

2 PhD + 1 Postdoc position in Plant Adaptation under Environmental Change

We are two new research groups studying factors constraining adaptive evolution in response to environmental change at the University of Neuchâtel, Switzerland. Using ecological genomics, we address complementary issues on different Brassicaceae species. We are looking for 2 PhD students and 1 Postdoc (2 year position).

***PhD position on local adaptation in an alpine polyploid (Parisod group, christian.parisod@unine.ch) ***

Contributing to a larger SNSF-funded project on the impact of transposable elements on genome dynamics and reproductive isolation, this PhD research will investigate populations of *Biscutella laevigata* located at the trailing edge versus the leading edge of the species range. The aim is to combine landscape genetics and experimental approaches to detect patterns of genome reorganization and local adaptation.

We are seeking a highly motivated and independent student that has completed a MSc degree in evolutionary ecology or plant molecular genetics. You should be familiar with (i) field sampling and experimental design, (ii) molecular techniques and (iii) statistical analysis (skills in GIS would be an asset). Strong organizational and communication skills (English) are required. Interested candidates are encouraged to make informal contacts with Christian Parisod christian.parisod@unine.ch.

Motivated applicants should submit (1) a one-page letter that summarizes their research interests and experience, and their motivation for working on this project, (2) CV, (3) copies of undergraduate and MSc transcripts, and (4) contact information of 2-3 reference persons (all as one PDF) to: christian.parisod@unine.ch

The position will begin June 1st, 2011. Yearly salary: CHF 38000 - 44000. Closing date: Applications are welcome until the position is filled. Earliest evaluation of applications is on December 15, 2010.

PhD position on plant evolution under environmental change (Willi group, Yvonne.willi@unine.ch)

How do plants adapt to environmental change? - This is the main question addressed by a SNSF-funded project on the genetics and ecology of adaptation to drought and heat stress in *Arabidopsis lyrata*. A three-year PhD position is available to join this project, supervised by Yvonne Willi at the Institute of Biology, University of Neuchâtel, Switzerland.

The causes and mechanisms of adaptation to environmental change are relevant to many fields of biology (life history evolution / physiology / molecular genetics), and we will tackle them from multiple sides: by performing experimental evolution and studies of variation in resistance traits in natural populations across environmental gradients. One goal is to link shifts in morphological and physiological characters with shifts in allele frequency at candidate genes.

Applicants must have a MSc degree in the natural sciences (ideally evolutionary biology, molecular ecology and/or plant physiology) that allows entrance to a PhD program, and very good organizational, analytical and writing skills. Motivated applicants should submit (1) a one-page letter that summarizes interests and relevant experience, (2) CV, (3) copies of undergraduate and MSc transcripts, and (4) contact information of 2-3 reference persons (all as one PDF) to: yvonne.willi@unine.ch

Yearly salary: CHF 38000 - 44000. Closing date: Applications are welcome until the position is filled. Earliest evaluation of applications is on November 30, 2010.

Postdoc position (2 years) on plant adaptation to environmental change (Willi group, Yvonne.willi@unine.ch)

Multiple factors may constrain adaptive evolution in response to environmental change. Our research focuses on the role of environmental stress and genetic correlations among ecologically relevant traits in causing limits to adaptation. Investigations include experimental evolution followed by phenotypic and genome level assessments, and the study of natural populations, linking environmental gradients, adaptive traits and their genomic basis. Our study system is the plant *Arabidopsis lyrata*. A two-year Postdoc position is available to join this project.

Candidates should have a genuine interest in plant evolutionary biology and practical research experience in quantitative genetics and/or next generation sequence analysis.

Application packages should include (1) a letter introducing yourself, (2) CV, (3) a research statement describing your accomplishments and the research questions you plan to tackle next using the system and infrastructure laid out above, and (4) the names and addresses of 3 potential referees. Documents should be submitted as a single PDF file to yvonne.willi@unine.ch by November 30, 2010.

The University of Neuchâtel

The University of Neuchâtel has great indoor and outdoor plant growth facilities, and resources for genomic analysis have been generously provided. Our Institute of Biology offers a stimulating scientific environment, including a rich spectrum of research activities in life sciences: plant ecology, evolution, physiology and molecular and cell biology.

The historic town of Neuchâtel overlooks a lake at the base of the Jura Mountains, and is located not far from neighboring universities in Berne and Lausanne. For more information, see <http://www2.unine.ch/biol/> or contact Christian Parisod (christian.parisod@unine.ch) or Yvonne Willi (yvonne.willi@unine.ch).

Christian Parisod (christian.parisod@unine.ch) and

Yvonne Willi (yvonne.willi@unine.ch)