



Welcome to the

2nd Snow Algae Meeting

SAM2018

at the

Fraunhofer Institute IZI-BB

- home of the CCCryo -

15th to 16th November 2018

Programme

Date	Time	What
Thursday, 15th Nov.	12:00	Arrival, registration und a small lunch buffet
	13:00	Start of meeting and presentations
	13:00-13:15	Liane G. Benning / Thomas Leya: Welcome
Plenary talk	13:15-14:15	Ron Hoham: My history with snow algae and what follows
	14:15-14:30	Short Break
		Topic 1: <i>Chlamydomonas nivalis</i> and other snow algae Chair: Linda Nedbalová
	14:30-14:40	<u>Thomas Pröschold</u> & Tatyana Darienko: What is <i>Chlamydomonas nivalis</i> ? How can we answer this question?
	14:40-14:50	<u>Takahiro Segawa</u> , Ryo Matsuzaki, Hiroshi Mori & Nozomu Takeuchi: Bipolar dispersal of red-snow algae phylotypes
	14:50-15:00	<u>Matthew P. Davey</u> , Lloyd S. Peck, Peter Convey, Andrew Gray, Peter T. Fretwell & Alison G Smith: Metabolic and community changes underpinning life phase transitions of snow algae
	15:00-15:30	Discussion Topic 1 - Moderators: Linda Nedbalová / Daniel Remias
	15:30-16:00	Coffee/Tea Break with poster session
		Topic 2: Taxonomy & Field Studies - Chair: Trinity L. Hamilton
	16:00-16:10	<u>Robin Kodner</u> , Rachael Mallon & Ryan McLaughlin: Spatial and temporal patterns in snow algal communities across the North Cascades Mountains
	16:10-16:20	Jaromír Lukavský, Vladislav Cepák, Linda Nedbalová, Ivan Iliev & <u>Jana Kviderová</u> : Cryoseston of European mountains
	16:20-16:30	<u>Linda Nedbalová</u> , Lenka Procházková, David Kaftan, Jaromír Lukavský: Diversity of snow algae in the Czech mountains: current state and further perspectives
	16:30-16:40	<u>Ryo Matsuzaki</u> , Hisayoshi Nozaki, Nozomu Takeuchi, Yoshiaki Hara & Masanobu Kawachi: A new snow-inhabiting species of <i>Chloromonas</i> (Volvocales, Chlorophyceae) from Japan, based on cultured and field-collected materials
	16:40-17:10	Discussion Topic 2 - Moderators: Trinity L. Hamilton / Liane G. Benning
	17:10-18:10	free time, transfer to hotels and restaurant in Potsdam
	19:00- ...	joint dinner in Potsdam

Friday, 16th Nov.	09:20	presentations
		Topic 3: Ecology & Field Studies - Chair: Ryo Matsuzaki
	9:20-9:30	<u>Daniel Remias</u> : From glaciers and snow fields into the lab: experiences with cryoflora
	9:30-9:40	<u>Lenka Procházková</u> , <u>Daniel Remias</u> , <u>Tomáš Řezanka</u> & <u>Linda Nedbalová</u> : <i>Chloromonas</i> sp. WP129, a snow alga capable to grown in very different light conditions
	9:40-9:50	<u>Trinity L. Hamilton</u> & <u>Jeff R. Havig</u> : Inorganic carbon addition stimulates snow algae primary productivity
	9:50-10:00	<u>Jeff R Havig</u> & <u>Trinity L. Hamilton</u> : Snow algae drive surface productivity and subglacial weathering at volcanic rock-hosted glaciers in the Pacific Northwest
	10:00-10:30	Discussion Topic 3 - Moderators: Ryo Matsuzaki / Daniel Remias
	10:30-10:50	Short Break
		Topic 4: Genetics & Taxonomy - Chair: Stefanie Lutz
	10:50-11:00	<u>Shawn P. Brown</u> , <u>Avery E. Tucker</u> & <u>Ari Jumpponen</u> : Molecular evidence for snow algae in "white" snow and continuing investigations
	11:00-11:10	<u>Sichao Huang</u> : Snow green algae DNA barcoding marker design
	11:10-11:20	<u>Stacy A. Krueger-Hadfield</u> : The maintenance of life cycle diversity and the importance of understanding reproductive modes
	11:20-11:40	Discussion Topic 4 - Moderators: Stefanie Lutz / Thomas Leya
	11:40-12:20	Tour at IZI-BB: CCCryo biobank & snow algae mass production
	12:20-13:20	Lunch Break with poster session and discussions along
		Topic 5: Genomics, Transcriptomics & Biotechnology Chair: Stacy Krueger-Hadfield
	13:20-13:30	<u>Stefanie Lutz</u> , <u>Thomas Leya</u> , <u>Daniel Frei</u> , <u>Dana Wenzel</u> , <u>Felix Jorde</u> , <u>Jürg Frey</u> , <u>Christian Ahrens</u> & <u>Liane G. Benning</u> : Snow algae genome sequencing - current state, challenges and limitations
	13:30-13:40	<u>Chris J. Hulatt</u> , <u>René H. Wijffels</u> & <u>Matt C. Posewitz</u> : Functional genomics of coldwater microalgae
	13:40-13:50	<u>Thomas Leya</u> , <u>Stefanie Lutz</u> , <u>Felix Jorde</u> , <u>Dana Wenzel</u> , <u>Carena Teufelhart</u> , <u>Madelí Castruita</u> , <u>Liane G. Benning</u> , <u>Sean Gallaher</u> , <u>Jeremy Schmutz</u> & <u>Sabeeha Merchant</u> : Psychrophilic snow algae - their potential in biotechnology
	13:50-14:20	Discussion Topic 5 - Moderators: Stacy Krueger-Hadfield / Thomas Leya
	14:20-15:00	Coffee/Tea Break
	15:00-17:00	Round Table Discussion <ol style="list-style-type: none"> 1. Where are we going in taxonomy? 2. Field Studies - Ecology - Climate - future topics? 3. Biotechnology with snow algae - is it worth it? 4. Shall we publish a synopsis paper of SAM2018? (Topic raised by Shawn Brown) 5. ?... 6. Next Meeting - Where and when?
	17:00	farewell and departure

Talks

Taxonomy - Ecology & Field Studies - Genetics - Biotechnology

- Shawn P. Brown, Avery E. Tucker & Ari Jumpponen: Molecular evidence for snow algae in “white” snow and continuing investigations (**G**)
- Matthew P. Davey, Lloyd S. Peck, Peter Convey, Andrew Gray, Peter T. Fretwell & Alison G Smith: Metabolic and community changes underpinning life phase transitions of snow algae (**T, G**)
- Trinity L. Hamilton & Jeff R. Havig: Inorganic carbon addition stimulates snow algae primary productivity (**E**)
- Jeff R Havig & Trinity L. Hamilton: Snow algae drive surface productivity and subglacial weathering at volcanic rock-hosted glaciers in the Pacific Northwest (**E**)
- Ron Hoham: My history with snow algae and what follows (**Plenary Lecture**)
- Sichao Huang: Snow green algae DNA barcoding marker design (**G**)
- Chris J. Hulatt, René H. Wijffels & Matt C. Posewitz: Functional genomics of coldwater microalgae (**G**)
- Robin Kodner, Rachael Mallon & Ryan McLaughlin: Spatial and temporal patterns in snow algal communities across the North Cascades Mountains (**E**)
- Stacy A. Krueger-Hadfield: Are haplodiplontic life cycles stable? The importance of investigating phenotypic and genotypic patterns in complex life cycles (**G**)
- Jaromír Lukavský, Vladislav Cepák, Linda Nedbalová, Ivan Iliev & Jana Kvíderová: Cryoseston of European mountains (**T, E**)
- Thomas Leya, Stefanie Lutz, Felix Jorde, Dana Wenzel, Carena Teufelhart, Madeli Castruita, Liane Benning, Sean Gallaher, Jeremy Schmutz & Sabeeha Merchant: Psychrophilic snow algae - their potential in biotechnology (**B**)
- Stefanie Lutz, Thomas Leya, Daniel Frei, Dana Wenzel, Felix Jorde, Jürg Frey, Christian Ahrens & Liane G. Benning: Snow algae genome sequencing - current state, challenges and limitations (**G**)
- Ryo Matsuzaki, Hisayoshi Nozaki, Nozomu Takeuchi, Yoshiaki Hara & Masanobu Kawachi: A new snow-inhabiting species of *Chloromonas* (Volvocales, Chlorophyceae) from Japan, based on cultured and field-collected materials (**T**)
- Linda Nedbalová, Lenka Procházková, David Kaftan, Jaromír Lukavský: Diversity of snow algae in the Czech mountains: current state and further perspectives (**T, E**)
- Lenka Procházková, Daniel Remias, Tomáš Řezanka & Linda Nedbalová: *Chloromonas* sp. WP129, a snow alga capable to grown in very different light conditions (**T, E**)
- Thomas Pröschold & Tatyana Darienko: What is *Chlamydomonas nivalis*? How can we answer this question? (**T**)
- Daniel Remias: From glaciers and snow fields into the lab: experiences with cryoflora (**E**)
- Takahiro Segawa, Ryo Matsuzaki, Hiroshi Mori & Nozomu Takeuchi: Bipolar dispersal of red-snow algae phylotypes (**G**)

Posters

- Mickaël Baqué, Franziska Hanke, Ute Böttger, Thomas Leya, Ralf Moeller & Jean-Pierre de Vera: Water kills? Protection of carotenoids' Raman signatures by Martian mineral analogues after high dose gamma irradiation Raman signatures during BIOMEX.
- Andrew Gray, Matthew P. Davey, Alison Smith, Peter Fretwell, Pete Convey, Lloyd Peck, Andrew Flemming & Monika Krolkowski: Antarctic snow algae: Monitoring blooms using optical remote sensing combined with field spectroscopy.
- Felix Jorde, Thomas Leya, Sara Pereira, S.M. Badenes, Edgar Santos, Luís Costa, Vitor Verdelho, Thomas Friedl & Anastasiia Kryvenda: Benefits of the algae crop rotation principle in algal mass production.
- Felix Jorde, Dana Wenzel, Björn Gutschmann & Thomas Leya: Facing the challenges of pure microalgae production in pilot scale photobioreactors.
- Thomas Leya & Carena Teufelhart: The bioresource CCCryo
- Rachael Mallon, Ryan McLaughlin, Nathan Roueche & Robin Kodner: Spatiotemporal diversity of snow algae communities in the Pacific Northwest.
- Kristen Thomas, Tian Qing Yen, Nathan Roueche, Rachael Mallon, Riley Marcus, Dr. Robin Kodner: Diversity of Snow Algae in a Pacific Northwest Alpine Lake Ecosystem?