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Swiss Portal for Plant Science
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Program Summer School 2011 June, 21-24, Muerren, CH

Location: Hotel Regina

Terrestrial Ecosystem Dynamics in a Changing World



<http://www.greenchairevents.com>

Plants represent 99% of terrestrial biomass, and they provide the globe with food, fodder, fibre and genetic resources. They are central for ecosystem functioning by building and securing soils, and they affect climate through their gas exchange with the atmosphere. As atmospheric conditions change due to anthropogenic forcing of the greenhouse effect and land transformation, plants and all their dependants will either adjust, or cope (tolerate), or fade in response to these changes, with significant effects on plant community structure (winners and losers) and ecosystem functioning. Gradual climatic warming, CO₂ enrichment, changing precipitation patterns and precipitation evaporation ratios plus the occurrence of extreme events will shape the biosphere's future. As plant scientists, we can actively contribute to (1) the understanding of these consequences, (2) planning mitigation strategies and (3) create public awareness of the nature and dimension of this issue.

Organisers:

- Ansgar Kahmen, ETH Zürich, Switzerland.
- Christian Körner, University of Basel, Switzerland.
- Kentaro Shimizu, University of Zürich, Switzerland.
- Melanie Paschke, PSC Zürich-Basel, Switzerland.

Invited Speakers:

- Oliver Bossdorf, University of Bern, Switzerland.
- Jürg Fuhrer, Agroscope Reckenholz-Tänikon-ART, Switzerland.
- Christophe Randin, University of Basel, Switzerland.
- Sebastiaan Luysaert, CEA, France.
- Stefan Brönnimann, Oeschger Centre for Climate Change Research and Institute of Geography, University of Bern, Switzerland.
- Gian-Reto Walther, BAFU, Bern, Switzerland.

Tuesday 21st June

16:00-17:00: registration.

17:00-18:00: Installation

18:00-18:45: Apéro

18:45-20:00: Diner

20:00-21:30: **Stefan Brönnimann**, "Climatic changes during the past 100 years - approaches and results", Oeschger Centre for Climate Change Research and Institute of Geography, University of Bern, Switzerland.

21:30 – open end: Preparation - prepare literature and questions for the discussions after sessions (work in student teams).

Wednesday 22nd June

8:00-8:45: **Christian Körner**, "Leeway and constraints of plant and ecosystem responses to atmospheric change", University of Basel, Switzerland.

8:45-9:15: Discussion (moderated by group 1, plenum)

9:15-9:45: Group work - preparation of summaries (all groups)

10:00-10:30 Coffee break

10:30-11:15: Presentation and integration - student presentations and voting (plenum)

11:15-12:00: **Oliver Bossdorf**, "Epigenetics and plant responses to environmental change", University of Bern, Switzerland.

12:00-12:30: Discussion (moderated by group 2, plenum)

12:30-14:00 lunch

14:00-14:30: Group work - preparation of summaries (all groups)

14:30-15:15: Presentation and integration - student presentations and voting (plenum)

15:15-15:45: coffee break

15:45-16:30: **Kentaro Shimizu**, "Gene function in nature: toward predicting plastic and evolutionary responses to changing environments", University of Zürich, Switzerland.

16:30 – 17:00: Discussion (moderated by group 3, plenum)

17:00-17:30: Group work - preparation of summaries (all groups)

17:30-18:15: Presentation and integration - student presentations and voting (plenum)

18:15-18:45: handling poster + free time

18:45-19:45: diner

19:45-22:00: Poster session

Thursday 23rd June

8:00-8:45: **Jürg Fuhrer**, "Agricultural Crops and Climate Change", Agroscope Reckenholz-Tänikon ART, Switzerland.

8:45-9:15: Discussion (moderated by group 4, plenum)

9:15-10:00: Group work - preparation of summaries (all groups)

10:00-10:30 Coffee break

10:30-10:45: Presentation and integration - student presentations and voting (plenum)

10:45-11:30: **Gian-Reto Walther**, "Climate change impacts on biodiversity", BAFU, Bern, Switzerland.

11:30-12:00: Discussion (moderated by group 4, plenum)

11:30-12:15: Group work - preparation of summaries (all groups)

12:15-13:00: Presentation and integration - student presentations and voting (plenum)

13:00-14:00: lunch (may be a picnic is possible, to be discussed with the hotel)

14:30-17:30 Botanical excursion

18:30-20:00: diner

20:30-21:30: **Sebastiaan Luysaert**, "Ecosystem management for climate change mitigation: the good, the bad and the ugly", CEA, France.

Friday 24th June

8:00-8:45: **Ansgar Kahmen**, "Effects of biodiversity on ecosystem functions", ETH Zürich, Switzerland.

8:45-9:15: Discussion (moderated by group 5, plenum)

9:15-10:00: Group work - preparation of summaries (all groups)

10:00-10:30: Presentation and integration - student presentations and voting (plenum)

10:30-11:15: **Christophe Randin**, "Predicting the fate of plant species in a changing world: providing safer projections and avoiding pitfalls", University of Basel, Switzerland.

11:15-11:45: Discussion (moderated by group 6, plenum)

11:45-12:30: Group work - preparation of summaries (all groups)

12:30-14:00: Lunch

14:00-14:45: Presentation and integration - student presentations and voting (plenum)

14:45-15:30: Conclusion talk

15:30-16:00: Questions

16:00-16:30: Certificates and departure