

JESSICA F. STEPHENSON

Center for Adaptation to a Changing Environment (ACE)
ETH Zürich, 8092 Zürich, Switzerland · Eawag, 8600 Dübendorf, Switzerland
(+41) 763366362 · jfrstephenson@gmail.com · jfstephenson.com · @jessfstep

Research Employment and Education

Assistant Professor Department of Biological Sciences · University of Pittsburgh, USA · from June 2018

Post-doctoral Fellow ACE · ETH Zürich & Eawag, Switzerland · July 2015– May 2018

Ph. D. Cardiff University, UK · October 2011– June 2015

Thesis: “Predators, parasites, and the social behaviour of the guppy, *Poecilia reticulata*”

M. Sc. University of Bristol, UK · Universidad de Valparaíso, Chile · October 2008– July 2010

Thesis: “Olfaction, vision and cross-modal integration in zebrafish visual behaviour”

B. A. Biological Sciences (First Class) University of Oxford, UK · October 2004–June 2007

Dissertation: “Age-dependent spatiotemporal utilisation of seagrass by reef fish”

Research Assistantships

Institute of Aquaculture · University of Stirling, UK · January 2010– September 2010

Universidad de Valparaíso, Chile · June 2008– August 2008

Darwin Initiative project · Puerto Montt and Chiloé, Chile · January 2008– June 2008

Operation Wallacea · Cayos Cochinos, Honduras · June–September 2006 & 2007

Grants and Awards

2015	Center for Adaptation to a Changing Environment (ACE), ETH Zürich	Postdoctoral fellowship	>250,000.- CHF
2015	Welsh Crucible	Interdisciplinary research project	£10,000
2012-2014	Cardiff Undergraduate Research Opportunities Programme (CUROP)	Summer student projects	£2,720
2012-2014	Bristol Society for Parasitology (BSP)	Conference attendance	£700
2012	Fisheries Society of the British Isles (FSBI)	Conference attendance	£500
2011	FSBI	Ph.D. Stodenship	£75,000
2010	Marine Harvest & Institute of Aquaculture, University of Stirling	Ph.D. Stodenship	Declined
2009	Worshipful Company of Fishmongers	Travel award for M.Sc. work in Chile	£300
2006	Mike Soper Bursary Fund	Travel award for work in Honduras	£300

Academic Service

Member Fisheries Society of the British Isles · British Ecological Society · British Society for Parasitology · Ecological Society of America

Co-founder and inaugural meeting organiser Welsh Evolutionary Ecology Network (weenwales.wordpress.com)

Organiser and host of external seminar speakers Pieter Johnson, University of Colorado, Boulder · David Reznick, University of California, Riverside · Ellen Decaestecker, KU Leuven · Camille Bonneaud, University of Exeter · Kayla King, Oxford University · Britt Koskella, University of Exeter · Christophe Eizaguirre, Queen Mary University of London · Lesley Morell, Hull University

Journal article peer reviewer See [Publons](#) profile · Biological Journal of the Linnean Society · Biology Letters · Ecology · Evolutionary Ecology · Functional Ecology · International Journal for Parasitology · Journal of Fish Biology · Journal of Zoology · Oecologia · Oikos · Parasitology · PeerJ · PLoS ONE

Grant peer reviewer National Science and Engineering Research Council (Canada) Discovery Grant

Conference involvement Volunteer at Sea Lice 2010, Victoria, Vancouver Island · Session chair and student talk judge at British Ecological Society Annual Meeting 2015, Edinburgh · Session chair at ACE conference 2016, Ascona, Switzerland · Student talk judge at Eawag PhD symposium 2016, Kastanienbaum, Switzerland

Presentations

Selected invited seminars

- Methodology seminar · **ETH Phenomics Center** · January 2017:
'Fish and their parasites as experimentally tractable, relevant models for epidemiology'
- Departmental seminar · **University of Pittsburgh** · January 2017:
'The behavioural and evolutionary ecology of infectious disease transmission'
- Fish Ecology departmental seminar · **Eawag Kastanienbaum** · May 2016:
'The evolutionary ecology of host-parasite interactions'
- Departmental seminar · **University of East Anglia** · March 2016:
'The evolutionary ecology of host-parasite interactions'
- Adaptation to a Changing Environment seminar series · **ETH Zürich** · October 2015:
'The ecology of disease transmission'
- Organisms and Environment seminar series · **Cardiff University** · January 2015:
*'Sensory ecology, parasites and social behaviour in the guppy, *Poecilia reticulata*'*
- Adaptation to Changing Environments symposium · **ETH Zürich** · December 2014:
'Host-parasite interactions in changing environments'

Selected conference presentations

- Adaptation to a Changing Environment (ACE)** · Ascona · June 2016:
'The evolutionary ecology of host-parasite interactions'
- Biology16** · Lausanne · March 2016:
'Risk of transmission predicts avoidance of visual and chemical cues of infected conspecifics'
- British Ecological Society Annual Meeting** · Edinburgh · December 2015:
'Risk of transmission predicts avoidance of visual and chemical cues of infected conspecifics'
- Wales Ecology Evolution Network halloWEEN Meeting** · Gregynog · October 2014:
*'Evidence for direct and indirect effects of predators on the parasites of Trinidadian guppies, *Poecilia reticulata*'*
- British Society for Parasitology Autumn Symposium** · Salford University · September 2014:
*'Evidence for direct and indirect effects of predators on the parasites of Trinidadian guppies, *Poecilia reticulata*'*
- Media coverage: [BugBitten](#)
- British Society for Parasitology Spring Meeting** · Cambridge University · April 2014:
'Parasites of Trinidadian guppies: evidence for sex- and age-specific trait-mediated indirect effects of predators'
- Voted [Best Ecology Student Talk](#) (click the link for details)
- British Society for Parasitology Spring Meeting** · University of Bristol · April 2013:
*'Chemical communication in sea lice, *Lepeophtheirus salmonis*, controls movement between host Atlantic salmon, *Salmo salar*'*
- International Conference of Poeciliid Biologists** · University of the West Indies · June 2012:
'Parasite distribution among Trinidadian guppy populations'
- Fisheries Society of the British Isles Symposium** · University of East Anglia · July 2012:
'Olfaction, vision, and cross-modal interaction in fish behaviour'

Teaching Experience

Teaching

Guest lecturer · ETH Zürich & Eawag · 2015–present written and presented guest lectures to 3rd year Environmental Sciences bachelors students in ‘Ecological and Evolutionary Applications’.

Teaching assistant · Cardiff University, UK · 2011–2015 20+hours per year of under- and postgraduate teaching and marking, mainly on statistics and general parasitology courses.

Field course teaching assistant · Cardiff University, UK · 2012–2014 tutoring undergraduates in ecological research techniques three times on an annual two week course, Tobago.

Mentoring

ETH Zürich & Eawag · 2015–present I am currently supervising two undergraduate students, and am developing a literature review project with an M.Sc. student.

Cardiff University, UK · 2011–2015 As a Ph.D. student, I mentored four undergraduate dissertation students and one M.Res. student. These projects have resulted in three publications, and one manuscript in press, to date.

Teaching outside of academia

English teacher · Speak School · Preston, UK · January – August 2011: I taught English as a foreign language to adults of a wide range of nationalities.

Private tutor · 3A Tutors · Bristol, UK · September 2008 – June 2009: I tutored A-level students in Biology.

Tutor · Oxbridge Applications · 2007: I gave mock interviews for prospective Cambridge and Oxford undergraduates.

Watersports instructor · La Manga, Spain · 2004: I taught sailing and windsurfing to all ages in English and Spanish.

Technical Skills

Software R statistical software · L^AT_EX · ImageJ · JWatcher · Ethovision

Laboratory skills Organising all necessary paperwork and documentation to conduct animal experiments in accordance with Swiss and UK animal welfare legislation · Fish care and breeding · Behavioural experiments · Fish photography · Invasive procedures such as parasite culturing on fish, experimental infections of naïve fish, infection monitoring under anaesthesia, fin clipping, scale sampling and marking using Panjet.

Field skills Electrofishing · Seine netting · Fish collection, processing and international shipping (including organising all necessary permits) · Fish behavioural observations from bank, snorkelling and diving (PADI Divemaster) · Marine and freshwater habitat surveys · More than 15 months of fieldwork in Chile, Honduras, Scotland and Trinidad & Tobago.

Web Hosting Wordpress

Publications

Cited 151 times to date; h-index: 5; i10-index: 4 (see [Google Scholar](#) and [ResearchGate](#))

* *Denotes undergraduate or graduate student co-author.*

Submitted, in review and in press

L. C. Naisbett-Jones*, N. Putman, **J. F. Stephenson**, S. Ladak, K. A. Young. in press. Magnetic map leads juvenile eels to the Gulf Stream. **Current Biology**.

Peer-reviewed

14. **J. F. Stephenson**, K. A. Young, J. Fox*, J. Jokela, J. Cable and S. E. Perkins. in press. Host heterogeneity affects both parasite transmission to and fitness on subsequent hosts. **Philosophical Transactions of the Royal Society of London, Series B: Biological Sciences** 372: 20160093. doi:10.1098/rstb.2016.0093
13. **J. F. Stephenson**, M. Reynolds*. 2016. Imprinting can cause a maladaptive preference for infectious conspecifics. **Biology Letters** 12: 20160020. doi:10.1098/rsbl.2016.0020
Media coverage: [Atlas of Science](#)
12. **J. F. Stephenson**, C. Kinsella*, J. Cable, C. van Oosterhout. 2016. A further cost for the sicker sex? Evidence for male-biased parasite-induced vulnerability to predation. **Ecology and Evolution** 6: 2506-2515. doi:10.1002/ece3.2049
11. **J. F. Stephenson**. 2016. Keeping eyes peeled: guppies exposed to chemical alarm cue are more responsive to ambiguous visual cues. **Behavioral Ecology and Sociobiology** 70: 575-584. doi:10.1007/s00265-016-2076-4
10. **J. F. Stephenson**, C. van Oosterhout, J. Cable. 2015. Pace of life, predators and parasites: predator-induced life history evolution in Trinidadian guppies predicts sex-specific decrease in parasite tolerance. **Biology Letters** 11: 20150806. doi:10.1098/rsbl.2015.0806
9. **J. F. Stephenson**, C. van Oosterhout, R. S. Mohammed*, J. Cable. 2015. Parasites of Trinidadian guppies: evidence for sex- and age-specific trait-mediated indirect effects of predators. **Ecology** 96 (2): 489-498. doi:10.1890/14-0495.1
Media coverage: [BugBitten](#)
8. **J. F. Stephenson**. 2014. The experimental evolution of parasite resistance in wild guppies: artificial selection, resource availability and predation pressure. **Proceedings of the Royal Society B: Biological Sciences** 281 (1794): 20140541. doi:10.1098/rspb.2014.0541
7. J. Cable, G. A. Archard, R. S. Mohammed*, M. McMullan, **J. F. Stephenson**, H. Hansen, C. van Oosterhout. 2013. Can parasites use predators to spread between primary hosts? **Parasitology** 140 (9): 1138-1143. doi:10.1017/S003118201300067X
6. C. van Oosterhout, R. S. Mohammed*, R. Xavier, **J. F. Stephenson**, G. A. Archard, F. A. Hockley*, S. E. Perkins, J. Cable. 2013. Invasive freshwater snails provide resource for native marine hermit crabs. **Aquatic Invasions** 8 (2): 185-191. doi:10.3391/ai.2013.8.2.06
5. **J. F. Stephenson**. 2012. The chemical cues of male sea lice *Lepeophtheirus salmonis* encourage others to move between host Atlantic salmon *Salmo salar*. **Journal of Fish Biology** 81 (3): 1118-1123. doi:10.1111/j.1095-8649.2012.03347.x
4. **J. F. Stephenson**, K. E. Whitlock, J. C. Partridge. 2012. Food and conspecific chemical cues modify the visual behavior of zebrafish, *Danio rerio*. **Zebrafish** 9 (2): 68-73. doi:10.1089/zeb.2012.0734
3. **J. F. Stephenson**, J. C. Partridge, K. E. Whitlock. 2011. Zebrafish preference for light or dark is dependent on ambient light levels and olfactory stimulation. **Zebrafish** 8 (1): 17-22. doi:10.1089/zeb.2010.0671
2. K. A. Young, J. B. Dunham, **J. F. Stephenson**, A. Terreau, A. Thially, G. Gajardo, C. Garcia de Leaniz. 2010. A trial of two trout: comparing the impacts of rainbow and brown trout on a native galaxiid. **Animal Conservation** 13 (4): 399-410. doi:10.1111/j.1469-1795.2010.00354.x
1. K. A. Young, **J. F. Stephenson**, A. Terreau, A. Thially, G. Gajardo, C. Garcia de Leaniz. 2008. The diversity of exotic salmonids does not affect their competitive impact on a native galaxiid. **Biological Invasions** 11 (8): 1955-1961. doi:10.1007/s10530-008-9372-5

Popular press

- J. F. Stephenson**, E. Gillingham, S. Withenshaw. 2014. Project management, fellowships and grants: a workshop full of top tips. **BES Bulletin** 45 (1): 40-41.