

# Dr. William Pitchers

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## Career

- August 2015 - **Postdoctoral Researcher - Michigan State University** - [Gallant Lab](#)  
Project - '*The Genomic Basis of Electric Signal Diversity*'  
Funding - National Science Foundation
- 2010 - 2015 **Postdoctoral Researcher - Michigan State University** - [Dworkin Lab](#)  
Project - '*Evolutionary Genomics of Wing Shape in Drosophila melanogaster*'  
Funding - National Institutes of Health  
- [BEACON](#) Center for the Study of Evolution in Action.
- 2006 - 2010 **PhD Evolutionary Biology - University of Exeter in Cornwall**  
Thesis - '*Trait Integration as a Constraint on Phenotypic Evolution*'  
Funding - Natural Environmental Research Council
- 2005 - 2006 **Research Technician - University of Manchester.** Time split between:  
Dr P. Kover - cultivation and cataloguing *Arabidopsis*, practical support for students.  
Dr J. Wolf - establishment of stalk-eyed fly culture; data collection on mouse behaviour.
- 2000 - 2002 **MSc Behavioural Ecology - Manchester Metropolitan University**  
Research - '*Foraging preferences of the hoverflies Episyrphus balteatus & Syrphus ribesii*'
- 1997 - 2000 **BSc (Hons) Biology - University of Leeds**  
Research - '*Nutritional state and shoaling decisions in zebra-fish*'

## Publications

- Pitchers, W.**, Constantinou, S.J., Losilla, M. & Gallant, J.R. **2016** Electric Fish Genomics: Progress, Prospects, and New Tools for Neuroethology. *J. Phys. Paris*. doi: <http://dx.doi.org/10.1016/j.jphysparis.2016.10.003>
- Sonnenschein, A., VanderZee, D., **Pitchers, W.**, Chari, S. R. & Dworkin, I. **2015** A Database of *Drosophila* Wings for Phenomic and Biometric analysis. *GigaScience*, 4 (25). doi: [10.1186/s13742-015-0065-6](https://doi.org/10.1186/s13742-015-0065-6)
- Tack, D., **Pitchers W.** & Adams, K.L. **2014** Transcriptome Analysis Indicates Considerable Divergence in Alternative Splicing Between Duplicated Genes in *Arabidopsis thaliana*. *Genetics*, 198 (4): 1473-1481. doi: [10.1534/genetics.114.169466](https://doi.org/10.1534/genetics.114.169466)
- Pitchers, W.**, Klingenberg, C., Tregenza, T., Hunt, J. & Dworkin, I. **2014** Potential morphological constraint on the evolution of an acoustic signal. *JEB*, 27 (10), 2163-2176 doi: [10.1111/jeb.12471](https://doi.org/10.1111/jeb.12471)
- Pitchers, W.**, Wolf, J.B., Tregenza, T., Hunt, J & Dworkin, I. **2014** Evolutionary rates for multivariate traits: the role of selection and genetic variation. *Phil. Trans. Roy. Soc. B.*, 369: no.1649 20130252 doi: [10.1098/rstb.2013.0252](https://doi.org/10.1098/rstb.2013.0252)
- Pitchers, W.**, Brooks, R., Jennions, M.D., Tregenza, T., Dworkin, I & Hunt, J. **2013** Limited plasticity in the phenotypic variance-covariance matrix for male advertisement calls in the black field cricket, *Teleogryllus commodus*. *JEB* 26 (5): 1060-1078 doi: [10.1111/jeb.12120](https://doi.org/10.1111/jeb.12120)
- Pitchers, W.**, Pool, J. & Dworkin, I. **2012** Altitudinal Clinal Variation in Wing Form in African *Drosophila melanogaster*: One Cline or Many? *Evolution*, 67: 438-452. doi: [10.1111/j.1558-5646.2012.01774.x](https://doi.org/10.1111/j.1558-5646.2012.01774.x)

- Okada, K., **Pitchers, W.**, Sharma, M.D., Hunt, J. & Hosken, D.J. **2011** Longevity, calling effort, and metabolic rate in two populations of cricket. *Behav Ecol Sociobiol*, 65 (9): 1773-1778 doi: [10.1007/s00265-011-1185-3](https://doi.org/10.1007/s00265-011-1185-3).
- DeNieu, M., **Pitchers, W.** & Dworkin, I. **<in revision>** Adaptation to a novel predator in *Drosophila melanogaster*: How well are we able to predict evolutionary responses? [*Am. Nat.*]. BioRxiv doi: [10.1101/005322](https://doi.org/10.1101/005322)
- Pitchers, W.**, Nye, J., Márquez, E.J., Kowalski, A., Houle, D. & Dworkin, I. **<in review>** The power of a multivariate approach to genome-wide association studies: an example with *Drosophila* wing shape. [*Genetics*]. BioArxiv doi: <https://doi.org/10.1101/108308>
- Chandler, C.H., Chari, S., Kowalski, A., Choi, L., Tack, D., DeNieu, M., **Pitchers, W.**, Sonnenschein, A, Marvin, L., Hummel, K., Marier, C., Victory, A., Porter, C., Mammel, A. & Dworkin, I. **<in review>** How well do you know your mutation? Complex effects of genetic background on expressivity, complementation, and ordering of allelic effects. [*PLOS Genetics*].
- Parigi, A., Porter, C., Cermak, M., **Pitchers, W.** & Dworkin, I. **<in review>** How predator hunting-modes affect prey behaviour: Capture deterrence in *Drosophila melanogaster*. *PLOS ONE* BioRxiv doi: [10.1101/010330](https://doi.org/10.1101/010330)
- Pitchers, W.**, Kowalski, A., Tack, D., Choi, L., Brown Anderson, J. & Dworkin, I. **<in prep.>** Cut & Patched: the challenge of mapping genotype and expression to phenotype using natural variation. [*Genetics*].

## Teaching & Outreach

2015 – present	<b>Instructor</b> , <a href="#">Software Carpentry</a> & <a href="#">Data Carpentry</a> Volunteer programs to improve computing skills & practices among researchers
2014 – 2015	<b>Teaching Assistant</b> , <a href="#">Software Carpentry</a> Volunteer program to improve computing skills & practices among researchers
August 2014, 2015, 2016	<b>Kellogg Biological Station, Michigan State U.</b> Teaching Assistant: <a href="#">ANGUS</a> (Analysing Next-Gen Sequence Data – Prof C. T. Brown)
Fall Semester 2012 & 2013	<b>Zoology Dept. Michigan State U.</b> Teaching Assistant: Statistical Methods in Ecology and Evolution (Prof. I. Dworkin)
2008 – 2009	<b>University of Exeter</b> - Teaching Assistant for MSci / BSc Evolutionary Biology courses Project supervision of MSci students for Dr. J. Hunt Lab class teaching assistant for Dr. J. Hunt, Prof. D. Hosken, Prof. N. Wedell Stats class teaching assistant for Prof. Hodgson
2007 – 2009	<b>University of Exeter</b> - Departmental Postgraduate Representative for Cornwall Campus Worked as a liaison between the postgraduate students and the faculty/admin. staff Met with prospective postgraduates as a campus ambassador
December 2008	<b>University of Exeter</b> - Graduate School Workshop for New Faculty Invited Talk - <i>'Tips from Grad. Students on Being a Good PI'</i>
October 2007 & 2008	<b>University of Exeter</b> - Graduate School 'GradSkills' Workshop Invited Talk - <i>'Nuts &amp; Bolts: How to get your PhD in a Day'</i>

## Conferences & Meetings

April 2016	<b>2016 International Congress for Neuroethology</b> - Montevideo, Uruguay Poster - <i>'The Genomic Basis of Signal Complexity in Paramormyrops'</i>
March 2016	<b>Electric fish Satellite Meeting – International Congress for Neuroethology</b> - Montevideo, Uruguay Poster - <i>'The Genomic Basis of Signal Complexity if Paramormyrops'</i>
June 2015	<b>University of Minnesota</b> , St. Paul MN - McGaugh Lab., College of Life Sciences Invited Talk - <i>'Why are Wings Wing-shaped? Evolutionary Genetics of wing morphology in Drosophila Melanogaster'</i>
June 2015	<b>University of Wisconsin</b> , Madison WI - Genetics seminar series Invited Talk - <i>'The Highs &amp; Lows of Multivariate GWAS'</i>
March 2013	<b>1<sup>st</sup> Michigan Geometric Morphometrics Meeting</b> - East Lansing, USA Invited Talk - <i>'Capturing Natural Variation in Drosophila Wings'</i>
February 2013	<b>University of Sussex</b> - Evolution, Behaviour and Environment seminar series Invited Talk - <i>'Why are Wings Wing-shaped? Evolutionary Genetics of wing morphology in Drosophila Melanogaster'</i>
July 2012	<b>1<sup>st</sup> Joint Congress on Evolutionary Biology</b> - Ottawa, Canada Talk - <i>'Why are Wings Wing-shaped? ...selection on wing morphology in D. Melanogaster'</i> Session Chair - <i>'Adaptation 5'</i>
March 2012	<b>53<sup>rd</sup> annual Genetics Society of America Drosophila Genetics Conference</b> - Chicago, USA Poster - <i>'Genomics &amp; Morphology – the Wing Dictionary Project'</i>
January 2012	<b>3<sup>rd</sup> UK Meeting on Morphometrics and Statistical Shape Analysis</b> - York, UK Poster - <i>'Genomics &amp; Morphology - the Wing Dictionary Project'</i>
September 2011	<b>University of Exeter</b> - Centre for Ecology & Conservation seminar series Invited Talk - <i>'The Fly-Wings Genetic Dictionary'</i>
July 2010	<b>ESF Workshop: 'The role of GxE interactions in sexual selection'</b> - Falmouth, UK
June 2009	<b>10<sup>th</sup> annual International Congress of Orthopterology</b> - Antalya, Turkey Talk - <i>'Phenotypic Integration as a Constraint on Call Evolution'</i>
March 2008	<b>Association for the Study of Animal Behaviour</b> Easter Meeting - Edinburgh, UK Poster - <i>'What happens to Phenotypic Integration when Traits are Plastic?'</i>

## Referees

Dr. John Hunt  
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University of Exeter in Cornwall  
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