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Universiteit Leiden



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Curriculum Vitae

Annick S. Lang was born on January 19, 1982 in Meyrin, Switzerland. During her secondary education, Annick participated in a language exchange program in Australia. It was in the Australian rainforest of Fraser Island that she discovered her interest for botany and ecological studies. She obtained her high school diploma in modern languages at Collège Rousseau in Geneva in 2001. That same year, she started biology studies at the University of Neuchâtel, Switzerland, where she obtained a bachelor's degree three years later. While studying various subjects related to plant biology (plant- insect interactions, phytosociology, plant ecology), her interest for evolutionary botany, and especially bryology, grew stronger. In 2006, Annick obtained a master's degree in Behavioural Ecology and Evolution from the same university, with a major in Botany. Her master's project focused on population genetics of a rare European fen orchid, *Liparis loeselii* (L.) Rich, in Franche-Comté (France) and Switzerland. During her master's, she also participated in the European project 'Intrabiodiv' and worked as a teaching assistant for botanical practicum courses.

After obtaining her master's degree, she went back to Geneva where she worked for three years at the Conservatory and Botanical Garden on a liverworts type collection digitalisation project. This is where Annick was introduced to the moss genus *Dicranum* and undertook preliminary investigations on *D. scoparium* with the bryophyte, fern and gymnosperm curator Dr. M. J. Price.

Annick started her PhD in November 2009 at the National Herbarium of the Netherlands (now Naturalis Biodiversity Center) where she pursued bryological studies under the supervision of Dr. M. Stech. During her PhD, she participated in international conferences in Vladivostok (Russia), Melbourne (Australia), and New York (U. S. A.) and was involved in the organisation of Naturalis's seminars. Furthermore, she had the opportunity to supervise one MSc project on male dwarfism in *D. scoparium*. After her graduation, Annick intends to continue her research on the genus *Dicranum* with the aim to study the effect of pseudomonocly on population level in more detail.

List of publications

PAPERS

- Price M. J. & **A. S. Lang**. 2007. *A new types digitalisation project underway at G. Databasing of the Stephani non-African liverwort types: a GBIF.ch project*. Tropical Bryology Group Newsletter 22: 3-4.
- Lang A. S.** & Y. Naciri. 2010. *New chloroplast primers for intraspecific variation in Dicranum scoparium Hedw. (Dicranaceae) and amplification success in other bryophyte species*. Molecular Ecology Resources 10: 735-737.
- Price M. & **A. Lang**, 2011, *Dicranum tauricum Sapjegin (Dicranaceae) new for the Canton of Geneva, Switzerland*. Meylania 47: 29-33.
- Lang A. S.** & M. Stech. 2014. *What's in a name? Disentangling the Dicranum scoparium species complex (Dicranaceae, Bryophyta)*. Systematic Botany 39: 369–379.
- Lang A. S.**, Kruijer J. D. & M. Stech. 2014. *DNA barcoding of arctic bryophytes- an example from the moss genus Dicranum (Dicranaceae, Bryophyta)*. Polar Biology 37: 1157-1169.
- Lang A. S.**, Tubanova D. & M. Stech. *Species delimitations in the Dicranum acutifolium complex (Dicranaceae, Bryophyta)*. Journal of Bryology, in press.
- Lang A. S.**, Bocksberger G. & M. Stech. *Phylogenetic relationship and species delimitation in Dicranum (Dicranaceae, Bryophyta) inferred from nuclear and plastid DNA*. Molecular Phylogenetics and Evolution. Submitted to Molecular Phylogenetics and Evolution

CONFERENCES ABSTRACT

- Price M. J., **Lang A. S.** & Y. Naciri, *Do Bryophytes Evolve?* Conference series, Conservatory and Botanical Garden, Geneva. 15.11.2007 (talk).
- Lang A. S.** & M. J. Price. *The Franz Stephani collection: digitalisation and highlights of this Liverwort collection*. Conference series, Conservatory and Botanical Garden, Geneva. 13.12.2007 (talk).
- Price M. J., **Lang A. S.**, Gendre M., Lugeon, J., Loizeau P.-A., Palese R., Gautier L., & P. Clerc. *The Bryophyte Types in G: Databasing, Digitalisation and Discovery*. Andrew W. Mellon Foundation Meeting, Buenos Aires, Argentina. November 2008 (poster).
- Lang A. S.** & M. J. Price. *Type catalogues and species concepts: databasing of the Franz Stephani*

liverwort collection at G. NCCR Plant Survival International Conference on Plant Species Concepts and Evolution. University of Neuchâtel, Switzerland. 30 January- 01 February 2008 (poster).

- Lang A. S.** & M. Stech. *Morphological variability and biogeography of Dicranum scoparium Hedw.*, International conference "Bryoflora of the Russian Far East: taxonomy, genesis, and its phytogeographical relations", Vladivostok, 3-12 September 2010 (talk).
- Lang A. S.** & M. Stech. *Biogeography of mosses with an emphasis in Dicranum scoparium Hedw.*, Staff seminar series, Leiden, 2.12.2012 (talk).
- Lang A. S.** & M. Stech. *What does the phylogeography of widespread moss species reveal? New insight with the Holarctic moss Dicranum scoparium Hedw.* IBC meeting, Melbourne, 24-30 July 2011 (talk).
- Lang A. S.** & M. Stech. *What does the phylogeography of widespread moss species reveal? New insight with the Holarctic moss Dicranum scoparium Hedw.* PhD day, Leiden, 9.12.2012 (talk)
- Lang A. S.** & R. Gama De Nato. *All you've ever wondered about mosses!* Staff seminar series, Leiden, 20.3.2012 (talk).
- Stech M., Cornelder B., **Lang A. S.**, Mennes C.B. Veldman S. & J.D. Kruijer. *Molecular identification of arctic moss species for ecosystem and biodiversity studies.* MOSS 2012 and Mol. Sys. Conference, New York, 22.6.2012 (talk).

THESIS

- Lang A. S.** 2006. *Liparis loeselii (L.) Rich.: a study on population viability.* Master Thesis, Laboratoire de botanique évolutive, University of Neuchâtel, Switzerland.

Acknowledgments

I see earning a PhD like a hike in the mountains: the start is easy and delightful, maybe a little scary, as one cannot fully grasp what is really going to happen. The journey continues with ups and downs; still nice although sometimes difficult. During these harder moments, it is always gratifying to check on a map to see what one has already accomplished. The most difficult moment is probably when one reaches the end: the path gets steeper and the hardest passes remain to be crossed. But the view from the summit is worth the effort, I can tell!

First I would like to thank my supervisor Dr. Michael Stech for his guidance, support and patience throughout my PhD. I also would like to thank the National Herbarium of the Netherlands, now Naturalis Biodiversity Center, for financially supporting my project. I am very grateful to the herbaria FCO, ICEL, MO, O, NY, S, TRH, G and UBC, Huub van Melick, Beata Papp, Yoon-Jun Young, Peter Hovenkamp, Karen Martinez who provided me material and I also would like to thank my colleagues Marcel Eurlings, Regine Niba, Bertie Joan van Heuven, Wim Star for their help in the lab. Furthermore, I would like to share all my gratitude to Dr. Michelle Price, Dr. Yamama Naciri and Eva Meier from Geneva, without whom this project would not have started and for their enthusiasm, encouragement, and fruitful discussions.

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