Edinburgh.

COMMUNITY SERVICE:

- Invited Organizer, Plenary Session, ASM Microbe 2017, Evolutionary Battles Between Microbes and Hosts.
- Chair, Williams Prize Committee, International Society for Evolution, Medicine & Public Health (2016-2017)
- Chair, Omenn Prize Committee, International Society for Evolution, Medicine & Public Health (2016)
- Co-organised NIH/NIGMS workshop (2015): Ecology's Role in Population Genetics and Evolution (15 people from across the US). Bethesda, MD. Co-organizers: Sarah Schaack [Reed College] and Daniel Janes [NIH/NIGMS]

- External Scientific Advisory Committee, Center for Evolution and Medicine, Arizona State University (2015–current).
- Chair, Publications Committee, International Society for Evolution, Medicine & Public Health. (2015–current).
- Organised RAPIDD Workshop, Aquacultural Disease and the Evolution of Virulence (25 people from Europe & US). Co-organisers D. Kennedy [PSU] and G Kurath [USGS]. Seattle (2012).
- Organised RAPIDD Workshop, Evolution of Virulence from Wildlife to Farms (25 people from Europe, US and Asia). Co-organiser C. Webb, [Colorado State]. Fort Collins (2011).
- Steering Committee, American Academy of Microbiology Colloquium, *Designing Drugs That Last*. Philadelphia (2012).
- Co-organised NScent Catalysis Meeting (30 people from Europe and North America). Co-organized with S. Reece, N. Mideo, N. Savill, University of Edinburgh. Duke University (2011)
- Reviewer/interviewer, Strategic Awards Committee, The Wellcome Trust, London (2010).
- Scientific Advisory Board, DFG Priority Program Host-Parasite Coevolution, Germany (2009–current).
- Scientific Advisory Board, Finnish Centre of Excellence in Evolutionary Research (2006–2011).
- Scientific Advisory Board, School of Biological Sciences, University of Cambridge (2006–2008).
- John Maynard Smith Prize Panel, European Society of Evolutionary Biology (2007)
- Philip Leverhulme Prize Panel for Zoology, The Leverhulme Trust, London (2006, 2008).
- NCEAS working group on Establishing Ecology & Health, Santa Barbara, 2006.
- Heads of International Research Organizations (HIRO), Brainstorming Meeting on Ecology of Infectious Diseases, Bethesda, USA, (2005).
- Chair, External Review, Institute of Zoology (2003).
- Scientific Awards Committee, Zoological Society of London (2003-2007; Chair 2005–2007).
- External Examiner, BSc (Biology), University of Stirling (2001-2004).
- Vice Chair, Biodiversity Grant Panel, The Wellcome Trust (2000-2002).
- Member, Infection and Immunity Grant Panel, The Wellcome Trust (1997-2001).
- Member, SHoWCaSE Grant Panel, Wellcome Trust (1999).
- Member British Society for Parasitology, Society for the Study of Evolution, Society of American Naturalists, American Association for Advancement of Science, American Society for Tropical Medicine and Hygiene.

EDITORIAL BOARDS:

- Editorial Board *PLoS Biology* (2012–2019).
- Advisory Board, *Evolutionary Applications* (2008–current).
- Associate Editor, *Evolutionary Applications* (2012–current).
- Senior Associate Editor, *Evolution, Medicine and Public Health* (2012–current).
- Associate Editor, *Evolution* (2009–2011)
- Editorial Board, *Proceedings of the Royal Society of London Series B* (2002–2008).
- Editorial Advisory Board, *Trends in Ecology and Evolution* (2000–current).
- Editorial Board, *Journal of Evolutionary Biology* (1996–2000).

EXTERNAL PHD EXAMINER:

- University of Melbourne, Australia: 2014 [C. Kinnear, *Evolutionary Implications of Imperfect Vaccines in a Mouse Typhoid Model*]
- University of New England, Australia: 2013 [Tanzila Islam, *Replication Kinetics, Shedding, Transmission and Protective Efficacy of Rispens/CVI988 Vaccine Virus in Single and Combined Infections with Very Virulent Marek's Disease Virus.*]
- Bergen University, Norway: 2011 [Jon Magerøy, *Environmental Impact on Host-Parasite Interaction. A Study on the Adaptive Value of Host Castration and Gigantism When Hosts Can Regain Reproduction*]
- Bergen University, Norway: 2004 [Per Holmstad, *Do Parasites Affect Ptarmigan Population Dynamics?*]
- Lund University, Sweden: 2002 [L Råberg, *Costs in the Ecology and Evolution of the Vertebrate Immune System*]
- Imperial College at Silwood Park: 2001 [J Ferrari, *Evolution of Resistance to Natural Enemies*]
- University of Cambridge: 2000 [S P Brown, *Social Evolution in Parasites*]
- University of Pierre & Marie Curie, Paris: 2000 [S Gandon, *Evolution and Coevolution in Metapopulations*]
- University of Oxford: 2000 [C M Davies, *Snail-Schistosome Interactions and the Evolution of Virulence*]
- ETH, Switzerland: 1999 [S. Negovetic, *On the Maintenance of a Cline in Mixed Clonal and Sexual Populations of the Freshwater Snail Potamopyrgus antipodarum (Gastropoda: Hydrobiidae)*]
- University of Cambridge: 1999 [T L Braisher, *Genetic Variation in Trichostrongylid Parasites of the Soay Sheep on St Kilda*]
- University of Tromsø, Norway: 1999 [D A Lysne, *The Epidemiology of Macroparasites on Caged Atlantic Cod (Gadus morhua L.)*]
- Uppsala University, Sweden: 1998 [D Nordling, *Trade-offs Between Life History Traits and Immune Defence in the Collared Flycatcher Ficedula albicollis*]
- Imperial College at Silwood Park: 1998 [M Fellows, *Costs of Resistance in Drosophila melanogaster*]
- Oxford University: 1996 [B Walther, *Comparative Analyses of Ectoparasite Communities*]
- Uppsala University, Sweden: 1995 [R Dufva, *Parasites, Reproductive Success and Health Status in Birds*]

TEACHING:

Penn State

- SC200 – Science in Our World: Certainty and Controversy (2010–current). Course director. Conceived and developed course; teaching the vast majority of it. 70 non-science majors in 2010, 100 in 2011, 170 in 2012 and 2013, 205 in 2014, 330 in 2015, 357 in 2016. <http://sites.psu.edu/siowreflections/>
- Presentations on SC200 to PSU's e-Education Council, PSU's Symposium for Teaching and Learning with Technology, ECoS Dean's Alumni Advisory Board, Department of Biochemistry and Molecular Biology, and Department of Biobehavioral Health (all 2011).
- Guest Lecture, Penn State Altoona (2013).
- SC 297 Frontiers of Research, Lecture to 300 Freshman science students (2013, 2014).
- Guest lecture WSF460 Wildlife Behavior (2012).
- Two sessions with BMBB 598C Microbiology (2012, 2014, 2015).
- Two sessions with ENT 597A Frontiers in Insect Science (2009, 2012, 2013).
- Semester long grad course, BIOL 592 Evaluation of Biological Literature (2009).
- Co-taught semester long grad course ECOL 597 Evolutionary Ecology (2009).
- Undergrad researcher experience in the lab: Yumna Ahmed (2017-current), Clarisse Solis (2017-current), Taylor Ziegler (2016-current), Joash Lake (2015-current), Bridget Garrity (2016-current), Briana McLeod (2014-current), Michelle Lai (2013-current), Josh Bram (2012-2016), Rebecca Seliga (2010-2012), Courtney Babb (2011-2012),

Melissa Moody (2010-2011), Lucas Nell* (2009-2010), Danielle Tomasello* (2008-2009). *=author on refereed lab papers.

University of Edinburgh

- Pathogen Evolution Module, 4th year Medical Microbiology (2003–2005). Course organiser, 4 lectures, plus associated computer practicals and tutorials.
- Malaria Module, 4th year Zoology course (2003–2006). Three lectures plus associated discussion sessions.
- Quantitative Zoology, 4th year Zoology course (1999–2006). Designed and developed course; course organiser, 12 lectures, plus associated computer practicals and tutorials.
- Evolution Core Module, 4th year Zoology course (1998–2003). Six lectures.
- Community and Population Biology, 1st year course (2000–2006). Five lectures and associated library project on Animal Extinction.
- Population and Community Ecology, 3rd year course (2000–2002). Four lectures and two associated practicals.
- Miscellaneous lectures in Evolutionary and Ecological genetics (3rd year) and Biometrics 2h (2nd year), and 0th week Gee-Whizz Evolution lecture for 1st year students.

Other

- Guest Lectures, Evolutionary Medicine courses at Queens and Toronto Universities (2016-2017)
- Faculty, Lausanne Graduate Workshop in Evolutionary Biology, Riederalp, Switzerland (2015).
- Guest Lecturer, Evolutionary Medicine course, Yale University (2012, 2013).
- Faculty, Guarda Workshop in Evolutionary Biology, Switzerland (2006, 2012).
- Tromsø University, Norway, graduate course in epidemiology (1993-1996).
- Supervision of 2-6 undergraduate projects per year at Edinburgh (1995–2006); five at Oxford (1987-1990).
- Undergraduate laboratory classes (Otago University 1983-1985).
- Undergraduate tutorials in evolution, behaviour and ecology (Oxford University 1986-1992).

UNIVERSITY SERVICE:

Penn State

- Director, Center for Infectious Disease Dynamics (2010-current) www.ciddd.psu.edu
- Search Committee, Director Huck Institutes of Life Sciences (2017-current)
- Steering Committee, Penn State's Keystone Institute (2016-current).
- Enhancing Health Steering Committee, PSU Strategic Plan Implementation (2016-current)
- Huck Scientific Advisory Board on Global Health Biosecurity (2016-current)
- Chair, Seminar Committee, Department of Biology (2016-current)
- Nominations Committee, Department of Entomology (2016-current)
- Chair, Search Committee, Professor of Entomology: Mosquito Transmission of Biosafety Level 3 Arboviruses (2016-7).
- Chair, Alex and Jessie C Black Award for Excellence in Research Committee, College of Ag Sci (2016).
- Search Committee, BSL3 Faculty, Department of Veterinary and Biomedical Science, College of Ag Sci (2015-2017)
- Search Committee, Academic Administrator Replacement, Department of Biology (2015)
- Search committee, Chair of Biology (2015)
- Search committee, Dean, Eberly College of Science (2014-5)
- Tombrose Fellow responsible for general education development, Center for Excellence in Science Education, Eberly College of Science, Penn State (2012-2014)
- Directors Advisory committee, Huck Institute for Life Science (2013–current)
- Huck Institute Transformative Science award committee, Huck Institute for Life Science (2012-3)
- Awards Committee, Department of Entomology (2011-2014)
- Department Head Advisory Committee, Department of Entomology (2012-2014)

- Mentoring Committee, Department of Biology (2007–2016)
- Faculty Mentor: Jesse Lasky (Assistant Professor, Department of Biology, 2016-current), Heather Hines (Assistant Professor, Dept Biology, 2013-current), Ping Du (BIRCWH Scholar, Assistant Professor, Division of Epidemiology, Dept Public Health Sciences, 2010–2013); David Hughes (Assistant Professor, Dept. Entomology, 2011–current); Matt Ferrari (Assistant Professor, Dept Biology, 2011–tenure, 2016); Marcel Salathe (Assistant Professor, Dept Biology, 2011–2015, left PSU pre-tenure), Isabella Cattadori (Assistant Professor, Dept Biology, 2009–tenure, 2014).
- Seminar Organiser, Entomology Department (2010-2011)
- Promotion and Tenure Review Committee, Department of Biology (2010–2012)
- Huck Infectious Disease Cluster Hire Umbrella Committee (Chair) (2009–2011) [c.15 faculty hired]
- Advisory/Long Term Planning Committee, Department Biology (2009–current)
- Promotion and Tenure Review Committee, Department of Entomology (2009–2011)
- Faculty and Staff Awards Committee, Department of Biology (2008–current)
- Candidacy Committee, Department of Biology (2009–2016)
- Graduate Committee, Department of Biology (2007–2008)

Edinburgh

- Convener of Exam Board, Evolutionary Biology Honours (2005–2006)
- Convener of Exam Board, Zoology Honours (1999–2006)
- Convener of Exam Board, Animal Biology 2h, Parasite Biology 3M, and Behavioural Ecology 3M (1999–2006)
- Convener of Exam Board, Population and Community Ecology 3 (2004–2006)
- Chairman, Davis Trust Committee (2000–2006)
- Management Committee, Centre for Infectious Diseases (2003–2006)
- Management Advisory Group, ICAPB (1998–2004)
- SBS Animal Units Management Group (1999–2006)
- Steering Committee, School of Biology (1999–2003)
- Chairman of Examiners, Parasitology Honours (1999–2003)
- Faculty Research Staff Review Board (1999–2001)
- Member, University Disciplinary Tribunals and Grievance Committee (1999–2003)
- Internal PhD examiner: 1995 [Blackman], 1998 [Healer], 1999 [Wedgewood-Oppenheim], 2001 [Rokas], 2002 [Aboobaker].

FURTHER EDUCATION:

- Insights Programme: leadership and management development for senior academics, University of Edinburgh (2006)
- UK Home Office, Modules 1-3, Animal Licensing (2000)
- UK Home Office, Module 5 course, Animal Licensing (1999)
- Contract Researcher Initiative SHEFC Project (CRISP) Research Managers Workshop (1997)
- BBSRC Media Training Course (1997)
- Open University: Introduction to Calculus (1995), Mathematical Methods and Models (1996)
- Wellcome Trust Summer School 'Molecular Parasitology' (1990)

PUBLIC OUTREACH:

- Penn State Village. Invited talk. *Antibiotic Resistant Superbugs*. 2017.
- Research Unplugged, Schlow Library. State College. Invited talk: *Antibiotic Resistant Microbes: Threat to American Lives and Global Economy*. 2017.

- 23rd Annual American Society for Microbiology Conference on Undergraduate Education (ASMCUE). Invited talk : *Overwhelming Evolution. Patients, Microbes and the Darwinian Process*. 2016.
- University Health Services, University Park. Invited seminar (Continuing Medical Education): *Antimicrobial resistance, patients and the Darwinian process*. 2016.
- 21st Annual Advances in Physiology & Pharmacology in Anesthesia and Critical Care, Wake Forest Baptist Medical Center NC held at the Hilton Head Island, SC. 2014. Special Lecture (Continuing Medical Education): *Our bugs are getting smarter, are we?*
- Eberly Family Distinguished Lecture, *Medicine and the (mis)Management of Evolution*. Penn State, 2015.
- Wissenschaftskolleg zu Berlin, Public Lecture *When Evolution Matters*. 2014.
- Coursera MOOC *Epidemic – the Dynamics of Infectious Diseases*. I am one of 8 PSU faculty involved in producing this course; I produced 8 videos and contributed to overall course design. Ran from October 2013. <https://www.coursera.org/course/epidemics>
- Palo Alto Institute <http://paloaltoinstitute.org/> Invited speaker, Evolutionary Medicine symposium. <https://www.paloaltoinstitute.org/events/evolutionary-medicine>. 2012.
- Invited speaker TedMed 2012 <http://www.youtube.com/watch?v=cvXc9aMF6CA>
- Member, NESCent Working Group “*Infusing Premedical and Medical Education with Evolutionary Thinking*”. This is aimed at developing model curricula and curricular Materials in Evolutionary Medicine. Participant, 2012-2013.
- Co-organizer and teaching faculty on CME course *Evolutionary Foundations for Medicine and Public Health* with special emphasis on Cancer and Infections. This week long course at the Mt Desert Island Biological Laboratories was designed primarily to introduce physicians, public health specialists and non-evolutionary biomedical scientists. 2012.
- ECoS Frontiers of Science public lecture in the series *Epidemic! Infectious Disease on a Changing Planet*. Viewable at <http://science.psu.edu/news-and-events/lectures-and-events/frontiers/watch-videos/epidemic/future-of-disease-in-pharmaceutical-age>. 2011.
- Penn State Physician CME Weekend, Annual Physician Alumni Gathering. (Invited lectures). 2010, 2013.
- Princeton University, Public lecture, *The Future of Infectious Disease in a Pharmaceutical Age* sponsored by Princeton University Press. 2010.
- Major contributor to BBC Horizon Documentary ‘Are humans still evolving?’. 2010.
- Pennsylvania Veterinary Medical Association, 9th Annual Spring Clinic. (Invited speaker). 2007.
- Festival of Science, British Association for the Advancement of Science (Invited public lecture). 2007
- International Congress of Parasitology, Glasgow (Invited public lecture). 2006.
- British Association for the Advancement of Science Media Fellow 2003. Six week placement with *The Irish Times*, Dublin, culminating in a week covering the BA Festival of Science. For full list of published stories, plus thoughts and a sample of published articles see <http://www.thereadgroup.net/author/andrew/>
- Acadia University, Canada. 17th Annual Huggins High School Science Seminar (Invited Keynote). 2002.
- Faculty of Science and Engineering, University of Edinburgh (Invited public lecture). 1997.

SABBATICALS AND SIGNIFICANT LEAVE

- ETH Zurich (Sabbatical, September 2017-August 2018).
- Department of Internal Medicine, Division of Infectious Diseases, University of Michigan Medical School (March-August 2014) (Research Leave).
- Wissenschaftskolleg zu Berlin (2006-7) (Sabbatical from University of Edinburgh)

INVITED CONFERENCE PRESENTATIONS AND RESEARCH SEMINARS:

2018

Darwin Lecture, Institute of Cancer Research, UK (February) (Invited seminar).

2017

Max Planck Institute for Evolutionary Biology, Ploen, Germany (December) (Invited seminar).
Glaxo Smith Kline, Belgium. Workshop: *Prioritizing vaccines to fight antimicrobial resistance* (July) (Invited speaker).
ASM Microbe 2017, New Orleans (Invited plenary).
Department of Microbiology, New York University School of Medicine (Invited seminar).

2016

Penn State Hershey Medical School (Invited speaker, Grand Rounds).
Penn State MD/PhD Retreat (Invited speaker).
NIH Rockview, MD (Invited seminar).
ISGlobal, Barcelona (Invited seminar).

2015

Georgetown University, Department of Biology (Invited seminar)
NIH/NIGMS, Workshop: *Ecology's Role in Population Genetics and Evolution*, Bethesda, MD (invited speaker)
Royal Society-National Academy of Sciences Sackler USA-UK Scientific Forum *Trends in Synthetic Biology and Gain of Function and Regulatory Implications* London (Invited speaker)
Latsis Symposium, *Drug Resistance*, ETH Zurich, Switzerland (Invited speaker).
Department of Ecology and Evolution, University of Lausanne, Switzerland (Invited seminar).
Inaugural Meeting, Foundation for Evolution, Medicine and Public Health, Phoenix, AZ (Invited speaker).
International Poultry Scientific Forum, Atlanta (Dendy Keynote Address).

2014

MEEGID XII – 12th International Conference on Molecular Epidemiology and Evolutionary Genetics of Infectious Disease, Bangkok, Thailand (Keynote speaker).
NSCent Celebration, Durham NC (Invited speaker).
Department of Ecology and Evolutionary Biology, University of Michigan (Invited seminar).
10th International Symposium on Marek's Disease and Avian Herpesviruses, East Lansing, Michigan (Accepted talk).
School of Public Health, Yale University (Invited seminar).
Department of Ecology and Evolutionary Biology, UCLA (Invited seminar).
Department of Life Sciences, EPFL, Switzerland (Invited seminar).
British Society for Parasitology, Annual Conference, Cambridge, UK (Invited speaker).
Department of Ecology and Evolutionary Biology, University of Michigan (Invited keynote, Young Investigator Symposium).
School of Life Sciences, Arizona State University (Invited seminar).
Department of Genetics, North Carolina State (Graduate student invited seminar).

2013

Department of Ecology and Evolutionary Biology, Yale University (Invited seminar).
Foundation Mérieux, Annecy France, Meeting, Vaccination: an evolutionary engine for species? (Invited speaker).
Drexel University College of Medicine, PA (Invited seminar).
Intecol Congress, London, UK (Invited Speaker).
Gordon Conference, Microbial Population Biology (Plenary speaker).
2nd International Biannual Evolution and Cancer Conference, UCSF (Plenary speaker).
American Society of Naturalists, Vice Presidential Symposium, Snowbird, Utah (Invited speaker).
British Society for Parasitology Annual Conference, Bristol, UK (Plenary conference speaker + Keynote speaker in the associated British Ecological Society Special Interest Symposium).
University of Chicago Medical School (Invited seminar).
Department of Ecology and Evolution, University of Chicago (Invited seminar).
Evolutionary Medicine Month, UCLA Medical School (Invited, Grand Rounds).

2012

Avian Disease and Oncology Laboratory, ARS, USDA, East Lansing, Michigan (invited seminar).

RAPIDD Drug Resistance and Coinfection Workshop, Princeton University (invited speaker).
Ecology and Evolution of Infectious Disease Annual Meeting, Berkeley (invited speaker).
Department of Ecology and Evolutionary Biology, Yale University (Invited seminar).
Division of Biology, Kansas State University (Invited seminar).
Department of Biology, University of Vermont (Invited seminar).
Institute for Science and Technology, Austria (Invited seminar).
Department of Pharmacology, University of Hawaii, Hilo (Invited seminar).

2011

Department of Biology, University of Bergen, Norway (Invited seminar).
Department of Biology, University of Rochester, NY (Invited seminar).
International Meeting on Malaria and Related Haemosporidian Parasites of Wildlife, NSF-sponsored Research
Coordination Network for Haemosporida of Terrestrial Vertebrates (Plenary speaker).
American Association of Veterinary Parasitologists/Livestock Insect Workers Conference/International Symposium of
Ectoparasites of Pets, St Louis, Missouri (Plenary speaker).
Laboratory of Parasitic Diseases, National Institutes of Health, Bethesda (Invited seminar).
Stanford University School of Medicine CA, Department of Microbiology and Immunology (Invited seminar).
Louis Thaler Lecture, IFR “Biodiversité”, Montpellier, France.
Department of Biological Sciences, Vanderbilt University, Nashville TN. (Invited seminar).
National Academy of Sciences Colloquium *In the Light of Evolution V: Cooperation*, Irvine CA (Invited speaker).

2010

Keystone Symposium, *Molecular Targets for Control of Vector-Borne Diseases: Bridging Lab and Field Research*,
Copper Mountain, Colorado (Invited speaker)
Princeton University, Frontiers in Biology Public Seminar Series (Invited speaker).
Department of Ecology and Evolutionary Biology, Princeton University, NJ (Invited seminar).
Walter Reed Army Institute of Research, MD. (Invited, Distinguished Speakers Seminar Program)

2009

*Epidemics*² Conference, Athens, Greece, December (Invited keynote speaker).
University of Lausanne, Switzerland, Implications of Evolution for Human Health (Invited speaker).
Finnish Centre of Excellence in Evolutionary Research, University of Jyväskylä (Invited seminar).
Institute for Animal Health, Compton, UK (Invited seminar).
MITACS Summer School, Mathematics of Evolution and Invasions in Ecology and Epidemiology, Banff International
Research Station for Mathematical Innovation and Discovery (Invited speaker).
Department of Biology, University of Virginia (Invited seminar).

2008

American Museum of Natural History (Invited seminar).
Department of Molecular Microbiology and Immunology and the Division of Infectious Diseases of Johns Hopkins
University Medical Institutions (Invited seminar).
ESF Exploratory Workshop: Re-evaluating the extended phenotype paradigm in evolutionary biology. Copenhagen.
(Invited participant).
NIH National Institute of Allergy and Infectious Diseases Twinbrook Campus (Invited seminar).
Department of Entomology, University of Maryland (Invited seminar).
The American College of Epidemiology, Annual Meeting, Symposium: The Dawn of Evolutionary Epidemiology:
Applying Evolutionary Theory in an Epidemiologic Context. Tucson, AZ (Invited speaker)
Department of Biology, University of Notre Dame, IL (Invited seminar).
Ecology and Evolution of Infectious Disease Conference, Fort Collins, Colorado (Invited speaker)
Finnish Centre of Excellence in Evolutionary Research, University of Jyväskylä (Invited seminar).
Institute for Advanced Study, Berlin, Workshop: New Opportunities at the Evolution Medicine Interface (Invited
speaker).
Yale University, Symposium on Evolutionary Medicine (Invited speaker).

2007

XIth Congress of European Society for Evolutionary Biology. Uppsala, Sweden (Invited speaker).
ESF conference: The impact of the environment on innate immunity. Obergurgl, Austria (Invited speaker).
ETH Zurich, Switzerland (Invited seminar).
University of Emory, Atlanta, GA, USA, Dept of Biology (Invited seminar).
Penn State University, PA, USA, Dept of Biology (Invited seminar).
Wissenschaftskolleg zu Berlin, Germany (Invited seminar).

2006

Finnish Centre of Excellence in Evolutionary Research, University of Jyväskylä (Invited seminar).
European Molecular Biology Laboratory, 8th International EMBL PhD Student Symposium: Biology of Disease, A
Molecular Battlefield (Invited speaker).
University of Basel, Department of Biology (Invited seminar).

2005

Wellcome Trust Centre for Molecular Parasitology, University of Glasgow (Invited seminar).
Gordon Conference, Malaria, Oxford (Invited speaker).
Xth Congress of European Society for Evolutionary Biology, Krakow, Poland (Invited speaker).
Department of Biology, Queens University, Canada (Invited seminar).
Department of Zoology, University of Toronto, Canada (Invited seminar).
Centre for Discrete Mathematics and Theoretical Computer Science (DIMACS) Workshop on Evolutionary
Considerations in Vaccine Use. Rutgers University, New Jersey, USA.

2004

Journées Scientifiques, Laboratories «Functioning and Evolution of Ecological Systems» and «Evolutionary
Parasitology» Paris (invited speaker).
Jacques Monod Conference on Evolutionary Ecology of Host-Parasite Relationship. Roscoff, France (invited speaker).
7th International Symposium on Marek's disease. Oxford (Invited speaker).
Max Planck Institute for Limnology, Ploen, Germany (Invited seminar).
Ecology and Evolution of Infectious Diseases Meeting, Emory University, Atlanta, USA (Invited speaker).
2nd International Malaria Research Conference, Johns Hopkins Malaria Research Institute, Baltimore, USA (Invited
speaker).
Society of Infectious Diseases and Foundation of Infectious Diseases of the Netherlands, Symposium, Vaccine safety
and arthropod-borne viral encephalitis: cross-roads between public individual patient care and public health care.
Utrecht, The Netherlands (Invited speaker).

2003

XXI Symposium Scandinavian Society for Parasitology. Bergen, Norway (Invited plenary speaker).
Latsis Symposium, Evolution, Immunity and Infectious Disease, ETH Zürich, Switzerland (Invited speaker).

2002

Dept of Biology, University of Lund, Sweden (Invited seminar).
Association for Tropical Biology, Panama (Invited speaker).
Centre for Infectious Diseases, University of Edinburgh, Annual Symposium (Invited speaker).
Department of Biology, Keele University, UK (Invited seminar).
Symposium of the NGW Vaccine Working group, The Netherlands. Vaccines and the Evolution of Virulence. UMC
Utrecht, Holland (Invited speaker).
Centre for Ecology and Evolution, UCL, Institute of Zoology and Imperial College, Symposium: Evolutionary and
ecological aspects of disease and parasitism (Invited speaker).
Burt Memorial Lecture, St Andrew's University, UK.
Department of Biology, University of Utah, USA (Invited seminar).
Keystone Symposium. Malaria's challenge: from infants to genomics to vaccines. Keystone, Colorado, USA (Invited
speaker).

2001

VIIIth Congress of European Society for Evolutionary Biology. Aarhus, Denmark (Invited plenary).
Institute of Biological Sciences, University of Stirling, UK (Invited seminar).
Ecology Center, Department of Biology, University of Sunderland, UK (Invited seminar).
NERC Advances in Ecology Course, Imperial College at Silwood Park, UK (Invited seminar).
NERC Centre for Ecology and Hydrology, Banchory, Aberdeenshire, UK (Invited seminar).
Institute for Animal Health, Compton, UK (Invited seminar).
Association for Study of Animal Behaviour, Summer Conference, Interfacing Behaviour with Other Disciplines.
Glasgow, UK (Invited speaker).
British Society for Parasitology, Autumn Symposium, Parasite Variation: Ecological and Immunological
Consequences, London (Invited speaker).
Infectious Disease: Host-Pathogen Evolution. Hinxton Retreat, Wellcome Trust Genome Campus, Cambridge, UK
(Invited Speaker).
Department of Biology and Centre for Integrative Study of Animal Behaviour, Indiana University, Bloomington, USA.
W.D.Hamilton International Symposium (Invited speaker).
Wellcome Trust Centre for the Epidemiology of Infectious Disease, Zoology Department, University of Oxford, UK
(Invited seminar).

2000

Oxford 2000: Joint Meeting of the British Society for Parasitology, The Royal Society of Tropical Medicine and
Hygiene & The American Society for Tropical Medicine and Hygiene (Invited plenary).
Centre for Population Biology, Imperial College at Silwood Park, UK (Invited seminar).
Department of Biology, University of Sussex, UK (Invited seminar).

Last century (recorded from 1993)

Department of Experimental Ecology, ETH Zürich, Switzerland (Invited seminar). 1999.
Laboratory of Ecology, University of Montpellier, France ESF Workshop: The Evolutionary Biology of Host-Parasites
Relationships: Models Meet Reality (Invited speaker). 1999.
University of Maryland and the Smithsonian Institution (NSF-Research Training Group), Washington D.C. USA,
Symposium: Effects of Small Population Size on the Evolutionary and Ecological Dynamics of Parasitism (Invited
speaker). 1998.
Department of Biomolecular Sciences, Wageningen University, The Netherlands . Symposium: Molecular Ecology
(Invited speaker). 1998.
Baltic and Scandanvian Societies of Parasitology, Vilnius, Lithuania. Symposium: Ecology of Bird-Parasite
Interactions (Invited speaker). 1998.
Department of Zoology, University of Uppsala, Sweden. ESF Workshop: Ecological Immunology (Invited speaker).
1998.
Department of Animal and Plant Sciences, University of Sheffield, UK (Invited seminar). 1998.
Zoological Laboratory, University of Groningen, The Netherlands Workshop: Ecological Immunology (Invited
speaker). 1998.
International Institute for Advanced Systems Analysis, Laxemburg, Austria. Workshop: Virulence Management:
Between Theory and Experiment (Invited speaker). 1997.
Department of Integrative Biology, University of Basel, Switzerland (Invited seminar). 1997.
Experimental Ecology, ETH Zürich and Department of Biology, University of Zürich (Invited seminar). 1997.
Max-Planck-Institute für Verhaltenphysiologie, Seewiesen, Germany. International Summer School, The Evolution of
Sex (Invited speaker). 1997.
Department of Biology, University College London (Invited seminar). 1997.
Glasgow University Zoology Society (Invited seminar). 1997.
European Multicolloquium of Parasitology VII, Parma, Italy (Invited talk). 1996.
St Andrew's University Biology Society, UK (Invited seminar). 1995.
Uppsala University, Dept Zoology, Sweden (Two invited seminars). 1995.
Cambridge University, Zoology Department, Behaviour and Ecology Series (Invited seminar). 1995.
Department of Zoology, University of Otago, New Zealand, 6th Annual Student Colloquium (Invited keynote
speaker). 1994.

Zoology Department, University of Otago, New Zealand (Invited seminar). 1994.
International Congress of Genetics, Birmingham, UK (Invited talk). 1993.

Andrew Fraser READ: PUBLICATIONS

pdfs: www.thereadgroup.net

KEY PUBLICATIONS, LAST DECADE

- Hansen *et al.* (2017). On the use of a chemotherapeutic agent when resistance to it threatens the patient. *PLoS Biology* 15: e2001110.
- Day & Read (2016). Does high-dose antimicrobial chemotherapy prevent the evolution of resistance? *PLoS Computational Biology* 12: e1004689.
- Read *et al.* (2015). Imperfect vaccination can enhance transmission of highly virulent pathogens. *PLoS Biology* 13: e1002198.
- Huijben *et al.* (2013). Aggressive chemotherapy and the selection of drug resistant pathogens. *PLoS Pathogens* 9:e1003578..
- Barclay *et al.* (2012). The evolutionary consequences of blood-stage vaccination on the rodent malaria *Plasmodium chabaudi*. *PLoS Biology* 10: e1001368.
- Read, A.F. *et al.* (2011). The evolution of drug resistance and the curious orthodoxy of aggressive chemotherapy. *PNAS* 108: 10871-10877.
- Read, A.F., Lynch, P.A. & Thomas, M.B. (2009). How to build an evolution-proof insecticide for malaria control. *PLoS Biology* 7: e1000058.
- Wargo *et al.* (2007). Competitive release and facilitation of drug resistant parasites following therapeutic chemotherapy in a rodent malaria model. *PNAS* 104: 19914-19919..
- Råberg *et al.* (2007). Disentangling genetic variation for resistance and tolerance to infectious diseases in animals. *Science* 318: 812-814.

PEER-REVIEWED PUBLICATIONS

Submitted (MS available on request)

- Wale, N., Sim, D.G., Jones, M.J., Salathe, R., Day, T., **Read, A.F.** (submitted). Resource limitation prevents the emergence of drug resistance by intensifying within host competition.
- Woods, R.J., Patel, T.S., Nagel, J.L., Newton, D.W., & **Read, A.F.** (submitted). Institution-wide and within-patient evolution of daptomycin sensitivity in vancomycin-resistant *Enterococcus faecium* blood stream infections.
- Kerr, P.J., Cattadori, I., Liu, J., Sims, D., Dodds, J., Brooks, J., Kennett, M., Holmes, E.C., & **Read, A.F.** (submitted). The next step in the on-going arms race between myxoma virus and wild rabbits in Australia is a novel disease phenotype.
- Liu, J., Cattadori, I., Sim, D., Eden, J-S. Holmes, E.C., **Read, A.F.**, & Kerr, P.J. (submitted). Reverse engineering field isolates of myxoma virus demonstrates that some gene disruptions or loss of function do not explain virulence changes observed in the field.
- Alcock, J., Aktipis, A., Boddy, A.M., Day, T., Femling, J.K., Flinn, M.V., Hochberg, M.E., Jansen, G., **Read, A.F.**, & Maley, C.C. (submitted). New normal Heuristics for DOCS: How to identify normal function in abnormal results and define a new normal in medical practice.

In press

- Wale, N., Sim, D.G., & **Read, A.F.** (in press). A nutrient mediates intraspecific competition between rodent malaria parasites in vivo. *Proceedings of the Royal Society of London Series B*.

Kennedy, D.A., Cairns, C., Jones, M.J., Bell, A.S., Salathe, R., Baigent, S.J., Nair, V.K., Dunn, P.A., & **Read A.F.** (in press). Industry-wide surveillance of Marek's disease virus on commercial poultry farms: viral population dynamics underlying potential for virulence evolution and vaccine escape. *Avian Diseases*. <http://biorxiv.org/content/early/2016/09/14/075192>

2017

206. Kennedy, D.A., & **Read A.F.** (2017). Why does drug resistance readily evolve but vaccine resistance does not? *Proceedings of the Royal Society of London Series B* 284: 20162562
205. Kerr, P.J., Cattadori, I., Rogers, M.B., Fitch, A., Geber, A., Liu, J., Sim, D.G., Boag, B., Eden, J-B., Ghedin, E., **Read, A.F.**, & Holmes, E.C. (2017). Genomic and phenotypic characterization of myxoma virus from Great Britain reveals multiple evolutionary pathways distinct from those in Australia. *PLoS Pathogens* 13: e1006252.
204. Ssentongo, P., Robuccio, A.E., Thuku, G., Sim, D.G., Nabi, A., Bahari, F., Shanmugasundaram, B., Billard, M., Geronimo, A., Short, K.W., Drew, P.J., Baccon, J., Weinstein, S.L., Gilliam, F.G., Soute, J.A., Chincilli, V., **Read, A.F.**, Gluckman, B.J., & Schiff, S.J. (2017). A murine model to study epilepsy and SUDEP induced by malaria infection. *Scientific Reports* 7:43652.
203. Beck-Johnson, L.M, Nelson, W.A, Paaajmans, K.P., **Read, A.F.**, Thomas, M.B., & Bjornstad, O.N. (2017). The importance of temperature fluctuations in understanding mosquito population dynamics and malaria risk. *Royal Society Open Science* 4: 160969.
202. Hansen, E.A., Woods, R.J., & **Read, A.F.** (2017). On the use of a chemotherapeutic agent when resistance to it threatens the patient. *PLoS Biology* 15: e2001110.

2016

201. Pandey, U., Bell, A.S., Renner, D.W., Kennedy, D.A., Shreve, J.T., Cairns, C.L., Jones, M.J., Dunn, P.A., **Read, A.F.**, & Szpara, M.L. (2016). DNA from dust: comparative genomics of large DNA viruses in field surveillance samples. *mSphere* 1: e00132-16.
200. Greischar, M.A., Mideo, N., **Read, A.F.**, & Bjørnstad, O.N. (2016). Predicting optimal transmission investment in malaria parasites. *Evolution* 70:1542-1558.
199. Ohm, J.R., Teeple, J., Nelson, W.A., Thomas, M.B., **Read, A.F.**, & Cator, L.J. (2016). Fitness consequences of altered feeding behavior in immune-challenged mosquitoes. *Parasites and Vectors* 9:113. PMC4772315
198. Greischar, M.A., Mideo, N., **Read, A.F.**, & Bjørnstad, O.N. (2016). Quantifying transmission investment in malaria parasites. *PLoS Computational Biology* 12: e1004718. PMC4759450
197. Mideo, N., Bailey, J.A., Hathaway, N.J., Ngasala, B., Saunders, D.L., Lon, C., Kharabora, O., Jamnik, A., Balasubramanian, S., Björkman, A., Mårtensson, A., Meshnick, S.R., **Read, A.F.**, & Juliano, J.J. (2016). A deep sequencing tool for assessing clearance by antimalarials in polyclonal infections. *Evolution, Medicine and Public Health* 2016:21-36. PMC4753362
196. Kennedy, D.A., Kurath, G., Brito, I.L., Purcell, M.K., **Read, A.F.**, Winton, J.R., & Wargo, A.R. (2016). Potential drivers of virulence evolution in aquaculture. *Evolutionary Applications* 9(2): 344-354. doi: 10.1111/eva. PMC4721074
195. Day, T., & **Read, A.F.** (2016). Does high-dose antimicrobial chemotherapy prevent the evolution of resistance? *PLoS Computational Biology* 12: e1004689. PMC4731197

2015

194. Woods, R.J., & **Read, A.F.** (2015). Clinical management of resistance evolution in a bacterial infection: a case study. *Evolution, Medicine and Public Health* 1: 281-288. PMC4629395
193. Carlton, J.M., Volkman, S K., Uplekar, S., Hupalo, D.N., Alves, J.M.P., Cui, L., Donnelly, M., Roos, D.S., Harb, O.S., Acosta, M., **Read, A.F.**, Ribolla, P.E., Singh, O.P., Valencha, N., Wassmer, S.C., Ferreira, M., & Escalante, A.A. (in press). Population genetics, evolutionary genetics, and the genome-wide studies of malaria: A view across the

international Centers of Excellence in Malaria Research. *American Journal of Hygiene and Tropical Medicine* 93 (Suppl 3): 87-98. PMC4574278

192. **Read, A.F.**, Baigent, S.J., Powers, C., Kgosana, L.B., Blackwell, L., Smith, L.P., Kennedy, D.A., Walkden-Brown, S.W., & Nair, V.K. (2015). Imperfect vaccination can enhance transmission of highly virulent pathogens. *PLoS Biology* 13: e1002198. PMC4516275
191. Pollitt, L.C., Bram, J.T, Blanford, S., Jones, M.J., & **Read, A.F.** (2015). Existing infection facilitates establishment and density of malaria parasites in their mosquito vector. *PLoS Pathogens* 11: e1005003. PMC4504473
190. Cator, L.J., Pietri, J.E., Murdock, C.C., Ohm, J.R., Lewis, E., **Read, A.F.**, Luckhart, S., & Thomas, M.B. (2015). Immune response and insulin signaling alter mosquito to enhance malaria transmission potential. *Scientific Reports* 5: 11947. PMC4495552
189. Kennedy, D.A., Dunn, J., Dunn, P.A., & **Read, A.F.** (2015). An observational study of the temporal and spatial patterns of Marek's-disease-associated leucosis condemnation of young chickens in the United States of America. *Veterinary Preventative Medicine* 120: 328-335. PMC4465502
188. Huijben, S., Chan, B.H.K., & **Read, A.F.** (2015). Relevance of undetectably rare resistant malaria parasites in treatment failure: experimental evidence from *Plasmodium chabaudi*. *American Journal of Hygiene and Tropical Medicine* 92: 1214-1221. PMC4458828
187. Kerr, P.J., Liu, J., Cattadori, I., Ghedin, E., **Read, A.F.**, & Holmes, E.C. (2015). Myxoma virus and the leporipoxviruses: an evolutionary paradigm. *Viruses* 7: 1020-1061. PMID 25757062. PMC4379559
186. Day, T., Huijben, S., & **Read, A.F.** (2015). Is selection relevant in the evolutionary emergence of drug resistance? *Trends in Microbiology* 23: 126-133. PMC4494118
185. Smith, R.A., M'ikanatha, N., & **Read, A.F.** (2015). Antibiotic resistance: A primer and a call to action. *Health Communication* 30: 309-314. PMC4275377.

2014

184. Kouyos, R.D., Metcalf, C.J.E., Birger, R., Klein, E.Y., zur Wiesch, P.A., Ankomah, P., Arinaminpathy, N., Bogich, T.L., Bonhoeffer, S., Brower, C., Chi-Johnston, G., Cohen, T., Day, T., Greenhouse, B., Huijben, S., Metlay, J., Mideo, N., Pollitt, L.C., **Read, A.F.**, Smith, D.L., Standley, C., Wale, N., & Grenfell, B. (2014). The path of least resistance: aggressive or moderate treatment. *Proceedings of the Royal Society of London Series B* 281: 20140566. DOI: 10.1098/rspb.2014.0566. PMC4211439.
183. Glunt, K.D., Paaijmans, K.P., **Read, A.F.**, & Thomas, M.B. (2014). Environmental temperatures significantly change the impact of insecticides measured using WHOPES protocols. *Malaria Journal* 13: 350. PMC4162960.
182. Barclay, V.C., Kennedy, D., Weaver, V.C., Sim, D., Lloyd-Smith, J.O. & **Read, A.F.** (2014). The effect of immunodeficiency on the evolution of virulence: an experimental test with the rodent malaria *Plasmodium chabaudi*. *American Naturalist* 184: S47-S57.
181. Pollitt, L.C., Sim, D.G., Salathe, R.M., & **Read, A.F.** (2014). Understanding genetic variation in *in vivo* tolerance to artesunate: implications for treatment efficacy and resistance monitoring. *Evolutionary Applications* 8: 296-304. PMC4380923
180. de Moraes, C.M., Stanczyk, N.M., Betz, H.S., Pulido, H., Sims, D.G., **Read, A.F.** & Mescher, M.C. (2014). Malaria-induced changes in host odors enhance mosquito attraction. *Proceedings of the National Academy of Science USA*. 111:11079-84. doi: 10.1073/pnas.1405617111. PMC4121820.
179. Cator, L.C., Lynch, P.A., Thomas, M.B. & **Read, A.F.** (2014). Alterations in mosquito behaviour by malaria parasites: potential impact on force of infection. *Malaria Journal* 13:164. doi: 10.1186/1475-2875-13-164. PMC4113138.

178. Pollitt, L.C., Huijben, S., Sim, D.G., Salathe, R.M., Jones, M. & **Read, A.F.** (2014). Rapid response to selection, competitive release and increased transmission potential of artesunate-selected *Plasmodium chabaudi* malaria parasites. *PLoS Pathogens* 10: e1004019. PMC3999151.
177. Santhanam, J., Råberg, L., **Read, A.F.** & Savill, N.J. (2014). Immune-mediated competition in rodent malaria is most likely caused by induced changes in innate immune clearance of merozoites. *PLoS Computational Biology* 10: e1003416. PMC3900382.
176. Greischar, M.A., **Read, A.F.** & Bjørnstad, O.N. (2014). Synchrony in malaria infections: how intensifying within-host competition can be adaptive. *American Naturalist* 183: E36-E49. PMC4334120.

2013

175. Fairlie-Clark, K.J., Allen, J.R., **Read, A.F.** & Graham, A.L. (2013). Quantifying variation in the potential for antibody-mediated apparent competition among nine genotypes of the rodent malaria parasite *Plasmodium chabaudi*. *Infection, Genetics and Evolution* 20: 270-275. PMC3898986.
174. Pollitt, L.C., Mackinnon, M.J., Mideo, N., & **Read, A.F.** (2013). Mosquito transmission, growth phenotypes and the virulence of malaria parasites. *Malaria Journal* 12: 440. doi:10.1186/1475-2875-12-440. PMC3924181.
173. Atkins, K.E., **Read, A.F.**, Walkden-Brown, S.W., Savill, N.J. & Woolhouse, M.E.J. (2013). The effectiveness of mass vaccination on Marek's disease virus (MDV) outbreaks and detection within a broiler barn: a modeling study. *Epidemics* 5: 208-217. PMC3863959.
172. Kerr, P.J., Rogers, M.B., Fitch, A., DePasse, J.V., Hudson, P.J., Tschärke, D.C., **Read, A.F.**, Holmes, E.C. & Ghedin, E. (2013). Genome scale evolution of myxoma virus (MYXV) reveals host-pathogen adaptation and rapid geographic spread. *Journal of Virology* 87: 12900-12915. PMC3838154.
171. Beck-Johnson, L.M., Nelson, W.A., Paaijmans, K.P., **Read, A.F.**, Thomas, M.B., Bjørnstad, O. (2013). The effect of temperature on *Anopheles* mosquito population dynamics and on the potential for malaria transmission. *PLoS One* 8: e79276. PMC3828393.
170. Huijben, S., Bell, A.S., Sim, D.G., Salathe, R., Tomasello, D., Mideo, N., Day, T. & **Read, A.F.** (2013). Aggressive chemotherapy and the selection of drug resistant pathogens. *PLoS Pathogens* 9:e1003578. PMC3771897.
169. **Read, A.F.** (2013). Science in general education. *Journal of General Education* 62: 28-36.
168. Mideo, N., Kennedy, D.A., Carlton, J.M., Bailey, J.A., Juliano, J.J. & **Read, A.F.** (2013). Ahead of the curve: next generation estimators of drug resistance in malaria infections. *Trends in Parasitology* 29: 321-328. PMC3694767.
167. Cator, L.J., George, J., Blanford, S., Murdock, C.C., Baker, T.C., **Read, A.F.** & Thomas, M.B. (2013). 'Manipulation' without the parasite: altered feeding behaviour of mosquitoes is not dependent on infection with malaria parasites. *Proceedings of the Royal Society of London Series B* 280: 20130711. <http://dx.doi.org/10.1098/rspb.2013.0711>. PMC3774228.
166. Baigent, S.J., Kgosana, L., Gamawa, A.A., Smith, L.P., **Read, A.F.** & Nair, V.K. (2013). Relationship between levels of very virulent MDV in poultry dust and in feather tips from vaccinated chickens. *Avian Diseases* 57: 440-447.
165. Cator, C.J., Thomas, S., Paaijmans, K.P., Ravishankaran, S., Justin, J.A., Mathai, M.T., **Read, A.F.**, Thomas, M.B. & Eapen, A. Characterizing microclimate in urban malaria transmission settings: a case study from Chennai, India. *Malaria Journal* 12: 84. doi:10.1186/1475-2875-12-84. PMC3599321.
164. Atkins, K.E., **Read, A.F.**, Savill, N.J., Renz, K.G., Fakhrul Islam, A.F.M., Walkden-Brown, S.W. & Woolhouse, M.E. (2013). Vaccination and reduced cohort duration can drive virulence evolution: Marek's disease virus and intensified agriculture. *Evolution* 67: 851-860.

2012

163. Cator, L., Lynch, P.A., **Read, A.F.** & Thomas, M.B. (2012). Do malaria parasites manipulate mosquitoes? *Trends in Parasitology* 28: 466-470. PMC3478439.
162. Lynch, P.A., Grimm, U. Thomas, M.B. & **Read, A.F.** (2012). Prospective malaria control using entomopathogenic fungi: comparative evaluation of impact on transmission and selection for resistance. *Malaria Journal* 11: 383. doi:10.1186/1475-2875-11-383. PMC3519523.
161. Blanford, S., Jenkins, N.E., Christian, R., Chan, B.H.K., Luisa, N., Michael, O., Koekemoer, L., Coetzee, M., **Read, A.F.** & Thomas, M.B. (2012). Storage and persistence of a candidate fungal biopesticide for use against adult malaria vectors. *Malaria Journal* 11: 354. doi:10.1186/1475-2875-11-354. PMC3506477.
160. Blanford, S., Jenkins, N.E., **Read, A.F.** & Thomas, M.B. (2012). Evaluating the lethal and pre-lethal effect of a range of fungi against adult mosquitoes. *Malaria Journal* 11: 365. doi:10.1186/1475-2875-11-365. PMC3520692.
159. Murdock, C.M., Paaijmans, K.P., **Read, A.F.** & Thomas, M.B. (2012). Rethinking vector immunology: the role of environmental temperature in shaping resistance. *Nature Microbiology Reviews* 10: 869-876. PMC4142813.
158. Schneider, P., Bell, A.S., Sim, D.G., O'Donnell, A.J., Blanford, S., Paaijmans, K.P., **Read, A.F.** & Reece, S.E. (2012). Virulence, drug sensitivity and transmission success in the rodent malaria, *Plasmodium chabaudi*. *Proceedings of the Royal Society of London Series B* 279: 4677-4685. PMC3479731.
157. Kerr, P.J., Ghedin, E., DePasse, J.V., Fitch, A., Cattadori, I.M., Hudson, P.J., Tschärke, D.C., **Read, A.F.** & Holmes, E.C. (2012). Evolutionary history and attenuation of myxoma virus on two continents. *PLoS Pathogens* 8: e1002950. doi:10.1371/journal.ppat.1002950. PMC3464225.
156. Barclay, V.C., Sim, D., Chan, B.H.K., Nell, L.A., Rabaa, M.A., Bell, A.S., Anders, R.F. & **Read, A.F.** (2012). The evolutionary consequences of blood-stage vaccination on the rodent malaria *Plasmodium chabaudi*. *PLoS Biology* 10: e1001368. doi:10.1371/journal.pbio.1001368. PMC3409122.
155. Bell, A.S., Huijben, S., Paaijmans, K.P., Sim, D., Chan, B.H.K., Nelson, W.A. & **Read A.F.** (2012). Enhanced transmission of drug-resistance parasites to mosquitoes following drug treatment in rodent malaria. *PLoS One* 7: e37172. doi:10.1371/journal.pone.0037172. PMC3368907.
154. Murdock, C.C., Paaijmans, K.P., Bell, A.S., King, J., Hillyer, J.F., **Read, A.F.** & Thomas, M.B. (2012). Complex effects of temperature on mosquito immune function. *Proceedings of the Royal Society of London Series B* 279: 3357-3366. PMC3385736.
153. Das, A., Anvikar, A.R., Cator, L.J., Dhiman, R.C., Eapen, A., Mishra, N., Nagpal, B.N., Nanda, N., Raghavendra, K., **Read, A.F.**, Sharma, S.K., Singh, O.P., Singh, V., Sinnis, P., Srivastav, H.C., Sullivan, S.A., Sutton, P.L., Thomas, M.B., Carlton, J.M., Valecha, N. (2012). Malaria in India: The Center for the Study of Complex Malaria in India. *Acta Tropica* 121: 267-273. PMC3294179.

2011

152. Atkins, K.E., **Read, A.F.**, Savill, N.J., Renz, K.G., Walken-Brown, S.W. & Woolhouse, M.E.J. (2011). Modeling Marek's disease virus (MDV) infection: Parameter estimates for mortality rate and infectiousness. *BMC Veterinary Research* 7: 70. doi:10.1186/1746-6148-7-70. PMC3226581
151. Mideo, N., Savill, N.J., Chadwick, W., Schneider, P., **Read A.F.**, Day, T. & Reece, S.E. (2011). Causes of variation in malaria infection dynamics: insights from theory and data. *American Naturalist* 178: 174-188. doi:10.1086/662670. PMC3937740.
150. Glunt, K.D., Thomas, M.B. & **Read, A.F.** (2011). The effects of age, exposure history and malaria infection on susceptibility of *Anopheles* mosquitoes to low concentrations of pyrethroid. *PLoS One* 6: e24968. doi:10.1371/journal.pone.0024968. PMC3178580.

149. Blanford, S., Shi, W., Christian, R., Marden, J.H., Koekemoer, L.L., Brooke, B.D., Coetzee, M., **Read, A.F.** & Thomas, M.B. (2011). Lethal and pre-lethal effects of a fungal biopesticide contribute to substantial and rapid control of malaria vectors. *PLoS One* 6: e23591. doi:10.1371/journal.pone.0023591. PMC3163643.
148. Huijben, S., Sim, D., Nelson, W.A. & **Read, A.F.** (2011). The fitness of drug resistant malaria parasites in a rodent model: multiplicity of infection. *Journal of Evolutionary Biology* 24: 2410-2422. doi:10.1111/j.1420-9101.2011.02369.x. PMC3304104.
147. Metcalf, C.J.E., Graham, A.L., Huijben, S., Barclay, V.C., Long, G.H., Grenfell, B.T., **Read, A.F.** & Bjørnstad, O.N. (2011). Partitioning regulatory mechanisms of within host malaria using the effective propagation number. *Science* 333: 984-988. PMC3891600.
146. George, J., Blanford, S., Domingue, M.J., Thomas, M.B., **Read, A.F.** & Baker, T.C. (2011). Reduction in host-finding behavior in fungus-infected mosquitoes is correlated with reduction in olfactory receptor neuron responsiveness. *Malaria Journal* 10:219. doi:10.1186/1475-2875-10-219. PMC3162589.
145. Mideo, N., Nelson, W.A., Reece, S.E., Bell, A.S., **Read A.F.** & Day, T. (2011). Bridging scales in the evolution of infectious disease life histories: application. *Evolution* 65: 3298-3310. PMC3937741.
144. **Read, A.F.**, Day, T. & Huijben, S. (2011). The evolution of drug resistance and the curious orthodoxy of aggressive chemotherapy. *Proceedings of the National Academy of Science USA* 108: 10871-10877. PMC3131826.

2010

143. Juliano, J.J., Porter, K., Mwapasa, V., Sem, R., Rogers, W.O., Ariey, F., Wongsrichanalai, C., **Read, A.F.** & Meshnick, S.R. (2010). Massively parallel pyrosequencing: exposing malaria in-host diversity and estimating population diversity by capture-recapture. *Proceedings of the National Academy of Science USA* 107: 20138-20143. PMC2993407
142. Long, G.H., Sinha, D., **Read, A.F.**, Pritt, S., Kline, B., Harvill, E.T., Hudson, P.J. & Bjørnstad, O.N. (2010). Identifying the age cohort responsible for transmission in a natural outbreak of *Bordetella bronchiseptica*. *PLoS Pathogens* 6: e1001224. doi:10.1371/journal.ppat.1001224. PMC3002977.
141. Pepin, K.M., Lass, S., Pulliam, J.R.C., **Read, A.F.** & Lloyd-Smith, J.O. (2010). Identifying genetic markers of adaptation for surveillance of viral host jumps. *Nature Reviews Microbiology* 8: 802-813.
140. Babayan, S.A., **Read, A.F.**, Bain, O. & Allen, J.E. (2010) Filarial parasites develop faster and reproduce earlier in response to host immune effectors that determine filarial life expectancy. *PLoS Biology* 8: e1000525. doi:10.1371/journal.pbio.1000525. PMC2957396.
139. Miller, M.R., Råberg, L., **Read, A.F.** & Savill, N.J. (2010). Quantitative analysis of immune response and erythropoiesis during rodent malaria infection. *PLoS Computational Biology* 6: e1000946. doi:10.1371/journal.pcbi.1000946. PMC2947982.
138. Paaijmans, K.P., Blanford, S., Bell, A.S., Blanford, J.I., **Read, A.F.** & Thomas, M.B. (2010). Influence of climate on malaria and transmission depends on daily temperature variation. *Proceedings of the National Academy of Science USA*. 107: 15135-15139. doi:10.1073/pnas.1006422107. PMC2930540.
137. Rivero, A. Vezilier, J., Weill, M., **Read, A.F.** & Gandon, S. (2010) Insecticide control of vector-borne diseases: when is insecticide resistance a problem? *PLoS Pathogens* 6: e1001000. doi:10.1371/journal.ppat.1001000. PMC2916878.
136. Huijben, S., Nelson, W.A., Wargo, A.R., Sim, D.G., Drew, D.R. & **Read, A.F.** (2010). Chemotherapy, within-host ecology and the fitness of drug resistant malaria parasites. *Evolution* 64: 2952-2968. PMC3066636.
135. Long, G.H., Karanikas, A.T., Harvill, E.T., **Read, A.F.** & Hudson, P.J. (2010) Acellular pertussis vaccination facilitates *Bordetella parapertussis* infection in a rodent model of bordetellosis. *Proceedings of the Royal Society of London Series B* 277:2017-2025. PMC2880100.

134. Pulkkinen, K., Suomalainen, L-R, **Read, A.F.**, Ebert, D, Rintamäki, P. & Valtonen E.T. (2010). Intensive fish farming and the evolution of pathogen virulence: the case of columnaris disease in Finland. *Proceedings of the Royal Society of London Series B* 277: 593-600. doi: 10.1098/rspb.2009.1659133. PMC2842694.

2009

133. Paaijmans, K.P., **Read, A.F.** & Thomas, M.B. (2009). Understanding the link between malaria risk and climate. *Proceedings of the National Academy of Science USA* 106: 13844-13849. PMC2720408.
132. Koella, J.C., Lynch., P.A., Thomas, M.B. & **Read, A.F.** (2009). Towards evolution-proof malaria control with insecticides. *Evolutionary Applications* 2: 469-480. doi: 10.1111/j.1752-4571.2009.00072.x. PMC3352447.
131. Blanford, S., **Read, A.F.** & Thomas, M.B. (2009). Thermal behaviour of *Anopheles stephansi* in response to infection with malaria and fungal entomopathogens. *Malaria Journal* 8:72. doi:10.1186/1475-2875-8-72. PMC2683858.
130. **Read, A.F.**, Lynch, P.A. & Thomas, M.B. (2009). How to build an evolution-proof insecticide for malaria control. *PLoS Biology* 7: e1000058. doi:10.1371/journal.pbio.1000058. PMC3279047.
129. Bell, A.S., Blanford, S., Jenkins, N., Thomas, M.B. & **Read, A.F.** (2009). Real-time quantitative PCR for analysis of candidate fungal biopesticides against malaria: technique validation and first applications. *Journal of Invertebrate Pathology* 100: 160-169. PMC2666797.
128. **Read, A.F.** & Huijben, S. (2009). Evolutionary biology and the avoidance of antimicrobial resistance. *Evolutionary Applications* 2: 40-51. PMC3352414.
127. Råberg, L., Graham, A.L. & **Read, A.F.** (2009). Decomposing health: tolerance and resistance to parasites in animals. *Philosophical Transactions of the Royal Society of London Series B* 364: 37-49. PMC2666700.

2008

126. Schneider, P., Chan, B.H.K., Reece, S.E. & **Read, A.F.** (2008). Does drug sensitivity of malaria parasites depend on their virulence? *Malaria Journal* 7: 257. doi:10.1186/1475-2875-7-257. PMC2636820.
125. Barclay, V.C., Chan, B.H.K., Anders, R.F. & **Read, A.F.** (2008). Mixed allele malaria vaccines: host protection and within-host selection. *Vaccine* 26: 6099-6107. PMC2674600.
124. Mideo, N., Barclay, V.C., Chan, B.H.K., Savill, N.J., **Read, A.F.** & Day, T. (2008). Understanding and predicting strain-specific patterns of pathogenesis in the rodent malaria, *Plasmodium chabaudi*. *American Naturalist* 172: E214-E238.
123. Mideo, N., Day, T. & **Read, A.F.** (2008). Modelling malaria pathogenesis. *Cellular Microbiology* 10: 1947-1955. PMC2613259.
122. Grech, K., Chan, B.H.K. & **Read, A.F.** (2008). The impact of immunisation on competition within *Plasmodium* infections. *Evolution* 62: 2359-2371.
121. Mackinnon, M.J., Gandon, S. & **Read, A.F.** (2008). Virulence evolution in response to vaccination: the case of malaria. *Vaccine* 26S: C42-C52. PMC2663389.
120. Long, G.H., Chan, B.H.K., Allen, J.E., **Read, A.F.** & Graham, A.L. (2008). Experimental manipulation of immune-mediated disease and its fitness costs for rodent malaria parasites. *BMC Evolutionary Biology* 8: 128. doi:10.1186/1471-2148-8-128. PMC2391164.
119. Barclay, V.C., Råberg, L., Chan, B.H.K., Brown, S., Gray, D. & **Read, A.F.** (2008). CD4⁺ T cells do not mediate within-host competition between genetically diverse malaria parasites. *Proceedings of the Royal Society of London Series B* 275: 1171-1179. PMC2373868.
118. Lynch, P.A., Grimm, U. & **Read, A.F.** (2008). How will public and animal health interventions drive life history evolution in parasitic nematodes? *Parasitology* 135: 1599-1611.

117. Long, G.H., Chan, B.H.K., Allen, J.E., **Read, A.F.** & Graham, A.L. (2008). Blockade of TNF receptor 1 reduces disease severity but increases parasite transmission during *Plasmodium chabaudi chabaudi* infection. *International Journal for Parasitology* 38: 1073-1081.

116. Lamb, T.J., Harris, A., Le Goff, L., **Read, A.F.** & Allen, J.E. (2008). *Litomosoides sigmodontis*: Vaccine-induced immune responses against *Wolbachia* surface protein can enhance the survival of filarial nematodes during primary infection. *Experimental Parasitology* 118: 285-289.

2007

115. Wargo, A. R., Huijben, S., de Roode, J.C., Shepherd, J. & **Read, A.F.** (2007). Competitive release and facilitation of drug resistant parasites following therapeutic chemotherapy in a rodent malaria model. *Proceedings of the National Academy of Science USA* 104: 19914-19919. PMC2148397.

114. Råberg, L., Sim, D. & **Read, A.F.** (2007). Disentangling genetic variation for resistance and tolerance to infectious diseases in animals. *Science* 318: 812-814.

113. Grech, K., Maung, L.A. & **Read, A.F.** (2007). The effect of parental rearing conditions on offspring life history in *Anopheles stephensi*. *Malaria Journal* 6: 130. PMC2034587.

112. Day, T., Graham, A.L. & **Read, A.F.** (2007). Evolution of parasite virulence when host responses cause disease. *Proceedings of the Royal Society of London Series B* 274: 2685-2692. PMC2279213.

111. Wargo, A. R., de Roode, J.C., Huijben, S., Drew, D.R. & **Read, A.F.** (2007). Transmission stage investment of malaria parasites in response to in-host competition. *Proceedings of the Royal Society of London Series B* 274: 2759-2768. PMC1975767.

110. Lythgoe, K.A., Morrison, L.J., **Read, A.F.** & Barry, J.D. (2007). Parasite-intrinsic factors can explain ordered progression of trypanosome antigenic variation. *Proceedings of the National Academy of Science USA* 104: 8095-8100. PMC1876577.

109. Thomas, M.B. & **Read, A.F.** (2007). Can fungal biopesticides control malaria? *Nature Microbiology Reviews* 5: 377-383.

2006

108. Long, G.H., Chan, B.H.K., Allen, J.E., **Read, A.F.** & Graham, A.L. (2006). Parasite genetic diversity does not influence TNF-mediated effects on the virulence of primary rodent malaria infections. *Parasitology* 133: 673-684.

107. Grech, K., Watt, K. & **Read, A.F.** (2006). Host-by-parasite interactions for virulence and resistance in a malaria model system. *Journal of Evolutionary Biology* 19: 1620-1630.

106. Bell, A.S., de Roode, J.C., Sim, D. & **Read, A.F.** (2006) Within-host competition in genetically diverse malaria infections: parasite virulence and competitive success. *Evolution* 60: 1358-1371.

105. Råberg, L., de Roode, J.C., Bell, A.S., Stamou, P., Gray, D. & **Read, A.F.** (2006). The role of immune-mediated apparent competition in genetically diverse malaria infections. *American Naturalist* 168: 41-53.

104. Wargo, A.R., Randle, N., Chan, B.H.K., Thompson, J., **Read, A.F.** & Babiker, H. (2006) *Plasmodium chabaudi*: reverse transcriptase PCR (RT-PCR) for the detection and quantification of the transmission stage malaria parasites. *Experimental Parasitology* 112: 13-20.

2005

103. Barry, J.D., Marcello, L., Morrison, L.J., **Read, A.F.**, Lythgoe, K., Jones, N., Carrington, M., Blandin, G., Böhme, U., Caler, E., Hertz-Fowler, C., Renauld, H., El-Sayed, N. & Berriman, M. (2005). What the genome sequence is telling us about trypanosome antigenic variation. *Biochemical Society Transactions* 33: 986-989.

102. Mitchell, S.E. & **Read, A.F.** (2005). Poor maternal environment enhances offspring disease resistance in an invertebrate. *Proceedings of the Royal Society of London Series B* 272: 2601-2607. PMC1559984.

101. Shutler, D., Reece, S.E., Mullie, A., Billingsley, P.F. & **Read, A.F.** (2005). Rodent malaria parasites *Plasmodium chabaudi* and *P. vinckei* do not increase their rates of gametocytogenesis in response to mosquito probing. *Proceedings of the Royal Society of London Series B* 272: 2397-2402. PMC1559963.
100. de Roode, J.C., Helinski, M.E.H., Anwar, M. & **Read, A.F.** (2005). Dynamics of multiple infection and within-host competition in genetically diverse malaria infections. *American Naturalist* 166: 531-542.
99. Graham, A.L., Allen, J.E. & **Read, A.F.** (2005). Evolutionary causes and consequences of immunopathology. *Annual Review in Ecology, Evolution and Systematics* 36: 337-397.
98. Ferguson, H.M., Gouagna, L. C., Obare, P., Babiker, H., Githure, J., **Read, A.F.** & Beier, J.C. (2005) The presence of *Plasmodium falciparum* in human blood increases the gravidity of *Anopheles gambiae* mosquitoes. *American Journal of Tropical Medicine and Hygiene* 73: 312-320.
97. Little, T.J., Hultmark, D. & **Read, A.F.** (2005). Invertebrate immunity and the limits of mechanistic immunology. *Nature Immunology* 6: 651-654. doi:10.1038/ni1219.
96. Morrison, L.J., Majiwa, P.A.O., **Read, A.F.** & Barry, J.D. (2005). Probabilistic order in antigenic variation of *Trypanosoma brucei*. *International Journal for Parasitology* 35: 961-972.
95. Blanford, S., Chan, B.H.K., Jenkins, N., Sim, D., Turner, R.J., **Read, A.F.** & Thomas, M.B. (2005). Fungal pathogen reduces potential for malaria transmission. *Science* 308: 1638-1641.
94. de Roode, J.C., Pansini, R., Cheesman, S.J., Helinski, M.E.H., Huijben, S., Wargo, A.R., Bell, A.S., Chan, B.H.K., Walliker, D. & **Read, A.F.** (2005). Virulence and competitive ability in genetically diverse malaria infections. *Proceedings of the National Academy of Science USA* 102: 7624-7628. PMC1140419.
93. Reece, S.E., Duncan, A.B., West, S.A. & **Read, A.F.** (2005) Host cell preferences and variable transmission strategies in malaria parasites. *Proceedings of the Royal Society of London Series B* 272: 511-517. PMC1578707.
92. Mackinnon, M.J., Bell, A. & **Read, A.F.** (2005). The effects of mosquito transmission and population bottlenecking on virulence, multiplication rate and resetting in rodent malaria. *International Journal for Parasitology* 35: 145-153.
91. Mitchell, S.E., Rogers, E.S. & Little, T. & **Read, A.F.** (2005). Host-parasite and genotype by environment interactions: temperature modifies potential for selection by a sterilising pathogen. *Evolution* 59: 70-80.
90. Graham, A.J., Lamb, T.J., **Read, A.F.** & Allen, J.E. (2005). Malaria-filaria co-infection in mice makes malarial disease more severe unless filarial infection achieves patency. *Journal of Infectious Diseases* 191: 410-421.

2004

89. de Roode, J.C., Culleton, R., Bell, A.S. & **Read, A.F.** (2004). Competitive release of drug resistance following drug treatment of mixed *Plasmodium chabaudi* infections. *Malaria Journal* 3: 33. doi:10.1186/1475-2875-3-33. PMC517944.
88. Mackinnon, M.J. & **Read, A.F.** (2004). Immunity promotes virulence evolution in a malaria model. *PLoS Biology* 2: e230. doi:10.1371/journal.pbio.0020230. PMC434153.
87. Mitchell, S.E., **Read, A.F.** & Little, T. (2004). The effect of a pathogen epidemic on the genetic structure and reproductive strategy of the crustacean *Daphnia magna*. *Ecology Letters* 7: 848-858.
86. Ferguson, H.M. & **Read, A.F.** (2004). Mosquito appetite for blood is stimulated by malaria infections in themselves and their vertebrate hosts. *Malaria Journal* 3:12. doi:10.1186/1475-2875-3-12. PMC441399.
85. Mackinnon, M.J. & **Read, A.F.** (2004). Virulence in malaria: an evolutionary viewpoint. *Philosophical Transactions of the Royal Society of London. Biological Sciences* 359: 965-986. PMC1693375.
84. de Roode, J.C., Culleton, R., Cheesman, S.J., Carter, R. & **Read, A.F.** (2004). Host heterogeneity is a determinant of competitive exclusion or coexistence in genetically diverse malaria infections. *Proceedings of the Royal Society of London Series B* 271: 1073-1080. PMC1691691.

83. Lamb, T.J., Le Goff, L., Kurniawan, A., Guiliano, D.B., Fenn, K., Blaxter, M.L., **Read, A.F.** & Allen, J.E. (2004). The majority of the response elicited against *Wolbachia* surface protein in filarial nematode infection is due to infective larval stage. *Journal of Infectious Diseases* 120: 120-127.

2003

82. Ferguson, H.M., Mackinnon, M.J., Chan, B.H. & **Read, A.F.** (2003). Mosquito mortality and the evolution of malaria virulence. *Evolution* 57: 2792-2804.
81. Guinnee, M.A., Gemmill, A.W., Chan, B.H.K., Viney, M.E. & **Read, A.F.** (2003). Host immune status affects maturation time in two nematode species – but not as predicted by a simple life history model. *Parasitology* 127: 507-512.
80. de Roode, J.C., **Read, A.F.**, Chan, B.H.K. & Mackinnon, M.J. (2003). Rodent malaria parasites suffer from the presence of conspecific clones in three-clone *Plasmodium chabaudi* infections. *Parasitology* 127: 411-418.
79. Reece, S.E., Duncan, A.B., West, S.A. & **Read, A.F.** (2003). Sex ratios in the rodent malaria parasite *Plasmodium chabaudi*. *Parasitology* 127: 419-425.
78. Cheesman, S.J., de Roode, J.C., **Read, A.F.** & Carter, R. (2003). Real-time quantitative PCR for analysis of genetically mixed infections of malaria parasites: technique validation and applications. *Molecular and Biochemical Parasitology* 131: 83-91.
77. Ferguson, H.M., Rivero, A. & **Read, A.F.** (2003). The influence of malaria parasite genetic diversity on mosquito feeding and fecundity. *Parasitology* 127: 9-19.
76. Gandon, S., Mackinnon, M., Nee, S. & **Read, A.F.** (2003). Imperfect vaccination: some epidemiological and evolutionary consequences. *Proceedings of the Royal Society of London Series B* 270: 1129-1136.
75. Little, T.J., O'Connor, B., Colegrave, N., Watt, K. & **Read, A.F.** (2003). Maternal transfer of strain-specific immunity in an invertebrate. *Current Biology* 13: 489-492.
74. Mackinnon, M.J. & **Read, A.F.** (2003). The effects of host immunity on virulence-transmissibility relationships in the rodent malaria *Plasmodium chabaudi*. *Parasitology* 126: 103-112.

2002

73. Gandon, S., Mackinnon, M. J., Nee, S. & **Read, A.F.** (2002). Anti-toxin vaccines and pathogen virulence. *Nature* 417: 610.
72. West, S.A., Smith, T.G., Nee, S. & **Read, A.F.** (2002). Fertility insurance and the sex ratios of malaria and related hemosporin blood parasites. *Journal of Parasitology* 88: 258-263.
71. Ferguson, H.M. & **Read, A.F.** (2002). Genetic and environmental determinants of malaria parasite virulence in mosquitoes. *Proceedings of the Royal Society of London Series B* 269: 1217-1224. PMC1691016.
70. Mackinnon, M.J., Gaffney, D.J. & **Read, A.F.** (2002). Virulence of rodent malaria parasites: host genotype by parasite genotype experiments. *Infection, Genetics and Evolution* 36: 287-296.
69. Ferguson, H.M. & **Read, A.F.** (2002). Why is the effect of malaria parasites on mosquito survival still unresolved? *Trends in Parasitology* 18: 256-261.
68. Nee, S., West, S.A. & **Read, A.F.** (2002). Inbreeding and parasite sex ratios. *Proceedings of the Royal Society of London Series B* 269: 755-760. PMC1690940.

2001

67. Gandon, S., Mackinnon, M. J., Nee, S. & **Read, A.F.** (2001). Imperfect vaccines and the evolution of pathogen virulence. *Nature* 414: 751-756.
66. West, S.A., Reece, S.E. & **Read, A.F.** (2001). Gametocyte sex ratios of malaria and related apicomplexan (protozoa) parasites. *Trends in Parasitology* 17: 525-531.

65. Buckling, A. & **Read, A.F.** (2001). The effect of partial host immunity on the transmission of malaria parasites. *Proceedings of the Royal Society of London Series B* 268: 2325-2330. PMC1088883.
64. Timms, R., Colegrave, N., Chan, B.H.K. & **Read, A.F.** (2001). The effect of parasite dose on severity of disease in the rodent malaria *Plasmodium chabaudi*. *Parasitology* 123: 1-11.
63. **Read, A.F.** & Taylor, L.H. (2001). The ecology of genetically diverse infections. *Science* 292: 1099-1102.
62. West, S.A., Gemmill, A.W., Graham, A., Viney, M.E. & **Read, A.F.** (2001). Immune stress and facultative sex in a parasitic nematode. *Journal of Evolutionary Biology* 14: 333-337.

2000

61. Harvey, S.C., Gemmill, A.W., **Read, A.F.** & Viney, M.E. (2000). The control of morph development in the parasitic nematode *Strongyloides ratti*. *Proceedings of the Royal Society of London Series B* 267: 2057-2063. PMC1690777.
60. Gemmill, A.W., Viney, M.E. & **Read, A.F.** (2000). The evolutionary ecology of host-specificity: experimental studies with *Strongyloides ratti*. *Parasitology* 120: 429-437.
59. West, S.A., Smith, T.G. & **Read, A.F.** (2000). Sex allocation and population structure in Apicomplexan (Protozoa) parasites. *Proceedings of the Royal Society of London Series B* 267: 257-263. PMC1690522.
58. Pickering, J., **Read, A.F.**, Guerrero, S. & West, S.A. (2000). Sex ratio and virulence in two species of lizard malaria parasites. *Evolutionary Ecology Research* 2: 171-184.

Last century

57. West, S.A., Lively, C.M. & **Read, A.F.** (1999). A pluralist approach to the evolution of sex and recombination. *Journal of Evolutionary Biology* 12: 1003-1012.
56. Buckling, A.G.J., Crooks, L. & **Read, A.F.** (1999). *Plasmodium chabaudi*: Effect of antimalarial drugs on gametocytogenesis. *Experimental Parasitology* 93: 45-54.
55. Gemmill, A.W., Skorping, A. & **Read, A.F.** (1999). Optimal timing of first reproduction in parasitic nematodes. *Journal of Evolutionary Biology* 12: 1148-1156.
54. Mackinnon, M. J. & **Read, A.F.** (1999). Genetic relationships between parasite virulence and transmission in the rodent malaria *Plasmodium chabaudi*. *Evolution* 53: 689-703.
53. Buckling, A.G.J. & **Read, A.F.** (1999). The effects of chloroquine on the infectivity of *Plasmodium chabaudi* gametocytes. *International Journal for Parasitology* 29: 619-625
52. Buckling, A.G.J., Ranford-Cartwright, L., Miles, A. & **Read, A.F.** (1999). Chloroquine increases *Plasmodium falciparum* gametocytogenesis *in vitro*. *Parasitology* 118: 339-346.
51. Mackinnon, M. J. & **Read, A.F.** (1999). Selection for high and low virulence in the malaria parasite *Plasmodium chabaudi*. *Proceedings of the Royal Society of London Series B* 266: 741-748. PMC1689830.
50. Arneberg, P., Skorping, A., Grenfell, B. & **Read, A.F.** (1998). Host densities as determinants of abundance in parasite communities. *Proceedings of the Royal Society of London Series B* 265: 1283-1289.
49. Arneberg, P., Skorping, A. & **Read, A.F.** (1998). Parasite abundance, body size, life histories and the energetic equivalence rule. *American Naturalist* 151: 497-513.
48. Braithwaite, V.A., Salkeld, D.J., MacAdam, H. M., Hockings, C.G., Ludlow, A.M. & **Read, A.F.** (1998). Spatial and discrimination learning in rodents infected with the nematode *Strongyloides ratti*. *Parasitology* 117: 145-154.
47. Skorping, A. & **Read, A.F.** (1998). Drugs and parasites: global experiments in life history evolution? *Ecology Letters* 1: 10-12.

46. Shutler, D. & **Read, A.F.** (1998). Local mate competition, and extraordinary and ordinary blood parasite sex ratios. *Oikos* 82: 417-424.
45. Taylor, L.H. & **Read, A.F.** (1998). Determinants of transmission success of individual clones from mixed-clone infections of the rodent malaria *Plasmodium chabaudi*. *International Journal for Parasitology* 28: 719-725.
44. Taylor, L.H., Mackinnon, M.J. & **Read, A.F.** (1998). Virulence of mixed-clone and single-clone infections of the rodent malaria *Plasmodium chabaudi*. *Evolution* 52: 489-497.
43. Arneberg, P., Skorping, A. & **Read, A.F.** (1997). Is population density a species character? Comparative analyses of the nematode parasites of mammals. *Oikos* 80: 289-300.
42. Buckling, A.G.J., Taylor, L.H., Carlton, J.M.-R. & **Read, A.F.** (1997). Adaptive changes in *Plasmodium* transmission strategies following chloroquine chemotherapy. *Proceedings of the Royal Society of London Series B* 264: 553-559. PMC1688398.
41. Gemmill, A.W., Viney, M.E. & **Read, A.F.** (1997). Host immune status determines sexuality in a parasitic nematode. *Evolution* 51: 393-401.
40. Taylor, L.H. & **Read, A.F.** (1997). Why so few transmission stages? Reproductive restraint by malaria parasites. *Parasitology Today* 13: 135-140.
39. Taylor, L.H., Walliker, D. & **Read, A.F.** (1997). Mixed-genotype infections of malaria parasites: within-host dynamics and transmission success of competing clones. *Proceedings of the Royal Society of London Series B* 264: 927-935. PMC1688430.
38. Taylor, L.H., Walliker, D. & **Read, A.F.** (1997). Mixed-genotype infections of the rodent malaria *Plasmodium chabaudi* are more infectious to mosquitoes than single-genotype infections. *Parasitology* 115: 121-132.
37. **Read, A.F.** & Viney, M.E. (1996). Helminth immunogenetics: why bother? *Parasitology Today* 12: 337-343.
36. Robert, V., **Read, A.F.**, Essong, J., Tchuinkam, T., Mulder, B., Verhave, J.-P. & Carnevale, P. (1996). Effect of gametocyte sex ratio on infectivity of *Plasmodium falciparum* to *Anopheles gambiae*. *Transactions of the Royal Society of Tropical Medicine and Hygiene* 90: 621-624.
35. Schrag, S.J. & **Read, A.F.** (1996). Loss of male outcrossing ability in simultaneous hermaphrodites: phylogenetic analyses of pulmonate snails. *Journal of Zoology* 238: 287-299.
34. **Read, A.F.** & Skorping, A. (1995). The evolution of tissue migration by parasitic nematode larvae. *Parasitology* 111: 359-371.
33. **Read, A.F.**, Anwar, M., Shutler, D. & Nee, S. (1995). Sex allocation and population structure in malaria and related parasitic protozoa. *Proceedings of the Royal Society of London Series B* 260: 359-363.
32. **Read, A.F.** & Nee, S. (1995). Inference from binary comparative data. *Journal of Theoretical Biology* 173: 99-108.
31. **Read, A.F.** (1994). The evolution of virulence. *Trends in Microbiology* 2: 73-76.
30. Norris, K., Anwar, M. & **Read, A.F.** (1994). Reproductive effort influences the prevalence of haematozoan parasites in great tits. *Journal of Animal Ecology* 63: 601-610.
29. Schrag, S.J., Nidifon, G.T. & **Read, A.F.** (1994). Temperature determined outcrossing in wild populations of a simultaneous hermaphrodite snail. *Ecology* 75: 2066-2077.
28. Schrag, S.J., Mooers, A. Ø., Nidifon, G.T. & **Read, A.F.** (1994). Ecological correlates of male outcrossing ability in a simultaneous hermaphrodite snail. *American Naturalist* 143: 636-655.

27. **Read, A.F.**, Narara, A., Nee, S., Keymer, A.E. & Day, K. (1992). Gametocyte sex ratios as an indirect measure of outcrossing rates in malaria. *Parasitology* 104: 387-395
26. **Read, A.F.** & Day, K.P. (1992). The genetic structure of malaria parasite populations. *Parasitology Today* 8: 239-242.
25. **Read, A.F.** & Weary, D.M. (1992). The evolution of bird song: comparative evidence. *Philosophical Transactions of the Royal Society Series B* 338: 165-187.
24. Day, K.P., Koella, J.C., Nee, S., Gupta, S. & **Read, A.F.** (1992). Population genetics and dynamics of *Plasmodium falciparum*: an ecological view. *Parasitology* 104: S35-S52.
23. Schrag, S.J. & **Read, A.F.** (1992). Temperature determination of male outcrossing ability in a simultaneous hermaphrodite. *Evolution* 46: 1698-1707.
22. Schrag, S.J., Rollinson, D., Keymer, A.E. & **Read, A.F.** (1992). Heritability of male outcrossing ability in the simultaneous hermaphrodite, *Bulinus truncatus* (Gastropoda: Planorbidae). *Journal of Zoology (London)* 226: 311-319.
21. Young, R.P., Hart, B.J., Merrett, T.G., **Read, A.F.** & Hopkin, J.M. (1992). House dust mite sensitivity: interactions of genetics and allergen doseage. *Clinical & Experimental Allergy* 22:205-211.
20. **Read, A.F.** (1991). Passerine polygyny: a role for parasites? *American Naturalist* 138: 434-459.
19. **Read, A.F.** & Nee, S. (1991). Is Haldane's Rule significant? *Evolution* 45: 1707-1709.
18. Balmford, A. & **Read, A.F.** (1991). Testing alternative models of sexual selection through female choice. *Trends in Ecology and Evolution* 6: 274-276.
17. Keymer, A.E., Gregory, R.D., Harvey, P., **Read, A.F.** & Skorping, A. (1991). Parasite-host ecology: case studies in population dynamics, life-history evolution and community structure. *Acta Oecologica* 12: 105-118.
16. Nee, S., **Read, A.F.**, Greenwood, J.J.D. & Harvey, P.H. (1991). The relationship between abundance and body size in British birds. *Nature* 351: 312-313.
15. Skorping, A., **Read, A.F.** & Keymer, A.E. (1991). Life history covariation in intestinal nematodes of mammals. *Oikos* 60: 365-371.
14. **Read, A.F.** & Weary, D.M. (1990). Sexual selection and the evolution of bird song: a test of the Hamilton and Zuk hypothesis. *Behavioural Ecology and Sociobiology* 26: 47-56.
13. Elgar, M.A., Ghaffer, N. & **Read, A.F.** (1990). Sexual dimorphism in leg length among orb-weaving spiders: a possible role for sexual cannibalism. *Journal of Zoology (London)* 222: 455-470.
12. Guilford, T. & **Read, A.F.** (1990). Zahavian cuckoos and the evolution of nestling discrimination by hosts. *Animal Behaviour* 39: 600-601.
11. Lawlor, B.J., **Read, A.F.**, Keymer, A.E., Parveen, G. & Crompton, D.W.T. (1990). Non-random mating in a parasitic worm: mate choice by males? *Animal Behaviour* 40: 870-876.
10. **Read, A.F.** & Harvey, P.H. (1989). Life history differences among the eutherian radiations. *Journal of Zoology* 219: 329-353.
9. **Read, A.F.** & Harvey, P.H. (1989). Reassessment of comparative evidence for Hamilton and Zuk theory on the evolution of secondary sexual characters. *Nature* 339: 618-620.
8. Harvey, P.H., **Read, A.F.** & Promislow, D.E.L. (1989). Life history variation in placental mammals: unifying the data with theory. *Oxford Surveys in Evolutionary Biology* 6: 13-31.
7. Trevelyan, R. & **Read, A.F.** (1989). Nest predators and the evolution of avian reproductive strategies: a comparison of Australian and New Zealand birds. *Oecologia* 81: 274-278.

6. **Read, A.F.** (1988). Sexual selection and the role of parasites. *Trends in Ecology and Evolution* 3: 97-102.
5. **Read, A.F.** (1988). Habitat use by Yellowheads *Mohoua ochrocephala* (Aves: Muscicapidae) in the Hawdon River Valley, Arthur's Pass National Park. 1. Habitat preferences. *New Zealand Journal of Zoology* 15: 461-470.
4. **Read, A.F.** (1988). Habitat use by Yellowheads *Mohoua ochrocephala* (Aves: Muscicapidae) in the Hawdon River Valley, Arthur's Pass National Park. 2. Time budgets and foraging behaviour. *New Zealand Journal of Zoology* 15:471-480.
3. **Read, A.F.** (1987). Comparative evidence supports the Hamilton and Zuk hypothesis on parasites and sexual selection. *Nature* 328: 68-70.
2. **Read, A.F.** (1987). The breeding and flocking behaviour of yellowheads at Arthur's Pass National Park. *Notornis* 34: 11-18.
1. **Read, A.F.** & O'Donnell, C.F.J. (1987). Abundance of yellowheads in the Hawdon River Valley, Arthur's Pass National Park in 1983 and 1984. *Notornis* 34: 307-315.

BOOK CHAPTERS & EDITED VOLUMES:

28. **Read, A.F.** (in press). Ecology and medicines. In: Dobson, A.P., Tilman, G.D., and Holt, R.D. (ed.s) *Unsolved Problems in Ecology*. Princeton University Press.
27. **Read, A.F.** (2017). Ecology, evolution and the cancer patient. In: Ujvari, B., Roche, B., Thomas, F. (ed.s). *Ecology and Evolution of Cancer*. pp. 255-257. Elsevier Academic Press.
26. **Read, A.F.** & Mackinnon, M.J. (2008). Pathogen evolution in a vaccinated world. In: Stearns, S.C. & Koella, J. *Evolution in Health and Disease* 2nd ed. pp. 139-152. Oxford University Press.
25. **Read, A.F.** (2007). The evolution of virulence: malaria, a case study. In: Nesse, R (ed.). *Evolutionary Medicine*. Henry Stewart Talks www.hstalks.com London (CD-ROM).
24. **Read, A.F.** & Clark, J.S. (Guest Ed.s). (2006). *Trends in Ecology and Evolution* 20th Anniversary Issues: Volume 21 Numbers 6 & 7. Editorials: **Read, A.F.** & Clark, J.S. The last twenty years of ecology and evolution. *Trends in Ecology and Evolution* 21: 287; The next twenty years of ecology and evolution. *Trends in Ecology and Evolution* 21: 354-355.
23. Ferguson, H.F., Gandon, S., Mackinnon, M.J. & **Read, A.F.** (2006). Malaria parasite virulence in mosquitoes and its implications for the introduction and efficacy of GMM malaria control programmes. In: Boete, C (ed.). *Genetically Modified Mosquitoes for Malaria Control*. pp 103-116. Landes Bioscience, Georgetown, Texas.
22. **Read, A.F.** (2006) Ballooning parrots and semi-lunar germs. In: Grafen, A. & Ridley, M. (ed.s). *Richard Dawkins: How a Scientist Changed the World*. pp. 3-13. Oxford University Press.
21. Renaud, F., De Meeus, T. & **Read, A.F.** (2005). Parasitism in man-made ecosystems. In: Thomas, F., Renaud, F., Guegan, J-F (ed.s) *Parasitism and Ecosystems*. pp. 155-170. Oxford University Press.
20. **Read, A.F.**, Gandon, S., Nee, S. & Mackinnon, M.J. (2004). The evolution of pathogen virulence in response to animal and public health interventions. In: Dronamraj, K. (ed.). *Infectious Disease and Host-Pathogen Evolution*. pp 265-292. Cambridge University Press.
19. **Read, A.F.**, Smith, T.G., Nee, S. & West, S.A. (2002). Sex ratios of malaria parasites and related protozoa. In: Hardy, I. (ed.) *Sex Ratios: Concepts and Research Methods*. pp. 314-332. Cambridge University Press.
18. Viney, M.E. & **Read, A.F.** (ed.s) (2002). *Parasite Variation: Ecological and Immunological Consequences*. Symposia of the British Society for Parasitology Vol. 38. (Suppl. to *Parasitology* Vol. 125). Cambridge University Press.
17. **Read, A.F.**, Mackinnon, M.J., Anwar, M. & Taylor, L. H. (2002). Kin selection models as evolutionary explanations of malaria. In: Dieckmann, U., Metz, J.A.J., Sabelis, M.W., Sigmund, K. (ed.s). *Adaptive Dynamics of Infectious Diseases: In Pursuit of Virulence Management*. pp. 165-178. Cambridge University Press.

16. Wilson, K., Bjørnstad, O.N., Dobson, A.P., Merler, S., Poglayen, G., Randolph, S.E., **Read, A.F.**, and Skorping, A. (2002). Heterogeneities in macroparasite infections: patterns and processes. In: Hudson, P.J., Rizzoli, A., Grenfell, B.T., Heesterbeek, H. & Dobson, A.P. *The Ecology of Wildlife Diseases*. pp. 6-44. Oxford University Press.
15. Grenfell, B.T., Amos, W., Arneberg, P., Bjørnstad, O.N., Greenman, J.V., Harwood, J., Lanfranchi, P., McLean, A.R., Norman, R.A., **Read, A.F.** & Skorping, A. (2002). Visions for future research in wildlife epidemiology. In: Hudson, P.J., Rizzoli, A., Grenfell, B.T., Heesterbeek, H. & Dobson, A.P. *The Ecology of Wildlife Diseases*. pp. 151-164. Oxford University Press.
14. **Read, A.F.**, Gemmill, A. & Skorping, A. (2000). Evolution of nematode life histories: theory meets reality? In: Poulin, R., Morand, S. & Skorping A. (ed.s). *Evolutionary Biology of Host-Parasite Relationships: Theory Meets Reality*. pp. 237-246. Elsevier, Amsterdam.
13. **Read, A.F.** & Taylor, L. H. (2000). Within-host ecology of infectious diseases: patterns and consequences. In: Thompson, R.C.A. (ed.) *The Molecular Epidemiology of Infectious Diseases*. pp. 59-75. Arnold, London.
12. **Read, A.F.**, Aaby, P. Antia, R., Ebert, D., Ewald, P.W., Gupta, S., Holmes, E.C., Sasaki, A., Shields, D.C., Taddei, F., Moxon, E.R. (1999). Group report: What can evolutionary biology contribute to understanding virulence? In: Stearns, S.C. (ed.) *Evolution in Health and Disease*. pp. 205-215. Oxford University Press.
11. Nee, S., **Read, A.F.** & Harvey, P.H. (1996). The comparative method. In: Martins, E.P. *Phylogenies and the Comparative Method in Animal Behaviour*. pp 399-411. Oxford University Press.
10. **Read, A.F.** & Skorping, A. (1995). Causes and consequences of life history variation in parasitic nematodes. In: Griffin, C. & Gwynn, R.L. & Masson, J.P. (ed.s) *Ecology and Transmission of Entomopathogenic Nematodes*. pp. 58-68. European Commission, Brussels EUR 1629.
9. **Read, A.F.**, Albon, S.D., Antonovics, J., Apanius, V., Dwyer, G., Holt, R.D., Judson, O. Lively, C.M., Martin-Löf, A., McLean, A.R., Metz, J.A.J, Schmidt-Hempel, P., Thrall, P.H., Via, S. & Wilson, K. (1995). Group report: genetics and evolution of infectious diseases in natural populations. In: Grenfell, B. & Dobson, A. (ed.s) *Ecology of Infectious Diseases in Natural Populations*. pp. 450-477. Cambridge University Press.
8. Harvey, P.H. & **Read, A.R.** (1992). Primate ranging behaviour. In: Jones, S., Martin, R., Pilbeam, D. & Bunney, S. (eds). *The Cambridge Encyclopedia of Human Evolution*. pp. 155-157. Cambridge University Press, Cambridge.
7. Harvey, P.H., **Read, A.F.**, John, J., Gregory, R. & Keymer, A.E. (1991). An evolutionary perspective. In: Toft, C., Aeschlimann, A. & Bolis, L. (ed.s) *Parasitism: Coexistence or Conflict?* pp. 344-355. Oxford University Press, Oxford.
6. Keymer, A.E. & **Read, A.F.** (1991). Behavioural ecology: the impact of parasitism. In: Toft, C., Aeschlimann, A. & Bolis, L. (ed.s) *Parasitism: Coexistence or Conflict?* pp. 37-61. Oxford University Press, Oxford.
5. Keymer, A.E. & **Read, A.F.** (ed.s) (1990). *The Evolutionary Biology of Parasitism*. Symposia of the British Society for Parasitology Vol. 27. (Suppl. to *Parasitology* Vol. 100). Cambridge University Press.
4. **Read, A.F.** (1990). Parasites and the evolution of host sexual behaviour. In: *Parasitism and Host Behaviour*. Barnard, C. & Behnke, J.M. (eds.) pp. 117-157. Taylor and Francis Ltd, London.
3. Harvey, P.H., Promislow, D.E.L., **Read, A.R.** (1989). Causes and correlates of life history differences among mammals. In: *Comparative Socioecology. The Behavioural Ecology of Humans and other Mammals*. Standen, V. & Foley, R. (eds). British Ecological Society Special Publication, Blackwells, Oxford. pp. 305-318.
2. **Read, A.F.** & Harvey, P.H. (1988). Genetic relatedness and the evolution of animal mating patterns. In: *Human Mating Patterns*. Symposia of the Society for the Study of Human Biology Vol. 28. Mascie-Taylor, C.G.N. & Boyce, A.J. (eds). Taylor and Francis, London. pp. 115-132.
1. Harvey, P.H. & **Read, A.R.** (1988). How and why do mammalian life histories differ? In: *Evolution of Life Histories of Mammals: Theory and Pattern*. Boyce, M.S. (ed.). pp. 213-232. Utah University Press, Utah.

SCIENTIFIC COMMENTARIES:

- Thomas, M.B., & **Read, A.F.** (2016). The threat (or not) of insecticide resistance for malaria control. *Proceedings of the National Academy of Science USA* 113: 8900-8902.
- Read, A.F.**, Bentley, G.R., & Haig, D. (2016). George C. Williams Prize. *Evolution, Medicine and Public Health*. 2016: 212-213. doi:10.1093/emph/eow017.
- Read, A.F.** & Mideo, N. (2013). The vector as protector. *Nature* 498: 177-178.
- Thomas, M.B., Godfray, H.C.J., **Read, A.F.**, van den Berg, H., Tabashnik, B.E., van Lenteren, J.C., Waage, J.K. & Takken, W. (2012). Lessons from agriculture for the sustainable management of malaria vectors. *PLoS Medicine* 9: e1001262. doi:10.1371/journal.pmed.1001262. PMC3393651.
- Read, A.F.** & Braithwaite, V.A. (2012). Healthy body, unhealthy mind? In: *Host manipulation by parasites*. Hughes, D.P., Brodeur, J. & Thomas, F. (eds). pp. 195-197. Oxford University Press.
- Borer, E.Y., Antonovics, J., Kinkel, L.L., Hudson, P.J., Daszak, P., Ferrari, M.J., Garrett, K.A., Parrish, C.R., **Read, A.F.** & Rizzo, D.M. (2011). Bridging taxonomic and disciplinary divides in infectious disease. *EcoHealth* 8: 261-267 doi:10.1007/s10393-011-0718-6. PMC3292718.
- Read, A.F.** & Thomas, M.B. (2009). Mosquitoes cut short. *Science* 323: 51-52.
- Read, A.F.**, Graham, A.L, Råberg, L. (2008). Animal defenses against infectious agents: is damage control more important than pathogen control? *PLoS Biology* 6: e1000004. doi:10.1371/journal.pbio.1000004. PMC2605932.
- Thomas, M.B. & **Read, A.F.** (2007). Fungal biopesticides with a sting. *Nature Biotechnology* 25: 1329-1492.
- Long, G. H, & **Read, A.F.** (2007). The expanding field of evolutionary immunology: 'The impact of the environment on innate immunity: at the defence frontier – the biology of innate immunity'. *Expert Reviews in Clinical Immunology* 3: 459-461.
- West, S.A., Reece, S.E. & **Read, A.F.** (2003). *Toxoplasma gondii*, sex and premature rejection. *Trends in Parasitology* 19: 155-157.
- de Roode, J.C. & **Read, A.F.** (2003). Evolution and ecology, after the malaria genomes. *Trends in Ecology and Evolution* 18: 60-61.
- Viney, M.E. & **Read, A.F.** (2002). So what if parasite vary? *Trends in Parasitology* 18: 2-4.
- Read, A.F.** & Allen, J. E. (2000). Evolution and immunology: The economics of immunity. *Science* 290:1104-1105.
- Reece, S.E. & **Read, A.F.** (2000). Malaria sex ratios. *Trends in Ecology and Evolution* 15: 259-260.
- Timms, R. & **Read, A.F.** (1999). What makes a specialist special? *Trends in Ecology and Evolution* 14: 333-334.
- Kythgoe, K. & **Read, A.F.** (1998). Catching the Red Queen? The advice of the Rose. *Trends in Ecology and Evolution* 13: 473-474.
- Gemmill, A. & **Read, A.F.** (1998). Counting the costs of resistance. *Trends in Ecology and Evolution* 13: 8-9.
- Sheldon, B.C. & **Read, A.F.** (1997). Comparative biology and disease ecology. *Trends in Ecology and Evolution* 12: 43-44.
- Read, A.F.** & Harvey, P.H. (1993). Evolving in a dynamic world. *Science* 260: 1760-1762.
- Read, A.F.** & Harvey, P.H. (1993). The evolution of virulence. *Nature* 362: 500-501.
- Read, A.F.** & Schrag, S.J. (1991). The evolution of virulence: experimental evidence. *Parasitology Today* 7: 296-297.

- Keymer, A.E. & **Read, A.F.** (1990). Evolutionary biology of parasitism. *Parasitology Today* 6: 2-3
- Bennun, L.A. & **Read, A.F.** (1988). Joint nesting in Acorn Woodpeckers. *Trends in Ecology Evolution* 3: 319.
- Harvey, P.H. & **Read, A.R.** (1988). When incest is not best. *Nature* 336: 513-514.
- Read, A.F.** (1986). Female mate choice in pied flycatchers: an answer and a problem. *Trends in Ecology Evolution* 1: 85.
- Read, A.F.** & Harvey, P.H. (1986). Genetic management in zoos. *Nature* 332: 408-10.

PUBLISHED NOTES, BOOK REVIEWS & EDITORIALS:

- Read, A.F.** (2016). Op Ed, *Philadelphia Inquirer* (Aug 4). Science, politics can team up to solve antibiotic resistance.
- Read, A.F.**, & Woods, R.J. (2014). Clinical Brief: Antibiotic resistance management. *Evolution, Medicine and Public Health*. doi: 10.1093/emph/eou024. PMC4228198.
- Read, A.F.** (2011). Taming Evolution. How best to manage the “natural” selection created by medical practice? *Science Journal* (PSU’s Eberly College Alumni magazine) Fall/Winter 2011.
- Read, A.F.** (2011). Evidence based resistance management? *Plasmodium* 5: 3-4. (Newsletter of the National Institute of Malaria Research, New Delhi.)
- Thomas, M.B., Blanford, S., Jenkins, N.E., Killeen, G.F., Knols, B.G.J., **Read, A.F.**, Schlote, E-J. & Takken, W. (2005). Benefits and risks in malaria control. *Science* 310: 50.
- Read A.F.**, Gandon S., Nee, S. de Roode, J.C. and Mackinnon, M.J. (2005) Evolution of MDV virulence: an evolutionary biologist perspective. In: V. Nair (ed.) *Recent Advances in Marek’s Disease Research: Proceedings of the 7th International MD Symposium, St Catherine’s College, Oxford, 10 -14th July* (pp. 69-73). Institute for Animal Health, Compton, UK
- Skorping, A. & **Read, A.F.** (2000). What determines the longevity of mammalian nematodes? *Bulletin of the Scandanavian Society for Parasitology* 10: 55-60.
- West, S.A., Lively, C.M. & **Read, A.F.** (1999). Sex may take more than one. *Journal of Evolutionary Biology* 12:1053-1055.
- Read, A.F.** & Shutler, D. (1998). Darwinian medicine? Lessons from avian blood parasites. *Bulletin of the Scandanavian Society for Parasitology* 8: 30-32.
- Harvey, P.H., **Read, A.F.** & Nee, S. (1995). Further remarks on the role of phylogeny in comparative ecology. *Journal of Ecology* 83: 733-734.
- Harvey, P.H., **Read, A.F.** & Nee, S. (1995). Why ecologists are phylogenetically challenged. *Journal of Ecology* 83: 535-536.
- Read, A.F.** & Nee, S. (1993). Haldane's coincidence: a reply to Brookfield. *Evolution* 47: 1888-1889.
- Harvey, P.H., Nee, S. & **Read, A.F.** (1993). Fluctuating asymmetry. *Nature* 363: 217.
- Read, A.F.** & Nee, S. (1990). Male schistosomes: more than just muscle? *Parasitology Today* 6: 297.
- Read, A.F.** & Harvey, A.R. (1989). Validity of sexual selection. *Nature* 340: 105.
- Read, A.** (1985). Predation of an arboreal rat by a New Zealand falcon. *Notornis* 32: 155.
- Read, A.** & McClelland, P. (1984). Orange-fronted parakeets in the Hawdon River Valley, Arthur's Pass National Park. *Notornis* 31: 266-7.

BOOK REVIEWS:

- Matthews, G. (2012). *Integrated Vector Management: Controlling Vectors of Malaria and Other Insect Vector Borne Diseases*. Wiley-Blackwell. In: *Quarterly Review of Biology* 88:151.
- Harré, R. (2009). *Pavlov's Dogs and Schrödinger's Cat: Scenes from the Living Laboratory*. Oxford University Press, Oxford. In: *Nature* 458: 1113-1114 (2009).
- Werth, B. (2009). *Banquet at Delmonico's. Great Minds, the Gilded Age, and the Triumph of Evolution in America*. Random House, New York. In: *Nature* 457: 663-664 (2009).
- Conn. P.M. & Parker, J.V. (2008). *The Animal Research War*. Palgrave MacMillan, London. In: *Nature* 453: 592-593 (2008).
- Zuk, M. (2007). *Riddled with Life: Friendly Worms, Ladybug Sex, and the Parasites That Make Us Who We Are*. Harcourt, Orlando. In: *Bioscience* 58:362-363 (2008).
- Esch, G.W. (2004). *Parasites, People, and Places. Essays on Field Parasitology*. Cambridge University Press, Cambridge. In: *Trends in Ecology and Evolution* 20:111-112 (2005).
- Majerus, M.E.N. (2003). *Sex Wars: Genes, Bacteria and Biased Sex Ratios*. Princeton University Press, Princeton. In: *Bioscience* 54: 362-363 (2004)
- Grafen, A. & Hails, R. (2002). *Modern Statistics in the Life Sciences*. Oxford University Press and Crawley, M.J. 2002. *Statistical Computing. An Introduction to Data Analysis Using S-Plus*. John Wiley. In: *Trends in Ecology and Evolution* 18: 11-12 (2003).
- Vetvicka, V. & Sima, P. (1998). *Evolutionary Mechanisms of Defense Reactions*. Birkhäuser Verlag. In: *Journal of Evolutionary Biology* 13: 151-152 (2000).
- W.D. Hamilton and J.C. Howard (ed.s). (1997). *Infection, Polymorphism and Evolution*. Chapman & Hall and the Royal Society. In: *Quarterly Review of Biology* 74:224 (1999).
- Matthews, B.E. (1998). *An Introduction to Parasitology*. Cambridge University Press. In: *Times Higher Education Supplement*, Feb 26 (1999).
- Poulin, R. (1998). *Evolutionary Ecology of Parasites. From Individuals to Communities*. Chapman & Hall. In: *Trends in Ecology and Evolution* 13: 516-517 (1998).
- Clayton, D.H. & Moore, J. (ed.s) (1997). *Host-Parasite Evolution: General Principles and Avian Models*. Oxford University Press. In: *Trends in Ecology and Evolution* 13: 293-294 (1998).
- Roizman, B. (ed.) (1995). *Infectious Diseases in an Age of Change. The Impact of Human Ecology and Behaviour of Disease Transmission*. National Academy of Sciences, Washington. In: *American Journal of Epidemiology* 145: 861-862 (1997).
- Isham, V. & Medley, G. (ed.s) (1996). *Models for Infectious Human Diseases. Their Structure and Relation to Data*. Cambridge University Press, Cambridge. In: *Parasitology Today* 13: 158-159 (1997).
- Crawley, M. J. (ed.) (1992). *Natural Enemies. The Population Biology of Predators, Parasites and Diseases*. Blackwell Scientific, Oxford. In: *Quarterly Review of Biology* 69: 256-257 (1994).
- Brooks, D.R. & McLennan, D.A. (1993). *Parascript. Parasites and the Language of Evolution*. Smithsonian Institution Press, Washington. In: *Parasitology Today* 10: 203-204 (1994)
- Power, D.M. (ed.) (1991). *Current Ornithology Vol. 8*. Plenum Press, New York. In: *Ibis* 135: 104-105 (1993).
- Loye, J. & Zuk, M. (ed.s) (1991). *Bird-Parasite Interactions. Ecology, Evolution and Behaviour*. Oxford University Press. In: *Trends in Ecology and Evolution* 6: 411-412 (1991).
- Fuller, E. (ed.) (1990). *Kiwis*. Swan Hill Press, Shrewsbury, England. In: *Ibis* 133: 427 (1991)
- Galbreath, R. (1989). *Walter Buller. The Reluctant Conservationist*. GP Books, Wellington. In: *Ibis* 133: 97 (1991).
- Esch, G., Bush, A. & Aho, J. (ed.s) (1990). *Parasite Communities: Patterns and Processes*. Chapman and Hall. In: *Trends in Ecology and Evolution* 5: 424-425 (1990). [with S. Nee]
- Plotkin, H.C. (ed.) (1988). *The Role of Behaviour in Evolution*. MIT Press, Cambridge, MA. In: *Ibis* 132: 627 (1990).
- Chambers, S. (1989). *Birds of New Zealand. Locality Guide*. Arun Books, Hamilton, New Zealand. In: *Ibis* 132: 624 (1990).
- Otte, D. & Endler, J.A. (ed.s) (1989). *Speciation and its Consequences*. Sinauer, Sunderland, MA. In: *Ibis* 132: 492 (1990).
- Ehrlich, N.J., Dobkin, D.S. & Wheye, D. (1988). *The Birder's Handbook: a Field Guide to the Natural History of North American Birds*. Simon and Schuster Inc., New York. In: *Ibis* 131:617 (1989).
- Summers-Smith, J.D. (1988). *The Sparrows. A study of the genus Passer*. Poyser, Carlton. In: *Times Higher Education Supplement* Jan. 1989.
- Andrews, J.R.H. (1987). *The Southern Ark. Zoological Discovery in New Zealand 1769-1900*. Century, London. In: *Ibis* 130: 307 (1988).
- Peters, R.H. (1983). *The Ecological Implications of Body Size*. Cambridge University Press. In: *Ibis* 129: 586 (1987).
- King, C. (1984). *Immigrant Killers. Introduced Predators and the Conservation of Birds in New Zealand*. Oxford University Press, Auckland. In: *Ibis* 128: 581-582 (1986).