

Ecology and Evolution of Tropical Montane Fern Diversity

Dissertation

zur

**Erlangung der naturwissenschaftlichen Doktorwürde
(Dr. sc. nat.)**

vorgelegt der

Mathematisch-naturwissenschaftlichen Fakultät

der

Universität Zürich

von

Sarah Noben-Grzonka

aus

Deutschland

Promotionskommission

Prof. Dr. Hans Peter Linder (Vorsitz)
PD Dr. Michael Kessler (Leitung der Dissertation)
Prof. Dr. Jason Grant

Zürich, 2019

Table of content

Synopsis.....	4
Introduction.....	6
Chapter 1: Uncorrelated phylogenetic and functional diversity patterns provide complementary information on community assembly of ferns along three tropical elevational transects.....	23
Chapter 2: Environment and species identity determine abundances of ferns along elevational gradients.....	58
Chapter 3: Epiphytic ferns evolved in montane forest environments.....	91
Concluding remarks.....	120
Acknowledgments.....	124
Appendix.....	126