

Current position **Research fellow Origins Center at 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. Supervision: Dr. Frieder Mayer.

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*.

Mar 2010 - Jun 2010 **MSc Research project** (30 ECTS) at the VU University Amsterdam within the 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

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)

Teacher Assistant

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.

Mentoring

2020 Thomas Rietbergen, BSc student, University of Amsterdam
 2020 Max Boot, BSc student, University of Amsterdam
 2019 (ongoing) Elise Fruitet. PhD student, University of Amsterdam
 2019 Arlet Culhaci, bioinformatics student, University of Applied Sciences Leiden
 2019 Robin Moene, BSc student, University of Amsterdam
 2016-2018 Hayden Waller, Graduate Student, Cornell University
 2014 Carolin Geelhaar, MSc student, Humboldt University Berlin
 2014 Anna Lübke, BSc student, Humboldt University Berlin
 2013 Rafael Block, BSc student, Humboldt University Berlin

Other

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 Sloterplass, Amsterdam, The Netherlands

Funds Raised

2011 Amsterdams Universitair Fonds – € 500
 2011 Stichting Dr. Hendrik Muller Vaderlandsch Fonds – € 700
 2018 Marie Curie Individual Fellowship – € 181,000
 2020 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)

Publications (* marks undergraduate student contributions)

1. **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
2. **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

3. **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
4. **Blankers, T.**, Oh, K.P., & Shaw, K.L. 2018. The genetics of a behavioral speciation phenotype in an island system. *Genes* **9**: E346
5. **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
6. **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
7. **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
8. 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
9. **Blankers T.** 2016. Acoustic communication, sexual selection, and speciation in field crickets. *Phd Thesis*. <https://edoc.hu-berlin.de/handle/18452/18205>
10. 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
11. 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
12. **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
13. **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.
14. **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.
15. **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

In review

Blankers, T.; Lievers, R; Plata, C; van Wijk, M; van Veldhuizen, D; Groot, AT. Sex pheromone signal and stability covary with fitness (revised version in review at *Proc. Roy. Soc. B.*).

In preparation (drafts available upon request)

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 (* talks)

- ***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. Orthopteran 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.

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

Conference/symposium organization

- 2015 Bioacoustics meeting in Zingst co-organizer with Jonas Finck and Florian Rau
- 2020 Netherlands Annual Ecology Meeting co-convener with Alexander Haverkamp

Outreach

- 2014 Open science night (Lange Nacht der Wissenschaften), Naturkundemuseum Berlin
- 2016 EEB & NBB Open Day, Cornell University
- 2017 EEB & NBB Open Day, Cornell University
- 2019 Betadag Regiuscollege
- 2019 Several school visits at Science Park, University of Amsterdam
- 2019 Amsterdam Green Campus workshop

Languages (ILR / CEFR)

Dutch: native (5 / -)

English: academic/proficiency (4 / C2)

German: proficiency (3 / C1)

Spanish: advanced (2+ / B2)

Programming Languages/Workflow management

R

Python

Bash

Snakemake