Curriculum Vitae

Prof. Tobias Uller

Professor of Evolutionary Biology and Wallenberg Academy Fellow, Lund University Address: Department of Biology, Ecology Building, Sölvegatan 37, 223 62 Lund, Sweden Email: <u>tobias.uller@biol.lu.se</u>, Web: <u>https://www.biology.lu.se/tobias-uller</u>, <u>www.ullergroup.se</u> Date of Birth: December 29, 1977, Nationality: Swedish

(i) Appointments

Professor of Evolutionary Biology	Lund University	2016 - present
Senior Lecturer in Evolutionary Biology	Lund University	2015 - 2016
Researcher	Lund University	2013 - 2015
College Tutor, St John's College	University of Oxford	2012 - 2013
College Tutor, Balliol College	University of Oxford	2010 - 2011
Departmental Lecturer	University of Oxford	2007 - 2012
(ii) Fellowships		
Wallenberg Academy Fellow	Lund University	2013 - 2018
Royal Society University Research Fellow	University of Oxford	2012 - 2015
Fulbright Fellow	University of Arizona	2008
Wenner-Gren Fellow	University of Wollongong	2005 - 2007
(iii) Education		
PhD, Animal Ecology	University of Gothenburg	2001 - 2004
BSc, Animal Ecology	University of Gothenburg	1996 - 2000

(iv) Statistics

Publication of 148 papers in international journals and 12 book chapters since 2002. H-score = 40, citations ~6750 (~4650 since 2013) (source: Google Scholar, June 17 2018)

(v) Research funding, selected

- > 100 MSEK in grant income as principal investigator, including:
- Wallenberg Academy Fellow, 9.0 MSEK, 2013-2018
- John Templeton Foundation, ca 75.0 MSEK, *Putting the extended evolutionary synthesis to the test*, 2016-2019 (with Prof. K Laland)
- Swedish Research Council Project Grant, 3.5 MSEK, Unravelling the genomic signature of sexually selected introgression in lizards, 2018-2021
- o Royal Society University Research Fellow, ca 7.5 MSEK, Epigenetics in context, 2012-2015
- FP-7 Large International Collaboration Grant (co-applicant), 100 MSEK of which ca 4.5 MSEK to my group, *Developmental determinants of ageing and longevity*, 2010-2015
- Swedish Research Council Project Grant, 2.55 MSEK, Unravelling the genomic signature of sexually selected introgression in lizards, 2015-2017

(vi) Esteem

 \circ The Tage Erlander Prize, awarded by the Swedish Royal Academy of Sciences, 2018

- Christofer Barnard Award for Outstanding Contributions by a Young Investigator, awarded by the Association for the Study of Animal Behaviour, 2009
- 30 invited plenaries or symposium key notes at international congresses, meetings and workshops since 2009, including the following:
 - European Meeting for PhD Students in Evolutionary Biology (EMPSEB), 2018, SPA
 - European Society for Evolutionary Developmental Biology, 2018, IRL
 - European Society for Evolutionary Biology Conference, 2017, NL
 - Australasian Evolution Congress, 2017, AU
 - New Directions in Evolutionary Biology, 2016, Royal Society & British Academy, UK
 - Evolving Plasticity in Natural and Artificial Systems, 2016, ZiF, Bielefeld, DE
 - 9th Congress on the Lizards of the Mediterranean Basin, 2015, Limassol, CY
 - Groningen Institute for Evolutionary Life Sciences, 2015, Opening Symposium NL
 - Causation in Biology, International Meeting, 2015, Bristol, UK
 - *Early-life plasticity in biology and medicine*, International Workshop, 2015, UK
 - Frontiers in Niche Construction, International Meeting, 2014, Santa Fe Institute, US
 - 8th World Congress on the Developmental Origins of Health and Disease, 2013, SG
 - Society for the History, Philosophy & Social Studies of Biology, 2012, Montpellier, FR
 - Evolution of Sex Determination, International Workshop, 2012, La Sage, CH
 - Society for the History, Philosophy & Social Studies of Biology, 2010, Brisbane, AU
- 32 invited Departmental Seminars: Cambridge, Oxford[2], Edinburgh, Glasgow, Sheffield, Liverpool, Birmingham, Sussex, Bristol, Manchester, Institute of Zoology London, Cork, Valencia, Madrid, Groningen, Basel, Zurich, Berlin, Munich, Konstanz, Helsinki[2], Copenhagen, Lund, Stockholm, Antwerpen, Iowa State University, Australia National University, Tasmania[2], University of New South Wales
- Advisory Editor for the *Journal of Experimental Zoology* (2013 present), Associate Editor for *Behaviour* (2009 2016) and Guest Editor for the *Phil Trans Roy Soc* (2009)
- Member of the peer review colleges of Natural Environmental Research Council UK (2010 2017), the British Ecological Society (2012 2017), and the Swedish Research Council (2018)

(vii) Further evidence of academic leadership

- Leader of a 75 MSEK integrative research program involving 50 researchers at eight primary institutions in Sweden (Lund), the UK (e.g., Cambridge) and the USA (e.g., Stanford)
- Lead organiser of > 10 international meetings and workshops (e.g., KLI Workshop in Klosterneuburg, AT and Santa Fe Workshop, US) and symposia at international conferences (e.g., European Society for Evolutionary Biology, World Congress of Herpetology)
- External examiner of 8 PhD theses in the UK, Finland, France, Spain, Sweden and Australia, Internal examiner of 6 PhD theses at the University of Oxford
- Supervisor of 8 PhD students (5 as the primary supervisor and 3 as active co-supervisor), and
 > 15 MSc students in Sweden, Australia and the UK.
- o Host/Employer of 13 postdoctoral researchers and fellows

(viii) Media and public engagement

Broad coverage by television (e.g., *the One Show* BBC1, national news in Australia), radio (in Sweden and Australia), newspapers (Australia, Asia, North America, Europe), leading science blogs (e.g., PlatoFootnote.org), scientific magazines (e.g., *Nature*), popular science magazines

(e.g., *National Geographic, Discovery Magazine*), and in books (e.g., *The Animal Kingdom. A Very Brief Introduction*, P. Holland, OUP).

- o Advisor on matters related to non-native species to Natural England and several NGOs
- o Member of the National Committee of Biology at the Swedish Royal Academy of Sciences

(ix) Research Profile

My research lies on the interface of evolutionary biology, developmental biology, and ecology. It combines field studies and laboratory experiments on animals with comparative methods, guided by mathematical modelling and conceptual analyses. Projects span across a range of topics, but most are designed to reveal how the functional processes of organisms – development, physiology and behaviour – influence their evolution.

Recent projects include studies of the evolutionary causes and consequences of developmental plasticity and extra-genetic inheritance (e.g., Uller et al. 2015 *Proc R Soc Lond B*; English et al. 2016. *Am Nat*), sex determination (e.g., Pen et al. 2010 *Nature*; Uller & Helanterä 2011 *Quart Rev Biol*), introgressive hybridization (e.g., While et al. 2015. *Ecol Lett*; MacGregor et al. 2017. *Evolution*), and adaptation to novel environments (e.g., While et al. 2015. *Proc R Soc Lond B*; Feiner et al. 2017 *Evolution*). I have also written several highly cited reviews (e.g., three in *Trends Ecol Evol*), and contributions aimed towards biologists and philosophers of science, including in *Science*, *Nature* and a featured *Darwin Review* for the *Proceedings of the Royal Society of London B* (see publications below for details).

My group includes six postdoctoral researchers, two PhD students, and one research engineer.

(x) 10 Representative Publications

- 10. Uller, T. & Helanterä, H. Niche construction and conceptual change in evolutionary biology. *British Journal for the Philosophy of Science, in press*
- 9. Uller, T., Moczek, A.P., Watson, R.A., Brakefield, P.B. & Laland, K.N. Developmental bias and evolution: a regulatory network perspective. *Genetics, in press*
- 8. Feiner, N., Rago, A., While, G.M. & Uller, T. Signatures of selection in embryonic transcriptomes of lizards adapting in parallel to cool climate. *Evolution* 72:67-81
- MacGregor, H.E.A., Lewandowsky, R.A.M., d'Ettorre, P., Leroy, C., Davies, N.W., While, G.M. & Uller, T. Chemical communication, sexual selection, and introgression in wall lizards. *Evolution* 71: 2327-2343
- English, S., Fawcett, T.W., Higginson, A.D., Trimmer, P. & Uller, T. 2016. Adaptive use of information during growth can explain long-term effects of early-life experiences. *American Naturalist* 187:620-632
- While, G.M., Michaelides, S., Heathcote, R.J.P., MacGregor, H.E.A., Zajac, N., Beninde, J., Carazo, P., Pérez i de Lanuza, G., Sacchi, R., Zuffi, M.A.L., Horváthová, T., Fresnillo, B., Schulte, U., Veith, M., Hochkirch A. & Uller, T. 2015. Sexual selection drives asymmetric introgression in wall lizards. *Ecology Letters* 18:1366-1375
- 4. Uller, T., English, S. & Pen, I. 2015. When does natural selection favour incomplete epigenetic resetting in germ cells? *Proceedings of the Royal Society of London B* 282: 20150682

- 3. ^{\$}While, G.M., Williamson, J., Prescott, G., Horvathova, T., Fresnillo, B., Beeton, N.J., Halliwell, B., Michaelides, S. & *Uller, T. 2015. Adaptive responses to cool climate promotes persistence of a non-native lizard. *Proceedings of the Royal Society of London* B 282: 20142638 [^{\$}equal contribution]
- Laland, K.N., Sterelny, K., Odling-Smee, J., Hoppitt, W. & Uller, T. 2011. Cause and effect in biology revisited: Is Mayr's proximate-ultimate distinction still useful? *Science* 334:1512-1516
- 1. Pen, I., **Uller, T**., Feldmeyer, B., Harts, A., While, G. M. & Wapstra, E. 2010. Climate-driven population divergence in sex-determining systems. *Nature* 468: 436-439