Thomas Blankers
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thomasblankers<at>gmail.com

Date of birth	08 October 1986
Place of Birth	Amsterdam, The Netherlands.
Current position	Research fellow, Origins Center & University of Amsterdam, Inst. for Biodiversity and Ecosystem Dynamics

Degrees

PhD	Humboldt University Berlin, Germany. Supervision: Prof. Matthias Hennig. Graduated *summa cum laude* 20 May, 2016.
MSc	University of Amsterdam, The Netherlands. MSc in Biological sciences, track Ecology and Evolution, Graduated *cum laude* 30 November, 2011.
BSc	University of Amsterdam, The Netherlands. BSc in Biology. Graduated 27 August, 2008.

Research Experience

Jan 2021 – ongoing	**Research fellow Origins Center** at **University of Amsterdam**, Inst. for Biodiversity and Ecosystem Dynamics. Supervision: Prof. Astrid T. Groot.
Oct 2018 – Dec 2020	**Marie Curie postdoctoral fellow** at **University of Amsterdam**, Inst. for Biodiversity and Ecosystem Dynamics. Supervision: Prof. Astrid T. Groot.
Aug 2016 – Sep 2018	**Postdoctoral associate**, Department of Neurobiology and Behavior, Cornell University, Ithaca, NY, USA. Supervision: Prof. Kerry L. Shaw.
Aug 2012 - Dec 2016	**Guest researcher.** Museum für Naturkunde Berlin, Leibniz institute for evolution and biodiversity science, Berlin, Germany. GENART (functional genomics of speciation) project.
Aug 2012 - Oct 2015	**PhD research**. Humboldt University Berlin, Germany. Thesis title: *Acoustic communication, sexual selection, and speciation in field crickets*. Supervision: Prof. Matthias Hennig.
Jan 2011- Nov 2011	**MSc Research project** (60 ECTS) at the Stony Brook University (SBU), Stony Brook, NY, USA, in the department of ecology and evolution. Thesis title: *Adaptive Radiation and Morphological diversification in Salamanders and Lizards.* Supervision: Prof. John J. Wiens, Prof. Steph B. Menken
Mar 2010 - Jun 2010	**MSc Research project** (30 ECTS) at the VU University Amsterdam, Department of Animal Ecology. Thesis title: *Nutrient signaling: genomics underlying lipid metabolism pathways in the parasitoid wasp Nasonia vitripennis*. Supervision: dr. Merijn Kant (UvA), Prof. Jacintha Ellers (VU), dr. Bertanne Visser (VU).
Apr 2008 - May 2008	**BSc Research project** (18 ECTS) at the **University of Amsterdam** within the Institute for Biodiversity and Ecosystem Dynamics (IBED). Thesis title:

Adaptive speciation appraised: how disruptive selection forces sympatric populations of the two-spotted spider mite to diversify. Supervision: dr. Martijn Egas.

Teaching Experience

Guest lectures in courses

22 Sept 2021	Comparative neuro-ethology of sexual communication – Course: Neurobiology and Behavior (BSc)
1 Oct 2020	Sender and receiver perspectives in animal communication evolution – Course: Neurobiology and Behavior (BSc)
2 Mar 2020	Animal communication, signal evolution, and speciation – Course: Evolution and Behavior (BSc)
14 Oct 2019	Comparative neuro-ethology – Course: Neurobiology and Behavior (BSc)
7 Mar 2019	Animal communication, signal evolution, and speciation – Course: Evolution and Behavior (BSc)

Teaching Assistant

2019	BSc course Ecogenomics, University of Amsterdam
2019	BSc course Neurobiology and Behavior, University of Amsterdam
2014, 2015	MSc course 'Bioacoustics', Humboldt University Berlin
2013, 2014, 2015	BSc course 'Aggressive behavior', Humboldt University Berlin
2012	BSc course 'Evolutionary Genetics', University of Amsterdam.
2012	Development of evolutionary genetics experiments for undergraduate education, University of Amsterdam
2010	BSc course 'Genetics and Evolution', University of Amsterdam.

Supervised students

2021	Eline de Vries (**MSc**, UvA, Feb - July), Wout van der Heide (**MSc**, UvA & Cornell University, Jan - August), Ekaterine Kikodze (**BSc**, Radboud University, May – August), Lotta Vaskimo (**MSc**, Leiden University, September – present)
2020	Thomas Rietbergen (**BSc**, UvA, Apr – Jun), Max Boot (**BSc**, UvA, Apr – Jun)
2019	Elise Fruitet (**PhD**, UvA, 2019 – present), Arlet Culhaci (University of Applied Sciences Leiden), Robin Moene (**BSc**, UvA, Apr – Jun)
2016-2018	Hayden Waller (**PhD**, Cornell University)
2014	Carolin Geelhaar (**MSc**) & Anna Lübke (**BSc**), Humboldt University Berlin
2013	Rafael Block (**BSc**), Humboldt University Berlin

Other teaching experience

Nov 2015 - Jul 2016	Homework class teacher. Het 4de Gymnasium Amsterdam, The Netherlands.
2008-2009	Homework tutor. StudentsPlus.
Sep 2007	Course for high school education in life sciences at the University of Amsterdam (12 ECTS). Supervision: drs. Riny van Krieken (UvA – ILO).
2004 – 2012	Sailing and Windsurfing instructor, WSC Sloterplas, Amsterdam, The Netherlands

Outreach

- 2014 Open science night (Lange Nacht der Wissenschaften), Naturkundemuseum Berlin
- 2016 EEB & NBB Open Day, Cornell University

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- 2019 Betadag Regiuscollege, 13 June
- 2019 School visit at Science Park Amsterdam (July 9)
- 2019 Amsterdam Green Campus workshop on energy transition
- 2021 Radio interview FRIS, NPO radio 1, about human chemical ecology (14 March) https://www.nporadio1.nl/fris/onderwerpen/73787-2021-03-14-waarom-heb-ik-okselhaar
- 2021 Guest lecture IMC basis, De Vuurvogel, Uithoorn (26 April)

Funding acquisition

2011	Amsterdams Universitair Fonds – € 500
2011	Stichting Dr. Hendrik Muller Vaderlandsch Fonds – € 700
2018	Marie Curie Individual Fellowship – € 181,000
2020	NWO NWA small project – € 150,000 (main applicant: Inge Loes ten Kate; € 50k awarded to our project in a co-application with Karen Bisschop and PIs of "predicting evolution" gamechanger of the Origins Center)

Professional service

Peer review

Proc. B, Evolution, PCI Evol. Biol., Axios Review, Biological Journal of the Linnean Society, Contributions to Zoology, Zoological Journal of the Linnean Society, Genes, PLOS one, Journal of Insect Science, Ecological Entomology

Symposium/workshop organization

- 2015 Bioacoustics meeting in Zingst co-organizer
- 2020 Netherlands Annual Ecology Meeting co-convener
- 2021 Quantitative Trait Mapping Workshop.

Programming Languages

- R
- Python
- Bash

Languages (ILR / CEFR)

- Dutch: native (5 / -)
- English: academic/proficiency (4 / C2)
- German: proficiency (3 / C1)
- Spanish: advanced (2+ / B2)

Publications (* marks BSc/Msc student contributions)

1. **Blankers, T**.; Lievers, R; Plata, C*; van Wijk, M; van Veldhuizen, D; Groot, AT. 2021. Sex pheromone signal and stability covary with fitness. *Royal Society Open Science* **8:** 210180
2. **Blankers, T.**; Oh, K.P.; Shaw, K.L. 2019. Parallel genomic architecture underlies repeated sexual signal divergence in Hawaiian Laupala crickets. *Proc. Roy. Soc. B*. 286: 20191479

3. **Blankers, T.**; Berdan, E.L.; Hening, R.M.; Mayer, F. 2019. Physical linkage and mate preference generate linkage disequilibrium for behavioral isolation in two parapatric crickets. *Evolution* **73**: 777-791
4. **Blankers, T**.; Oh, K.P.; Bombarely, A.; Shaw, K.L. 2018. The genomic architecture of a rapid island radiation: recombination rate variation, chromosome structure, and genome assembly of the Hawaiian cricket Laupala. *Genetics* **209:** 1329–1344
5. **Blankers, T**., Oh, K.P., & Shaw, K.L. 2018. The genetics of a behavioral speciation phenotype in an island system. *Genes* **9:** E346
6. **Blankers, T**., Block, R*. & Hennig, R.M. 2018. Codivergence but limited covariance of wing shape and calling song structure in field crickets (*Gryllus*). *Evol. Biol.* **45:** 144-155
7. **Blankers, T**., Vilaca, S.T., Waurick, I., Gray, D.A., Hennig, R.M., Mazzoni, C.J. & Mayer, F, Berdan, E.L. 2018. Demography and selection shape transcriptomic divergence in field crickets. *Evolution* **72**: 553-567
8. **Blankers, T**., Gray, D.A. & Hennig, R.M. 2017. Multivariate phenotypic evolution: divergent acoustic signals and sexual selection in *Gryllus* field crickets. *Evol. Biol.* **44**: 43-57
9. Gray, D.A., **Blankers, T.** & Hennig, R.M. 2016. Multivariate female preference tests reveal latent perceptual biases. *Proc. Roy. Soc. B: Biol. Sci.* **283**: 1842
10. **Blankers T**. 2016. Acoustic communication, sexual selection, and speciation in field crickets. *Phd Thesis*. https://edoc.hu-berlin.de/handle/18452/18205
11. Berdan, E.L., **Blankers, T**., Waurick, I., Mazzoni, C.J., & Mayer, F. 2016. A genes eye view of ontogeny: *De novo* assembly and profiling of the *Gryllus rubens* transcriptome. *Mol. Ecol. Res.* **16**:1478-1490
12. Hennig, R.M., **Blankers, T**. & Gray, D.A. 2016. Divergence in male cricket song and female preference functions in three allopatric sister species. *J. Comp. Phys. A*. **202**:347-60
13. **Blankers, T**., Lübke, A.K.* & Hennig, R.M. 2015. Phenotypic variation and covariation indicate high evolvability of acoustic communication in crickets. *J. Evol. Biol.* **28**: 1656-1669
14. **Blankers, T**., Hennig, R.M. & Gray, D.A. 2015. Conservation of multivariate female preference functions and preference mechanisms in three species of trilling field crickets. *J. Evol. Biol.* **28**: 630–641.
15. **Blankers, T**., Townsend, T.M., Pepe, K., Reeder, T.W. & Wiens, J.J. 2013. Contrasting global-scale evolutionary radiations: Phylogeny, diversification, and morphological evolution in the major clades of iguanian lizards. *Biol. J. Linn. Soc.* **108**: 127–143.
16. **Blankers, T**., Adams, D.C. & Wiens, J.J. 2012. Ecological radiation with limited morphological diversification in salamanders. *J. Evol. Biol.* **25**: 634–646.

Forthcoming papers

<u>In review</u>

1. **Blankers, T**; Fruitet, E; Burdfield-Steel, E; Groot, A.T. 2021. Experimental evolution of a pheromone signal. BioRxiv preprint doi: https://doi.org/10.1101/2021.09.06.459111
2. Meike T. Wortel, …, **Thomas Blankers**, …, Pleuni S. Pennings. 2021. The why, what, and how of predicting evolution across biology: from disease to biotechnology to biodiversity. EcoEvoRxiv preprint doi: 10.32942/osf.io/4u3mg
3. Bisschop, K., **Blankers, T**., Mariën, J, Egas, M, Groot, A.T, Visser, M.E., Ellers, J. 2021. Population- genetic bottleneck has only marginal effect on fitness evolution and its repeatability in dioecious *C. elegans*. BioRxiv preprint doi: https://doi.org/10.1101/2021.10.07.463474

In preparation

Blankers, T; Shaw, K.L. The biogeographical and evolutionary processes shaping within- and among-population genetic variation.

Blankers, T; Waller, W.H.; Shaw, K.L. The signature of non-adaptive, rapid speciation in the gut microbiome.

Conference Posters & Talks (* marks talks)

***Blankers T.** Genetic, phenotypic, and biogeographic perspectives on population divergence in a Hawaiian cricket. ESEB Satellite symposium on reproductive isoalation, 2021.

***Blankers T.,** Elise Fruitet, Emily Burdfield-Steel, Astrid T. Groot. The selection response of a multicomponent sexual signal. Evolution (SSE) 2021.

***Blankers T.** Plasticity, variation, and constraint in sex pheromone signals. NLSEB 2021.

***Blankers T**, W. Hayden Waler, Kerry L. Shaw. Convergent gut microbiota as a signature of non-adaptive speciation. NAEM 2021.

***Blankers T**, Karen Bisschop, Martijn Egas, Jacintha Ellers, Astrid T. Groot, Marcel Visser. The predictability of genetic adaption. Origins Center Conference 2021.

***Blankers T**, Elise Fruitet, Emily Burdfield-Steel, Astrid T. Groot. The evolution of sex pheromones. Netherlands Entomological Society meeting, Ede, The Netherlands, 2019.

Blankers T, Kevin P. Oh, Kerry L. Shaw**.** Parallel genetics of repeated sexual signal divergence. European Society for Evolutionary Biology, Turku, Finland, 2019.

Blankers, T. Burdfield-Steel, E.; Fruitet, E, Astrid T. Groot. Evolution of sex pheromone communication in response to artificial selection. NLSEB, Ede, The Netherlands, 2019.

*** Blankers T.,** Kevin P. Oh, Kerry L. Shaw. A rapid radiation of flightless crickets in Hawaii. Netherlands Entomological Society meeting, Ede, The Netherlands, 2018

Blankers T., Kevin P. Oh, Kerry L. Shaw. Parallel Genetic Architectures for a Behavioral Speciation Phenotype. European Society for Evolutionary Biology, Montpellier, France, 2018.

***Blankers, T.** Shaw K.L. Convergence and constraints in behavioral isolation: a tale of two crickets. NBB symposium 2017, Ithaca, NY, USA, 8 December 2017

***Blankers, T**. Shaw, K.L. The genomic architecture of repeated sexual signal divergence. Evolution, Portland (OR), 26 June 2017.

Blankers, T. Shaw, K.L. The geographic context of speciation in crickets. Evolution, Portland (OR), 26 June 2017.

***Blankers, T**. Shaw, K.L. Sexual selection, population divergence, and the genomic mosaic of local evolutionary histories. EvoDay, Lab of Ornithology, Cornell University. Ithaca NY, USA 11 May 2017.

***Blankers, T.** Shaw, K.L. Speciation islands? Behavioral and genomic divergence along a spatio-temporal cline. Cornell University NBB symposium 2016. Ithaca NY, USA, 9 December 2016.

***Blankers T**. & Berdan E.L. Population genetics becomes population genomics: what the 'omics era means for evolutionary biology. Berlin Center for Genomics and Biodiversity Research (BeGenDiv), Berlin, Germany, 23 September 2015.

***Blankers T**., Berdan E.L., Vilaca S., Waurick I., Mazzoni C.J., Gray, D.A. & Mayer F. Divergence in acoustic and chemical mate signaling genes after speciation with gene flow in field crickets. Berlin Center for Genomics and Biodiversity Research (BeGenDiv), Berlin, Germany, 23 September 2015.

Blankers T., Berdan E.L., Vilaca S., Waurick I., Mazzoni C.J. & Mayer F. Patterns of transcriptomic divergence and demographic history in field crickets. Candidate genes for the evolution of reproductive isolation in the presence of gene flow. European Society for Evolutionary Biology, Lausanne, Switzerland, 2015.

***Blankers T**., The genetic architecture of calling song and song preference traits in *Gryllus rubens* and *G. texensis*. Patterns of inheritance and phenotypic integration. Orthoptheran Bioacoustics Meeting, Zingst, Germany, 2015.

Blankers T., Mayer F. & Hennig R.M. Premating reproductive isolation between two closely related cricket species. European Society for Evolutionary Biology, Lisbon, Portugal, 2013.

References

- Prof. Astrid T. Groot, University of Amsterdam, a.t.groot<at>uva.nl
- Prof. Kerry L. Shaw, Cornell University, NY, kls4<at>cornell.edu
- Prof. R. Matthias Hennig, Humboldt-University Berlin, matthias.hennig<at>biologie.hu-berlin.de