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Universiteit Leiden



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Author: Oostra, Vicencio

Title: Hormonal and transcriptional mechanisms underlying developmental plasticity of life histories in a seasonal butterfly

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ADDENDUM &

List of Publications

Curriculum Vitae

List of Publications

Peer-reviewed publications

- 4) **Oostra V.***, de Jong M.A.*, Invergo B.M., Kesbeke F., Wende F., Brakefield P.M. & Zwaan B.J. (2011) Translating environmental gradients into discontinuous reaction norms via hormone signalling in a polyphenic butterfly. *Proceedings of the Royal Society B* 278 (1706): pp. 789-797 (*Chapter 2 of this thesis*).
- 3) Terenius O. *et al.* (2011) RNA interference in Lepidoptera: An overview of successful and unsuccessful studies and implications for experimental design. *Journal of Insect Physiology* 57 (2): pp. 231-245.
- 2) **Oostra V.**, Gomes L.G.L. & Nijman V. (2008) Implications of deforestation for the abundance of restricted-range bird species in a Costa Rican cloud forest. *Bird Conservation International* 18 (1): pp.11-19.
- 1) Gomes L.G.L.*, **Oostra V.***, Nijman V., Cleef A.M. & Kappelle M. (2008) Tolerance of frugivorous birds to habitat disturbance in a tropical cloud forest. *Biological Conservation* 141 (3): pp. 860-871.

* Shared first authorships

Manuscripts to be submitted

- **Oostra V.**, Mateus A.R.A., van den Burg K.R.L., Piessens T., van Eijk M., Brakefield P.M., Beldade P. and Zwaan B.J. Ecdysteroids link juvenile environment to adult life history in a seasonal insect (*Chapter 3*).
- **Oostra V.**, Pul N., van Eijk M., Brakefield P.M. and Zwaan B.J. Seasonally induced expression variation in life history genes in the butterfly *Bicyclus anynana* (*Chapter 4*).
- **Oostra V.**, Beldade P., Brakefield P.M., Pul N., van Eijk M. and Zwaan B.J. Developmental signature of the ageing-related transcriptional profile in a seasonal butterfly (*Chapter 5*).
- **Oostra V.**, Brakefield P.M., Hiltemann Y., Zwaan B.J. and Brattström O. On the fate of seasonally plastic traits in a rainforest butterfly under relaxed selection (*Chapter 6*).
- Mateus A.R.A., **Oostra V.**, Marques-Pita M., Lafuente E., Brakefield P.M., Zwaan B.J. and Beldade P. Adaptive developmental plasticity: Fine-scale compartmentalization of ecdysteroid-regulated tissue patterning.
- Mateus A.R.A., **Oostra V.**, Marques-Pita M., Brakefield P.M., Zwaan B.J. and Beldade P. Hormonal regulation of developmental reaction norms.

Curriculum Vitae

Vicencio Oostra was born on 5 January 1981 in Ibagué, Colombia. Shortly thereafter, he moved to The Netherlands. He attended high school in Nijmegen at the Stedelijk Gymnasium Nijmegen, and in Leiden at the Stedelijk Gymnasium Leiden, where he obtained his VWO diploma. In 1999 he enrolled at the University of Amsterdam to study Biology. For the first research internship of his Master's program, he travelled to the Costa Rican cloud forest together with his friend and classmate Laurens. Under the supervision of Prof. Antoine Cleef (Institute for Biodiversity and Ecosystem Dynamics, University of Amsterdam), Dr. Maarten Kappelle (The Nature Conservancy, Costa Rica), and Dr. Vincent Nijman (Zoological Museum Amsterdam, University of Amsterdam), Vicencio studied the impact of anthropogenic habitat disturbance on diversity and population densities of cloud forest bird species (2003-2004). He was awarded several small scholarships for the field work, and these studies resulted in two publications. During his years at the University of Amsterdam, Vicencio also worked as a teaching assistant in the Bachelor courses *Genetics* and *Statistics and Mathematical Modeling*, and in *Bètabrug*, a one-year pre-university science program. The second research internship of his Master's program took Vicencio to Leiden University. In the Evolutionary Biology Group of the Institute of Biology Leiden he studied gene expression during wing pattern development in butterflies, supervised by Dr. Suzanne Saenko and Dr. Patrícia Beldade (2007). He obtained his Master's degree in 2007 with distinction (*cum laude*). Following his graduation, Vicencio had the opportunity to return to the same group in Leiden as a PhD student, with Prof. Bas Zwaan and Prof. Paul Brakefield as advisors (2007-2012). As part of the EU-funded Network of Excellence LifeSpan, he studied developmental plasticity of life histories in the butterfly *Bicyclus anynana*, the results of which are presented in this thesis. Vicencio gave oral presentations of his work at six international conferences, as well as at several annual LifeSpan meetings and smaller seminars. He received two travel grants for lab visits and attendance of conferences (ESF and LifeSpan). In addition, he attended courses on quantitative genetics (University of Liège, Belgium) and on microarray data analysis (Instituto Gulbenkian de Ciência, Portugal). Together with another PhD student and two postdocs, he organized LifeSpan's first Young Investigator Workshop in Dubrovnik, Croatia. Vicencio travelled to the laboratory of Prof. Klaus Hoffmann (University of Bayreuth, Germany) to learn to use liquid chromatography / mass-spectrometry (LC-MS) for hormone quantitations. During the course of his PhD, he supervised the research projects of three MSc and two BSc students. After his time in Leiden, Vicencio followed Prof. Bas Zwaan to the Genetics Department at Wageningen University, where he has started to use RNAseq to better understand the transcriptomic changes underlying seasonal responses.



<http://www.vicencio-oostra.dds.nl/>

Photo by Oskar Brattström.

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