



2nd International GMBA-DIVERSITAS conference

"Functional significance of mountain biodiversity"

in Chandolin (Valais), Switzerland

26-30th July 2010

Sponsored by:



Tentative programme

Monday 26th July 2010

- 13:00- **GMBA Steering Committee meeting**
- 18:00 upon invitation only
- 15:00 Arrival at Chandolin, Le Grand Hotel Chandolin opens for participants
- 18:30 **Welcome dinner**

Tuesday 27th July 2010

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| Welcome/Opening of the conference | |
| 8:30 | BAFU, BLW, SCNAT, SNF: Address from SCNAT and/or swiss funding bodies of GMBA |
| 8:45 | Bruno Messerli History of mountain programmes and GMBA birthday note |
| 9:00 | Eva Spehn Achievements of a decade of global mountain biodiversity assessment (GMBA) |
| 9:15 | Key note: Christian Körner Mountain Biodiversity, its causes and function in a changing environment |
| 9:45 | Coffee break |

Session 1:**„Functional significance of mountain biodiversity“**

10:30	Key note: Richard Bardgett	Linking plant diversity, soil microbial communities and nutrient cycles
11:00	Key note: Sandra Lavorel	Using plant functional traits to understand the landscape distribution of multiple ecosystem services from subalpine grasslands
11:30	Key note: Markus Fischer	On the functional significance of mountain biodiversity
12:00	Lunch break	
13:30	N. Obojes, M. Bahn, E.Tasser, N. Inauen, E. Hiltbrunner, P. Saccone, J.C. Clément, S. Lavorel, U.Tappeiner, Ch. Körner	Plant functional diversity effects on water balance in mountain grasslands across the Alps
13:45	Christian Rixen, Mandy Pohl, Christine Alewell, Dominik Alig, Alexandre Buttler, Frank Graf, Christian Körner, Cyrill Martin, Raphael Stroude	Biodiversity and erosion control
14:00	G. Nakhutsrishvili, O. Abdaladze, M. Akhalkatsi, K. Batsatsashvili, Kh. Sharikadze	Alpine plant diversity and function in the Central Caucasus
14:15	Marko Spasojevic	Traits patterns indicate that increased production and isolation due to global change will impact functional diversity in the alpine.
14:30	Flore Viard-Crédat	Seed traits dancing in subalpine grasslands: from convergence to divergence under mowing and environmental filters.
14:45	Lohengrin Cavieres	The importance of facilitative interactions on the diversity of alpine plant communities of the southern Andes.
15:00	Coffee break	

Session 2:**„Phylogeny and genetic diversity in mountains“**

15:30	Key note: Mary T. K. Arroyo & Rosa A. Scherson	Using molecular phylogenetic construction to deconstruct the high elevation flora of the South American Andes
16:00	Patrick Kuss, Richard H. Ree & Robert R. Mill	Diversity, distribution and evolution of arctic-alpine Pedicularis
16:15	Andrea Pluess	Genetic structuring of a rapidly expanding Larix decidua population
16:30	Lucienne de Witte and Jürg Stöcklin	Size structure and longevity of arctic-alpine clonal plants
16:45	Felix Gugerli, Thorsten Englisch, Rolf Holderegger, Niklaus E. Zimmermann, Pierre Taberlet, IntraBioDiv Consortium	Patterns of biodiversity at the species and gene level in Alpine plants: relevance for conservation

Wednesday 28th July 2010

Session 3:

Climate change and mountain biodiversity

8:30	H. Pauli, M. Gottfried, G. Grabherr & the GLORIA-Europe partners	Shifting species spectra in alpine summit vegetation across Europe
8:45	Ken Green	Later migration of bogong moths into the Australian Snowy Mountains despite an earlier snow melt causes mismatch across three trophic layers.
9:00	Sonja Wipf, Christian Rixen, Sandro Boggia and Veronika Stöckli	Increasing plant biodiversity on mountain tops at the upper limit of dwarf shrub heath
9:15	Jalil Noroozi	Potential effects of climate warming on a unique cryo-flora: the endemic high alpine to subnival plants in the mountains of Iran
9:30	Messouli M., Bounoua L., Babqiqi, Wahid N., Yacoubi-Khebiza M., Ben Salem A., Rochdane S., Ghallabi LB., Hammadi FZ	Effects of Climate Change Land Use and Land Cover Change in the High-Atlas Mountain, Southeast Morocco
9:45	Ramona Maggini, Boris Schröder, Niklaus E. Zimmermann, Anthony Lehmann, Marc Kéry, Hans Schmid, Martin Beniston and Niklaus Zbinden	Assessing elevational shifts and projecting future ranges for swiss breeding birds as a consequence of climate and land use change
10:00	Samuel Schmid, Erika Hiltbrunner, Eva Spehn, Andreas Luescher and Michael Scherer-Lorenzen	Impacts of experimentally induced summer drought on ecosystem functioning in alpine grasslands
10:15	Nicole Inauen, Erika Hiltbrunner, Christian Körner	Diversity responses to elevated CO ₂ in alpine plant communities
10:30	Coffee break	

Session 4:

Improving forecasts of climate change effects on mountain biodiversity

11:00	Key note: Wilfried Thuiller	Preserving the Tree of Life - Anticipating the functional and evolutionary consequences of climate change on Alpine biodiversity
11:30	Michael Kalyuzhny, Ronen Kadmon, Gregorio Moreno-Rueda, Manuel Pizarro	Niche Theory, Elevation Range, and Mountain Biodiversity: A Combined Theoretical and Empirical Study
11:45	Christophe Randin	Past and future changes in alpine tundra in the Rocky Mountains
12:00	Julien Pottier	Can we predict plant assemblages from species responses to topoclimatic factors?
12:15	Lunch break	
13:15	Local excursions	
16:00	Coffee break	

16:30

Poster Session: presentation of all posters and local wine tasting

19:00 **Conference dinner**

Thursday 29th July 2010

Session 5:

Large scale patterns in mountain biodiversity

8:30	Key note: Falk Huettmann	Data Mining of GBIF data with the GMBA Mountain Portal Tool: examples from the third pole
9:00	Key note: Maarten Kappelle	Tropical Montane Cloud Forest biodiversity: General trends and large-scale, latitudinal and altitudinal patterns across the globe
9:30	Dacai Zhang, Hang Sun	The floristic division of the south and north parts of Hengduan Mountains, a biodiversity hotspot in SW China
9:45	Vincent Clark	The phytogeography of the southern Great Escarpment in southern Africa: Diversity, Endemism and Connectivity
10:00	Coffee break	

Session 6:

Altitudinal trends in mountain biodiversity

10:30	Lily O. Rodriguez & Alessandro Catenazzi	Trends along andean altitudinal transects of Peru: evidence of declines in frog density and diversity
10:45	Ramona Viterbi, Cristiana Cerrato, Achaz von Hardenberg, Antonello Provenzale, Radames Bionda, Bruno Bassano, Laura Castagneri and Giuseppe Bogliani	Patterns of congruence and diversity along altitudinal transects in N-W Italian Alps by a multi-taxa approach
11:00	Gopal S. Rawat	Patterns of plant species richness, diversity and endemism in the alpine zone of Western Himalaya at varying spatial scales
11:15	Philippe Vernon	How to interpret insect body size patterns along altitudinal gradients?
11:30	Anne Loison	Coexistence of large herbivores in mountains at multiple scales
11:45	Lunch break	

Session 7:

Land use change effects on mountain biodiversity

13:15	Jürg Stöcklin, Katrin Rudmann-Maurer, Anne Weyand, Markus Fischer	Land Use and Biodiversity in the Alps from the genetic to the landscape level
13:30	J.F. Scheepens, Eva S. Frei, Jürg Stöcklin	Regional differentiation in life history and susceptibility to grazing in a widespread Alpine monocarp
13:45	Roslyn M. Anderson, John O'Halloran and Mark C. Emmerson	The consequences of grazing management strategies in the uplands and implications for biodiversity
14:00	Nigel Yoccoz	Tundra plant diversity and semi-domestic reindeer management in northern Norway
14:15	João Honrado, João Torres, Joana Marques, Vânia Proença, Henrique Pereira, Joaquim	Fire regime as a driver of resilience, functional diversity and ecosystem

	Alonso & Carlos Aguiar	services in Mediterranean mountains
14:30	Thijs van den Bergh, Nicole Inauen, Erika Hiltbrunner and Christian Körner	Evapotranspiration in alpine and subalpine grasslands under land use change
14:45	Erika Hiltbrunner, Nicole Inauen, Esther Lischer, Thijs van den Bergh, Christian Körner	Ecological and hydrological consequences of green alder expansion in the Swiss Alps
15:00	Coffee break	

Session 8:

Invasive species in mountains

15:30	Christoph Kueffer, Jake Alexander, Olivier Broennimann, Curt Daehler, Antoine Guisan, Blaise Petitpierre, Christophe Randin, Tim Seipel, and Georg Von Arx	Global comparisons of plant invasions along elevational gradients as a model system for studying niche dynamics
15:45	Jake Alexander, Christoph Kueffer, Tim Seipel, Peter Edwards	Genetic and plastic responses of non-native plants along altitudinal gradients
16:00	Seipel T, Alexander J, Kueffer C, and MIREN consortium	Biogeographic distributions of non-native plants in mountains
16:15	Sylvia Haider, Jake Alexander & Christoph Kueffer	Non-native plant species richness along elevation gradients: the interplay of climate matching and time since introduction
16:30	Laure Gallien & Wilfried Thuiller	A new hierarchical framework to model invasive species distribution.

Session 9:

LTERs in the Alpine and their influence on biodiversity research

16:45	Key note: Mark Williams	NWT LTER as a prototype for understanding the controls on alpine biodiversity: the challenge of converting long term monitoring into science.
17:15	Francisco Bonet Garcia	Converting field data into knowledge: towards adaptive management in Sierra Nevada LTER site
17:30	Brigitta Erschbamer, Institute of Botany, University of Innsbruck	LTER in the Austrian Central Alps: scientific relevance and outlook
17:45	Final remarks	
18:00	End of the conference	

Friday 30th July 2010

8:00-16:00 Excursion to Furka

16:00- 20:00 Bio-CATCH meeting

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