



Newsletter 2/2015

Congratulations to the former director of the Alpine Research Centre Obergurgl, Dr. phil. Walter Moser (Professor Emeritus): happy birthday and all the best to the 50th anniversary of the doctorate!



Prof. Dr. Walter Moser was born on June 9th 1930 in Längenfeld in the Ötz valley. He studied Botany and Geology at the University of Innsbruck while being a schoolteacher at the same time. He wrote his doctoral thesis on the physiology of nival plants and was one of the scientists who established the research station on the “Hohen Nebelkogel” (3,184 m a.s.l.), where he studied photosynthesis and respiration of nival plants in the period 1966 - 1969. This research station had an international reputation for its groundbreaking measuring devices. In 1970, Prof. Dr. Moser got a position as a university assistant in Obergurgl. He organised and coordinated the MaB Obergurgl project, an interdisciplinary research project as part of the UNESCO programme “Man and Biosphere”, which brought

Obergurgl on the map of the scientific community. Within this project, the “Model Obergurgl” was elaborated in 1974, being the first computer model of a touristic area worldwide, integrating ecological, economical and sociological features. Finally, he was responsible for the designation of the UNESCO biosphere reserve “Gurgler Kamm”.

After his habilitation in 1979, Dr. Walter Moser became Professor of plant ecology and director of the phytotron of the University of Alberta in Edmonton, Canada.

We are grateful to Prof. Dr. Mosers for his scientific work in Obergurgl, being fundamental for the success of the Alpine Research Centre and wish him all the best for its 85th birthday and the 50th anniversary of his doctorate.

Announcements

'In the name of research' – monitoring of the ant *Formica suecica* in the inner Ötz valley: 1st and 22nd of August 2015



Formica suecica (photo: F. Glaser)

The Nature Park Ötztal, an important partner of the Alpine Research Centre Obergurgl, presents a volunteering programme to monitor the anthills of *Formica suecica*. This species is quite common in Scandinavia and Siberia but very rare in Central Europe. However, it can be found in some habitats near Obergurgl and Vent. To gain further information on the actual distribution of this species in the inner Ötz valley, the Nature Park Ötztal needs your

help. On the 1st and 22nd of August, volunteers are welcome to look for anthills of *Formica suecica* and collect samples under the guidance of scientists. For more information on this and other events of the Nature Park Ötztal please visit <http://www.naturpark-oetztal.at/en/events.html>.

If you want to participate, please contact info@naturpark-oetztal.at.

Recent research

Bed load transport in the Gurgler Ache

Bernhard Gems (Bernhard.Gems@uibk.ac.at)

Johannes Kammerlander (Johannes.Kammerlander@uibk.ac.at)

Daniel Kößler

Institute for Infrastructure, University of Innsbruck

Ass.-Prof. Dipl.-Ing. Dr. Bernhard Gems and his colleagues benefitted from a grant by the Alpine Research Centre Obergurgl and carried out a project entitled "Bed load mobility at steep slopes" during 2012-2014. In this project they recreated a reach of the Gurgler Ache in a scale of 1:20 to experimentally investigate the bed load transport in alpine rivers. For more information on this project please visit www.uibk.ac.at/afo/newsletter/0215/newsletter0215_recent-research.pdf.

Researchers in Obergurgl



Priv.-Doz. Mag. Dr. Birgit Sattler

Institute for Ecology, University of Innsbruck

Birgit Sattler dedicated her scientific work to the cryosphere and all the minute organisms living in this extreme habitat. As part of this work she developed the L.I.F.E. device (Laser-Induced Fluorescence Emission) in cooperation with Klemens Weisleitner and colleagues of the Institute for Experimental Physics of the University of Innsbruck. This device detects photosynthetic active microorganisms via laser beams and was recently

tested for its applicability in space missions. The development of the L.I.F.E. device was financed via a project funding of the Alpine Research Centre. However, Birgit Sattlers scientific career also takes her to the Antarctic, Greenland, and to lecture tours all over the world. For more information on Dr. Sattler, please visit her webpage at <http://www.uibk.ac.at/ecology/staff/persons/sattler.html.en>.

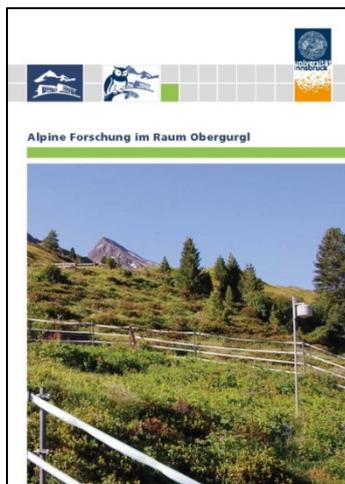
Publications



Annual report of the Alpine Research Centre Obergurgl 2014

Nikolaus Schallhart, Brigitta Erschbamer

Every year, the Alpine Research Centre publishes a report on research projects, services and events of the last season. The report for the year 2014 is now available on the homepage of the Alpine Research Centre at [http://www.uibk.ac.at/afo/publikationen/pdf/taetigkeitsbericht-2014 -final-fuer-doppelseitig_web.pdf](http://www.uibk.ac.at/afo/publikationen/pdf/taetigkeitsbericht-2014-final-fuer-doppelseitig_web.pdf). The report is only available in German language.



Extended brochure "Alpine research in the region of Obergurgl"

Nikolaus Schallhart, Public Relations Office of the University of Innsbruck (Hg.)

After the publication of our new book "Forschung am Blockgletscher – Methoden und Ergebnisse" (see newsletter 01/15), we reprinted an extended version of our brochure "Alpine research in the region of Obergurgl". This brochure is available for free in German and English language at the University Center Obergurgl is also published on the homepage of the Alpine Research Centre.



LTER-Austria white paper 2015

Various Authors

"Long-Term Ecosystem Research" (LTER) represents a network in Europe of approximately 400 research sites, 100 institutions and numerous research projects in 24 national networks. LTER-Europe conducts research across a broad spectrum of European ecosystems from the arctic and alpine to mediterranean sites.

This white paper highlights activities, progress and future planning of the Austrian LTER network. Furthermore, all sites of the Austrian network are introduced in this paper, with LTER Obergurgl being one of them. To download the white paper, please go to:

http://www.uibk.ac.at/afo/publikationen/pdf/whitepaper_2015_lter_vol2_eng_annexok.pdf

Recently published scientific articles from the area around Obergurgl

- Edwards, A.; Mur, L.A.J.; Girdwood, S.E.; Anesio, A.M.; Stibal, M.; Rassner, S.M.E.; Hell, K.; Pachebat, J.A.; Post, B.; Bussell, J.S.; Cameron, S.J.S.; Griffith, G.W.; Hodson, A.J. & Sattler, B. (2014): Coupled cryoconite ecosystem structure - function relationships are revealed by comparing bacterial communities in alpine and Arctic glaciers. *FEMS MICROBIOLOGY ECOLOGY* 89/2, 222-237
- Kammerlander, J.; Gems, B.; Kössler, D. & Aufleger, M. (2014): Experimental modelling of marginal bed-load transport in an alpine mountain river. *GEOPHYSICAL RESEARCH ABSTRACTS* 16, 12801
- Marcante, S.; Erschbamer, B.; Buchner, O. & Neuner, G. (2014): Heat tolerance of early developmental stages of glacier foreland species in the growth chamber. *PLANT ECOLOGY* 215/7, 474-758
- Stancheva, R.; Hall, J.D.; Herburger, K.; Lewis, L.A.; McCourt, R.M.; Sheath, R.G. & Holzinger, A. (2014): Phylogenetic position of *Zygonium ericetorum* (Zygnematophyceae, Charophyta) from a high alpine habitat and ultrastructural characterization of unusual aplanospores. *JOURNAL OF PHYCOLOGY* 50/5, 790-803

Pictures from Obergurgl



The first spring flowers in Obergurgl; 14.05.2015

Important dates

31.08.-04.09.2015: *Excursion guiding in high alpine environments, Obergurgl*
(more: www.uibk.ac.at/afo/aktuelles/)

01.10.2015: Open day of the Alpine Research Centre Obergurgl 2015, Obergurgl

Contact

If you have any suggestions for the next issue, any questions or if you don't want to receive any further newsletter please contact Klaus.Schallhart@uibk.ac.at.

For more information on events, publications and other activities of the Alpine Research Centre please visit <http://www.uibk.ac.at/afo/aktuelles/index.html.en>.

We hope you enjoyed reading this issue!



Univ.-Prof. Dr. Brigitta Erschbamer
Scientific Director



Ao. Univ.-Prof. Dr. Rüdiger
Kaufmann
Deputy Director



Dr. Nikolaus Schallhart
Scientific Coordinator

Universitätszentrum & Alpine Forschungsstelle
Obergurgl

