

Beatriz Willink

INTERNATIONAL POSTDOCTORAL FELLOW

Department of Zoology, Stockholm University, Stockholm 106-91, Sweden

+65 84521341 | [✉ beatriz.willink@zoologi.su.se](mailto:beatriz.willink@zoologi.su.se) | [🏠 beatrizwillink.com](http://beatrizwillink.com) | [📄 bwillink](https://www.bwillink.com)

Current position

Department of Zoology, Stockholm University

Stockholm, Sweden

Department of Biological Sciences, National University of Singapore

Singapore, Singapore

INTERNATIONAL POSTDOCTORAL FELLOW

2019-2023

Previous appointment

School of Biology, University of Costa Rica

San Jose, Costa Rica

VISITING LECTURER

2019-2020

Education

Lund University

Lund, Sweden

PH.D. BIOLOGY

2014-2018

- Thesis: "The descent of damselflies and variation in relation to sex"

University of Costa Rica

San Jose, Costa Rica

M.Sc. BIOLOGY

2011-2013

- Thesis: "Geographic variation in the color, behavior, and predation of the poison-dart frog *Oophaga granulifera*"

University of Costa Rica

San José, Costa Rica

B.Sc. BIOLOGY

2006-2009

Publications

1. Willink, Ware, J., & Svensson, E. I. (2024). Tropical origin, global diversification and dispersal in the pond damselflies (Coenagrionoidea) revealed by a new molecular phylogeny. *Systematic Biology*, *syae004*. <https://doi.org/10.1093/sysbio/syae004>
2. Willink, Tunström, K., Nilén, S., Chikhi, R., Lemane, T., Takahashi, M., Takahashi, Y., Svensson, E. I., & Wheat, C. W. (2024). The genomics and evolution of inter-sexual mimicry and female-limited polymorphisms in damselflies. *Nature Ecology & Evolution*, *8*, 83–97. <https://doi.org/10.1038/s41559-023-02243-1>
3. Vicente-Santos, A., Willink, B., Nowak, K., Civitello, D., & Gillespie, T. (2023). Host-pathogen interactions under pressure: A systematic review and meta-analysis of stress-mediated effects on disease dynamics. *Ecology Letters*, *26*, 2003–2020. <https://doi.org/10.1111/ele.14319>
4. Willink, B., & Wu, M. Y. (2023). To colour a bird: The evolution of carotenoid-based colouration in passerines is shaped by sexual selection, ecology and life history. *Journal of Animal Ecology*, *92*(1), 4–6. <https://doi.org/10.1111/1365-2656.13840>
5. Willink, B. (2022). How signals interact in multimodal displays: Insights from a robotic frog. *Journal of Animal Ecology*, *91*(4), 696–700. <https://doi.org/10.1111/1365-2656.13668>
6. Blow, R., Willink, B., & Svensson, E. I. (2021). A molecular phylogeny of fork-tail damselflies (genus *Ischnura*) reveals a dynamic macroevolutionary history of female colour polymorphisms. *Molecular Phylogenetics and Evolution*, *160*, 107134. <https://doi.org/10.1016/j.ympev.2021.107134>
7. Willink, B., Blow, R., Sparrow, D. J., Sparrow, R., & Svensson, E. I. (2021). Population biology and phenology of the colour polymorphic damselfly *Ischnura elegans* at its southern range limit in Cyprus. *Ecological Entomology*, *46*(3), 601–613. <https://doi.org/10.1111/een.13006>
8. Willink, B., Duryea, M. C., Wheat, C., & Svensson, E. I. (2020). Changes in gene expression during female reproductive development in a color polymorphic insect. *Evolution*, *74*(6), 1063–1081. <https://doi.org/10.1111/evo.13979>
9. Svensson, E. I., Willink, B., Duryea, M. C., & Lancaster, L. T. (2020). Temperature drives pre-reproductive selection and shapes the biogeography of a female polymorphism. *Ecology Letters*, *23*(1), 149–159. <https://doi.org/10.1111/ele.13417>

10. Waller, J. T., Willink, B., Tschol, M., & Svensson, E. I. (2019). The odonate phenotypic database, a new open data resource for comparative studies of an old insect order. *Scientific Data*, 6(1), 316. <https://doi.org/10.1038/s41597-019-0318-9>
11. Protti-Sánchez, F., Quirós-Guerrero, L., Vásquez, V., Willink, B., Pacheco, M., León, E., Pröhl, H., & Bolaños, F. (2019). Toxicity and alkaloid profiling of the skin of the Golfo Dulcean poison frog *Phyllobates vittatus* (Dendrobatidae). *Journal of Chemical Ecology*, 45, 914–925. <https://doi.org/10.1007/s10886-019-01116-x>
12. *Willink, B., Duryea, M. C., & Svensson, E. I. (2019). Macroevolutionary origin and adaptive function of a polymorphic female signal involved in sexual conflict. *The American Naturalist*, 194(5), 707–724. <https://doi.org/10.1086/705294>
13. Von Ellenrieder, N., Castro, B. W., & Svensson, E. (2017). Checklist of the dragonflies and damselflies from Guyana (Insecta: Odonata), with new records from the country. *Check List*, 13(2), 2104–2104.
14. Willink, B., & Svensson, E. I. (2017). Intra- and intersexual differences in parasite resistance and female fitness tolerance in a polymorphic insect. *Proceedings of the Royal Society B: Biological Sciences*, 284(1847), 20162407. <https://doi.org/10.1098/rspb.2016.2407>
15. Ryan, M. J., Latella, I. M., Willink, B., García-Rodríguez, A., & Gilman, C. A. (2015). Notes on the breeding habits and new distribution records of seven species of snakes from southwest Costa Rica. *Herpetology Notes*, 8, 669–671.
16. Ryan, M. J., Scott, N. J., Cook, J. A., Willink, B., Chaves, G., Bolaños, F., García-Rodríguez, A., Latella, I. M., & Koerner, S. E. (2015). Too wet for frogs: Changes in a tropical leaf litter community coincide with la niña. *Ecosphere*, 6(1), art4. <https://doi.org/10.1890/ES14-00352.1>
17. Ryan, M. J., Fuller, M. M., Scott, N. J., Cook, J. A., Poe, S., Willink, B., Chaves, G., & Bolaños, F. (2014). Individualistic population responses of five frog species in two changing tropical environments over time. *PLOS ONE*, 9(5), 1–8. <https://doi.org/10.1371/journal.pone.0098351>
18. Willink, B., García-Rodríguez, A., Bolaños, F., & Pröhl, H. (2014). The interplay between multiple predators and prey colour divergence. *Biological Journal of the Linnean Society*, 113(2), 580–589. <https://doi.org/10.1111/bij.12355>
19. Willink, B., Bolaños, F., & Pröhl, H. (2014). Conspicuous displays in cryptic males of a polytypic poison-dart frog. *Behavioral Ecology and Sociobiology*, 68, 249–261. <https://doi.org/10.1007/s00265-013-1640-4>
20. Willink, B., Palmer, M. S., Landberg, T., Vonesh, J. R., & Warkentin, K. M. (2014). Environmental context shapes immediate and cumulative costs of risk-induced early hatching. *Evolutionary Ecology*, 28, 103–116. <https://doi.org/10.1007/s10682-013-9661-z>
21. Willink, B., Brenes-Mora, E., Bolaños, F., & Pröhl, H. (2013). Not everything is black and white: Color and behavioral variation reveal a continuum between cryptic and aposematic strategies in a polymorphic poison frog. *Evolution*, 67(10), 2783–2794. <https://doi.org/10.1111/evo.12153>
22. Pröhl, H., Willink, B., & Hauswaldt, S. (2013). Geographic variation in sexual signals and behaviour in two species of poison frogs. *Evolutionary Ecology Research*, 15(6), 667–687.
23. Farji-Brener, A. G., Morueta-Holme, N., Chinchilla, F., Willink, B., Ocampo, N., & Bruner, G. (2012). Leaf-cutting ants as road engineers: The width of trails at branching points in *Atta cephalotes*. *Insectes Sociaux*, 59, 389–394. <https://doi.org/10.1007/s00040-012-0231-0>
24. Zumbado-Ulate, H., Bolanos, F., Willink, B., Soley-Guardia, F., & others. (2011). Population status and natural history notes on the critically endangered stream dwelling frog *Craugastor ranoides* (Craugastoridae) in a Costa Rican tropical dry forest. *Herpetological Conservation and Biology*, 6(3), 455–464.

*American Society of Naturalists (ASN) Presidential Award

Conference presentations

Society of Systematic Biologists, Society for the Study of Evolution, American Society of Naturalists | Evolution

Albuquerque, USA

THE GENOMICS AND EVOLUTION OF INTER-SEXUAL MIMICRY AND FEMALE-LIMITED POLYMORPHISMS IN DAMSELFLIES. (TALK)

2023

EMBO | EMBL Symposium: The Molecular Basis and Evolution of Sexual Dimorphism

Virtual

DIFFERENTIAL GENE EXPRESSION DURING REPRODUCTIVE DEVELOPMENT IN MALE-MIMICKING FEMALES OF A POLYMORPHIC INSECT. (POSTER)

2020

European Society for Evolutionary Biology

Turku, Finland

ECOLOGY AND SEXUAL CONFLICT DRIVE THE MACROEVOLUTIONARY DYNAMICS OF FEMALE-LIMITED COLOUR POLYMORPHISMS.

(TALK)

2019

Evolution in Sweden

ON THE ORIGIN AND DIVERSIFICATION OF POND DAMSELFLIES. (POSTER)

Stockholm, Sweden

2018

European Society for Evolutionary Biology

DEVELOPMENT AND INTER-SEXUAL COMMUNICATION IN DAMSELFLIES: COMBINING EXPERIMENTAL AND PHYLOGENETIC APPROACHES. (TALK)

Groningen, The Netherlands

2017

International Congress of Odonatology

A SPECIES PHYLOGENY TO STUDY TRAIT EVOLUTION IN POND DAMSELFLIES (ODONATA: COENAGRIONIDAE). (TALK)

Cambridge, UK

2017

International Congress of Entomology

THE ONTOGENY OF INTER-SEXUAL COMMUNICATION IN DAMSELFLIES: COMBINING EXPERIMENTAL AND PHYLOGENETIC APPROACHES. (TALK)

Orlando, USA

2016

International Congress of Odonatology

ONTOGENETIC COLOR CHANGES AND INTER-SEXUAL-COMMUNICATION IN THE COMMON BLUETAIL DAMSELFLY (*Ischnura elegans*). (TALK)

La Plata, Argentina

2017

European Society for Evolutionary Biology

RESISTANCE-TOLERANCE ANTAGONISM IN A POLYMORPHIC INSECT (POSTER)

Lausanne, Switzerland

2015

Association for Tropical Biology and Conservation

MULTIPLE PREDATORS INFLUENCE COLORATION DIVERGENCE IN A POISON-DART FROG. (TALK)

San Jose, Costa Rica

2013

World Congress of Herpetology

THE ROLE OF ANTI-PREDATOR STRATEGIES DRIVING COLOR VARIATION IN THE POISON-FROG *Dendrobates granulosus*. (TALK)

Vancouver, Canada

2012

Funding awarded

International Postdoctoral Fellowship \$330,000

SWEDISH RESEARCH COUNCIL

Sweden

2020

Jörgen Lindströms Stipendiefond \$1,600

LUND UNIVERSITY

Sweden

2016

Nils Ehle Stifelsen \$8,000

ROYAL PHYSIOGRAPHIC SOCIETY OF LUND

Sweden

2015

Faculty for the Future Fellowship \$10,000

SCHLUMBERGER FOUNDATION

The Netherlands

2015

Faculty Mobility Scholarship \$50,000

UNIVERSITY OF COSTA RICA

Costa Rica

2014

Reviewer for Scientific Journals

American Naturalist, Austral Ecology, Behavioural Ecology, Biological Journal of the Linnean Society, eLife, Ecological Monographs, Evolutionary Applications, Functional Ecology, Global Ecology and Biogeography, International Journal of Odonatology, Journal of Animal Ecology, Journal of Ethology, Journal of Evolutionary Biology, Journal of Zoology, Proceedings of the Royal Society B: Biological Sciences, Naturwissenschaften, Scientific Reports, Trends in Ecology and Evolution

Associate Editor

- Journal of Animal Ecology 2020-2023

Society Membership

- Society for the Study of Evolution (SSE)

Teaching Experience

Lecturer, Halmstad University (2016-2017)

- Molecular Phylogenetics and Systematics (Tutorial)

Invited Lecturer, University of Costa Rica (2019-2020)

- Phylogenetic Tools for Studying Evolution and Diversification (Lecture and Tutorial)

- Evolution and Development of Sexual Dimorphism (Seminar)
- General Biology for non-biologists (Lecture and Tutorial)
- Introduction to Biology (Lecture and Tutorial)
- Ultimate and Proximate Causes of Animal Colouration (Seminar)
- Practical Tools for Reproducible Research (Lecture and Tutorial)
- Organic Evolution (Lecture)

Student Supervision

National University of Singapore*

W. LIAO – M.Sc. BIOLOGY

- Thesis: "Do colour signals influence predation risk in the Tropical Bluetail damselfly"

Singapore, Singapore

2023

National University of Singapore*

W. LINCOLN – B.Sc. BIOLOGY

- Thesis: "Evaluating genes associated with inter-sexual mimicry in *Ischnura senegalensis*"

Singapore, Singapore

2022-2023

University of Costa Rica

F. CHIRINO – B.Sc. BIOLOGY

- Thesis: "Climatic factors determine acoustic activity in the critically endangered species *Agalychnis lemur* (Anura: Hylidae)"

San José, Costa Rica

2020-2023

Lund University

R. BLOW – M.Sc. BIOLOGY

- Thesis: "Evolutionary dynamics and mating behaviour associated with female-limited colour polymorphisms in the damselfly genus *Ischnura*"

Lund, Sweden

2016-2019

University of Costa Rica

F. PROTTI – M.Sc. BIOLOGY

- Thesis: "Aposematism in the frog *Phyllobates vittatus* (Anura: Dendrobatidae): integrating defences, signals and predation risk"

San José, Costa Rica

2015-2019

*Faculty Award for Mentorship Excellence (FAME)