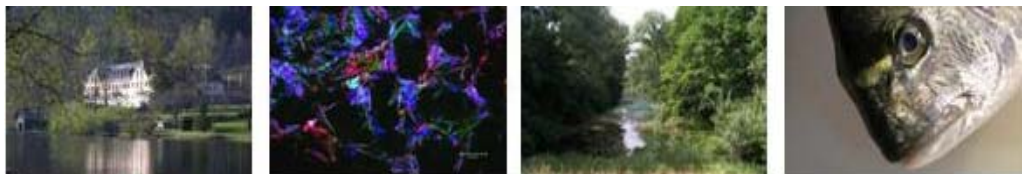




wasser
cluster
lunz

Activity Report 2009

WasserCluster Lunz GmbH



Research projects
Working group profiles
Publications
**Presentations and
miscellaneous activities**
Awards
Scientific events
Teaching
Press releases

Preface

2009 was a year of positive development for the WasserCluster: new international and national projects were launched resulting in a total of currently 20 ongoing perennial research projects, and the number of scientific staff was considerably increased. Also, scientific education at the WasserCluster bore fruit this past year: 9 students were able to successfully complete their master or PhD studies, respectively. During its second year of regular business the institute was able to establish itself more firmly both on a regional and on an international scale: the WasserCluster was integrated into the research database of Lower Austria ("Forschungsatlas Niederösterreich"). Over the summer months, we could accommodate five interns and so demonstrate regional job opportunities. New project co-operations were set up with students from abroad who were actively involved in our research projects, and with renowned guest researchers who came to Lunz. All in all, the institute is consistently advancing to a centre of aquatic ecosystem research.

In 2009, the starting signal for the extension and foundation of a new working group was given: as of 2011, the renovated former biological station will house the new water technology group, which will focus on long-term methodological and instrumental links between water technological applications and ecosystem research. This extension of the research location Lunz is being enabled by state funding.

Essential scientific performances at the Wassercluster shall briefly be illustrated by the following four examples:

The program initiative ExtremAqua was continued throughout 2009 and will perform long-term research within an international network in the region around Lunz and in the Danube floodplains near Vienna in order to find answers to questions about the effects of changing environmental conditions.

Together with colleagues from Canada and the USA, Martin Kainz published the book "LIPIDS in Aquatic Ecosystems", Springer, New York. The book is the first to combine findings from aquatic lipid research and aquatic/human food chain research and was assessed as a valuable contribution to food chain research by international commentators. Contrary to a recently established doctrine, Kainz and his colleagues (University of Washington, Seattle) proved that it is especially algae that provide essential cell building material for aquatic animals like fish.

Tom Battin held a visiting professorship at the renowned Department for Limnology at Uppsala University and he has become the head of the Department for Limnology at the University of Vienna in December 2009. His publication about the global carbon cycle in Nature Geoscience has attracted worldwide attention. As a result from this publication, the role of freshwater systems for the global carbon cycle is now being discussed in Copenhagen (COP15).

Thomas Hein could launch two new EU-funded projects in 2009 and together with his team and co-operational partners, he is going to examine possibilities of an integrated wetland management on three continents as well as the basics for the establishment of the Water Framework Directive in heavily modified water bodies of the Weinviertel in Lower Austria. Furthermore, two new projects elaborate the science-school co-operation by dealing with questions of environmental protection and climate change.

Presentation of the scientific activities at the WasserCluster

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Projects

Ongoing projects

BERG (Biofilm and Ecosystem Research Group - Battin)

- Biofilm and terrestrial carbon / MICDIF (FWF-NFN, 2007 – 2010, 250 kEur, PI deputy-coordinator)
- EURODIVERSITY_Comix (European Science Foundation, FWF, 2006 – 2009, ca. 201 kEur, PI: Battin)
- Graduate school “Symbiotic interactions”, (University of Vienna, 2007 - 2010)
- Impact of gravel pit lakes (States of Lower Austria, Upper Austria, Styria; Forum Rohstoffe, 2008-2011, 430 kEur total budget, 135 kEur WKL; PI: Battin, Hofmann)
- Architecture of carbon flows through fluvial networks - ARCARNET (BMWf-FWF, 540 kEur total budget, PI: Battin)
- Collaboration with “Singapore-Delft Water Alliance”; 21 kEur WKL; PI: Battin)

BioFrames (Biochemical Functions: Research and Management in Ecosystems at multiple Scales - Hein)

- CANFlood (FWF P 19907-B17, 2007 – 2010, 272 kEur, PI: Hein)
- Tools for supporting the sustainable management of freshwater wetlands with special regards to their roles in drinking water supply, sanitation, livelihood, and ecological restoration - WETWIN (FP7, EC, 2008 – 2011, 2.4 mEur total budget, 320 kEur WKL, WPL: Hein)
- ProFor (ETC, EC, PI: Hein) 2009 – 2011, 600 kEur total budget, 240 kEur WKL
- Natura 2000 (Gov. Lower Austria, EU Funds, PI: Hein) 2009 – 2011, 60 kEur
- Wespe (Sparkling Science, BMWf, PI: Hein) 2009 – 2011, 170 kEur total budget, 95 kEur WKL
- Lobau 2020 (MaB, Austrian Academy of Sciences, 2008 – 2011, 150 kEur total budget, 29 kEur WKL, Co-PI: Hein)
- Algal productivity in riverine wetlands (KIÖS, Austrian Academy of Sciences, 2007-2009, 6 kEur, PI: Hein)
- Connectivity Lobau Phase 1 (Municipal Authority of Vienna, 2008 – 2009, 1.4 mEur total budget, 130 kEur WKL, WP leader: Hein)

- Study on ecological residual flow requirements in the Ybbs. (WienEnergie, 2007 – 2009, 40 kEur, coop. with BOKU / IHG, PI: Hein)
- Nutrient dynamics in the Kihansi River – PhD project (LKEMP, GEF, 2004 – 2009, 85 kEur, Supervisor: Hein)
- A science-based approach to understand biodiversity-driven functions and services for improving wetland management - Biowetman (ASO, 12 kEur, 2008 – 2009, PI: Hein)

LIPTOX (Lipid and Toxicology Research Group - Kainz)

- Bioavailability and conversion of fatty acids in Daphnia (National Science Foundation, 2007-2009, 385 kUS\$ total budget, 10 kEur WKL, Co-PI: Kainz)
- Ostarrichi Fisch – Identification of essential dietary constituents versus potentially toxic compounds in aquatic food webs, 2009 – 2010, 150 kEur, PI: Kainz)
- CARP - Diet effects on fatty acids and methyl mercury in common carp (FWF, 2008-2011, 270 kEur, PI: Kainz)
- Adaptive abilities of Daphnia populations to increasing UVR and temperature, 2008-2010, 14 kEur, PI: Kainz)
- Effects of catchment processes and forest management in boreal forests on Hg and MeHg in surface waters (Norwegian Science Foundation, 2008-2010, kEur WKL, Co-PI: Kainz).
- Impact of gravel pit lakes (States of Lower Austria, Upper Austria, Styria; Forum Rohstoffe, 2008 – 2011, 421 kEur total budget, 135 kEur WKL, PI: Kainz, Hofmann)
- LIPTEMP – Temperature and diet effects on Daphnia lipids and fitness (FWF, 2009-2012, 287 kEur, PI: Kainz)

Joint projects

- ExtremAqua (BMWF, 25 kEur, Battin, Hein, Kainz)

Granted projects

Joint projects

- ExtremAqua Extension 2009 (BMWF, 50 kEur, Battin, Hein, Kainz)

Working group profiles

BERG

- 2 postdocs
Clemens Augspurger, WKL / University of Vienna
Edward Hall, WKL / University of Vienna
- 4 PhD students
Katharina Besemer, University of Vienna
Iris Hödl, WKL / University of Vienna
Gabriel Singer, WKL / University of Vienna
Andreas Weilhartner, WKL / University of Vienna
- 6 MSc students
Christina Fasching, University of Vienna
Clemens Karwautz, University of Vienna
Marvin, Pölzl, University of Vienna
Christian Schwarz, University of Vienna
Marcellin Rutegwa, IHE Delft
Fred Omengo, IHE Delft

BioFrames

- 2 postdocs
Peter Winkler, WKL / BOKU
Maren Striebel, Wassercluster Lunz
- 2 research associates
Gabriele Weigelhofer, WKL / BOKU
Jennifer Fuchsberger, WKL
- 5 PhD students
Stefan Preiner, WKL / BOKU
Iris Baart, BOKU
Elisabeth Bondar, WKL / BOKU
Radhia, Ideva, University of Vienna
Nina Welti, Wassercluster Lunz / BOKU
- 8 MSc students
Manuel Felkl, University of Vienna
Michael Edinger, University of Vienna
Andreas Ganglbauer, University of Vienna
Rebecca Gimbo, IHE Delft
Matthias Mair, BOKU
Nagib Batenganya, IHE Delft
Stefanie Schabhüttl, University of Vienna
Bernadette Teufl, University of Vienna

LIPTOX

- 1 postdoc
Sami Taipale, University of Washington, Seattle
- 2 PhD students
Francine Mathieu, University of Seattle
Sebastian Schultz, WKL / University of Vienna
- 5 MSc students
Martin Heissenberger, WKL / University of Vienna
Mariella Martinz, University of Vienna
Brigitte Koderbauer, University of Vienna
Esi Esuon Biney, Delft I.G.A.
Julia Nussbaumer, University of Innsbruck

Publications

BERG

Besemer, K., Singer, G., Hödl, I., Battin, T.J. (in press). Bacterial community composition of stream biofilms in spatially variable flow environments. *Applied and Environmental Microbiology*, AEM.01284-09v1.

Besemer, K., Hödl, I., Singer, G., Battin, T., (in press): Architectural differentiation reflects bacterial community structure in stream biofilms. *The ISME Journal*, ismej.2009.73.

Bottacin-Busolin, A., Singer, G., Zaramella, M., Battin, T.J. and Marion, A. (2009): Effects of Streambed Morphology and Biofilm on the Transient Storage of Solutes. *Environmental Sciences & Technology* DOI 10.1021/es900852w.

Besemer, K., Singer, G., Hödl, I. and Battin, T.J. (2009): Bacterial Community Composition of Stream Biofilms in Spatially Variable-Flow Environments. *Applied and Environmental Microbiology* 75 (22):7189-7195.

Besemer, K., Luef, B., Preiner, St., Eichberger, B., Agis, M., Peduzzi, P. (2009): Sources and composition of organic matter for bacterial growth in a large European river floodplain system (Danube, Austria). *Organic Geochemistry* 40 (3):321-331.

Hall, E.K., Dzialowski, A.R., Stoxen, S.M., and Cotner, J.B. 2009 The effect of temperature on the coupling between phosphorus and growth in lacustrine bacterioplankton communities *Limnology and Oceanography* 54:880-889

Battin, T.J., V.D. Kammer, F., Weihartner, A., Ottofuelling, St. and Hofmann, Th. (2009): Nanostructured TiO₂: Transport Behavior and Effects of Aquatic Microbial Communities under Environmental Conditions. *Environmental Science & Technology* DOI 10.1021/es9017046.

Battin, T.J., Luysaert, S., Kaplan, L.A., Aufdenkampe, A.K., Richter, A. and Tranvik, L.J. (2009): The boundless carbon cycle. *Nature Geoscience* 2 (598 – 601).

GEO Carbon Strategy (Group of Earth Observation) 2009 Copenhagen. Tom J. Battin contributing author.

BIOFRAMES

Reviewed articles

Lair, G.J., Zehetner, F., Fiebig, M., Gerzabek, M.H., van Gestel, C.A., Hein, T., Hohensinner, S., Hsu, P., Jones, K.C., Jordan, G., Koelmans, A.A., Poot, A., Slijkerman, D.M., Totsche, K.U., Bondar-Kunze, E., Barth, J.A. (2009): How do long-term development and periodical changes of river-floodplain systems affect the fate of contaminants? Results from European rivers. *Environ Pollut.* 157(12):3336-3346

Schagerl, M; Drozdowski, I; Angeler, DG; Hein, T; Preiner, S (2009): Water age - a major factor controlling phytoplankton community structure in a reconnected dynamic floodplain (Danube, Regelsbrunn, Austria). *J LIMNOL.* 68(2): 274-287.

Bondar-Kunze, E., Preiner, S., Schiemer, F., Weigelhofer, G., Hein, T. (2009): Effect of enhanced water exchange on ecosystem functions in backwaters of an urban floodplain. *Aquatic Sciences*. Published online first

Doi, H., Cherif, M., Iwabuchi, T., Katano, I., Stegen, J.C. and Striebel. M.: Integrating Elements and Energy through the Metabolic Dependencies of Gross Growth Efficiency and the Threshold Elemental Ratio. *Oikos*. In early edition.

Book articles

Hein, T., Bondar-Kunze, E., Schiemer, F., Welti, N. and Pinay G. (2009): Effects of Ecological Restoration on Biogeochemical Processes in Complex Riverine Landscapes. In: Pardue G. H. & Olvera T. K., *Ecological Restoration*; Nova Science Publishers , New York; ISBN 978-1-60741-013-3

Hein, T., Kucera-Hirzinger, V., Preiner, S., Schiemer, F., Weigelhofer, G. (2009): Der Mensch und die Flusslandschaften - Rolle natürlicher Flusslandschaften: Status und Perspektiven im Donauraum. In: Gamerith, Donauraum (Band 34 der Schriftenreihe für Ökologie und Ethologie) 34:83-107. *Facultas, Wien*

Muhar S., Poppe M., Preis S., Hein T., Jungwirth M. (2009): Revitalisierung österreichischer Flüsse. , Egger G., Michor K., Muhar S., Bednar B. (Hrsg.), *Flüsse in Österreich. Lebensadern für Mensch, Natur und Wirtschaft*, 311; Studien Verlag, Innsbruck Wien Bozen; ISBN: 978-3-7065-4670-6

Conference proceedings

Hein, T., Bondar-Kunze, E., Felkl, M., Habersack, H., Mair, M., Pinay, G., Tritthart, M., Welti, N. (2009): Hydromorphological control of nutrient cycling in complex river floodplain systems. In: EGU (Ed.), *Geophysical Research Abstracts*, Vol. 11, EGU2009-11331. Poster

Tritthart, M., Bondar-Kunze, E., Welti, N., Habersack, H., Hein, T. (2009) Modelling Surface Water Connectivity for an Improved Understanding of Carbon and Nitrogen Cycles in Riparian Zones. In: Universidad de Concepcion (Ed.), *The International Conference of Science and Information Technologies for Sustainable Management of Aquatic Ecosystems, 7th International Symposium on Ecohydraulics*; ISBN: 978-981-08-2100-5.

LIPTOX

Brett, M. T., Kainz. M., Taipale, S., Seshan, H. (2009): The pre-eminence of phytoplankton versus terrestrial carbon for sustaining herbivorous zooplankton production. *PNAS*. In Early Edition.

Kainz, M., Perga, M.-E., Arts, M. T., Mazumder, A. (2009): Essential fatty acid concentrations of different seston sizes and zooplankton: a field study of monomictic coastal lakes. *J. Plankt. Res.* 31:635-645.

Kainz, M. and Fisk, A. (2009): Integrating lipids and contaminants in aquatic ecology and ecotoxicology. In: *Lipids in Aquatic Ecosystems*. Springer Verlag, New York. 93-113.

Arts, M. T., Brett, M. T., and Kainz, M., eds. (2009): *Lipids in Aquatic Ecosystems*. Springer Verlag, New York. 377 p.

El-Sabaawi, R., Dower, J.F., Kainz, M., Mazumder, A. (2009): Interannual variability in fatty acid composition of the copepod *Neocalanus plumchrus* (Marukawa) in the Strait of Georgia, British Columbia, Canada. *Mar. Ecol. Prog. Ser.* 382:151-161.

El-Sabaawi, R., Dower, J.F., Kainz, M., Mazumder, A. (2009): Characterizing the trophic positions of calanoid copepods in the Strait of Georgia: insight from stable isotopes and fatty acids. *Mar. Biol.* 156:225-237.

Masclaux, H., Bec, A., Kainz, M., Desvillettes, C., Jouve, L. and Bourdier, G. (2009): Combined effects of food quality and temperature on somatic growth and reproduction of two freshwater cladocerans. *Limnol. Oceanogr.* 54:225-237.

Presentations and seminars

BERG

Battin, T.J. Guest Professorship at University of Uppsala, Sweden: March-September 2009.

Besemer, K., Hoedl, I., Singer, G., Battin, T. J. (October 2009): Architectural Differentiation Reflects Bacterial Community Structure in Stream Biofilms. SIL – conference, Salzburg, Austria. Oral Presentation

Singer, G.A., Besemer, K., Hoedl, I.-A., Battin, T.J. (October 2009): What is a greedy ant and why does it eat so much sugar? SIL- conference, Salzburg, Austria, Oral presentation

Weilhartner, A., Mathieu, F., Müllegger, C., Kainz, M., Hofmann, T., Battin, T.J. (26.-28. Oktober 2009): Do gravel pit lakes affect groundwater biogeochemistry? SIL - conference, Salzburg, Austria, Poster

Hall, E.K. Maixner, F., Pölzl, M. Daims, H. Richter, A. Battin, T.
Ecological Stoichiometry as a novel front in the microbial revolution:
linking community composition to ecosystem processes 2009 ASLO, Nice, France

BioFrames

Invited talks:

Hein, T. (May 2009): Nitrogen cycling in riverine wetlands. Plenary lecture International Workshop on "Microbiology of River associated Wetlands". Schloss Crieven, Germany.

Hein, T. (September 2009): Riverine wetlands in the Danube River Basin: status, challenges and future perspectives. 10th Croatian Biological Congress Osijek, Croatia.

Scientific conferences:

Hein, T., Bondar-Kunze, E., Felkl, M., Habersack, H., Mair, M., Pinay, G., Tritthart, M., Welti, N. (April 2009): Hydromorphological control of nutrient cycling in complex river floodplain systems. European Geosciences Union - General Assembly 2009, Vienna, Austria, Poster

Tritthart, M., Bondar-Kunze, E., Welti, N., Habersack, H., Hein, T. (January 2009): Modelling Surface Water Connectivity for an Improved Understanding of Carbon and Nitrogen Cycles in Riparian Zones. 7th International Symposium on Ecohydraulics, Concepcion, Chile. Oral communication.

Hein, T., Bondar-Kunze, E., Felkl, M., Habersack, H., Mair, M., Pinay, G., Schiemer, F., Tritthart, M. (July 2009): Effects of hydromorphological changes on nitrogen and carbon dynamics in a regulated river floodplain system of the Danube River, Austria. ISRS - First Triennial Meeting, Tampa, USA.

Hein, T., Bondar-Kunze, E., Felkl, M., Mair, M., Tritthart, M., Welti, N., (January 2009): Nutrient cycling in complex river floodplain systems: Water and sediment processes. American Society of Limnology and Oceanography, Nice, France. Oral communication.

Bondar-Kunze, E., Ganglbauer, A., Tritthart, M., Hein, T. (January 2009): Influence of water level fluctuations on biomass development and primary production of riverine microphytobenthos and their role in the carbon cycling in fluvial landscapes. American Society of Limnology and Oceanography, Nice, France. Poster

Welti, N., Bondar-Kunze, E., Singer, G., Tritthart, M., Pinay, G., Schiemer, F., Hein, T. (January 2009): Nutrient transformations within two floodplains of the Danube River: Effects of restoration. American Society of Limnology and Oceanography – ASLO meeting, Nice, France. Poster.

Ganglbauer, A., Bondar-Kunze, E., Hein, T., Zeiringer, B. (April 2009): The effect of flow reduction on microphytobenthos development in an alpine river stretch using novel fluorescence techniques. European Geosciences Union (EGU), Vienna, Austria. Poster

Striebel, M., Behl, S., Stibor, H., Andersen, T. (2009): Phytoplankton - Zooplankton Interaktionen: Stöchiometrie, Wachstum und Diversität. Deutsche Gesellschaft für Limnologie, Jahrestagung 2009, Oldenburg.

Striebel, M., Behl, S., Stibor, H. (2009): Licht als Ressource - Nischendifferenzierung, Diversität und Kohlenstoffdynamiken in Phytoplanktongemeinschaften. SIL-Austria, Jahrestagung 2009, Salzburg.

Stanek, C., Bondar-Kunze, E., Hein T. (Okt. 2009): Distribution of benthic algae in the Danube floodplains and its potential impact on the carbon cycle, SIL Meeting, Salzburg, Austria. Poster.

Bondar-Kunze, E., Preiner, S., Schiemer, F., Weigelhofer, G., Hein, T. (May 2009): Effect of enhanced water exchange on phosphorus dynamics and biological activity in an urban backwater system in Vienna (Austria). COST 869 WG2 meeting, Keszthely, Hungary.

Welti, N., Bondar-Kunze, E., Singer, G., Piney, G. and Hein, T. (May 2009): Large Scale Controls on Potential Denitrification: A Comparison of Two Floodplains. SWS European Chapter Meeting, Erkner, Germany. Oral presentation.

Welti, N., Bondar-Kunze, E., Oswalk, P., Mair, M., Bonin, P., Wanek, W., Pinay, G., Hein, T. (Nov. 2009): Mimicking floodplain disconnections and reconnections using ¹⁵N mesocosm incubations. Austrian Network of Stable Isotope Users Meeting, Innsbruck, Austria. Oral Presentation.

Weigelhofer, G., Welti, N., Kreuzinger, N., Ruzicka, K., Muhar, S., Pohl, G., Hein, T. (Okt. 2009): ProFor Weinvierte-JiZni Morava: Factors controlling the self-purification capacity of small, heavily impacted streams in agricultural landscapes. SIL Meeting, Salzburg, Austria.

LIPTOX

Invited talks:

Université du Québec à Montréal, Canada, May 2009: Composés essentiels et toxiques: Intégrer les lipides et les contaminants dans les études de toxicologie aquatique.

Université Blaise Pascal - Clermont Ferrand, Laboratoire de Biologie des Protistes (France), May 2009: Lipid retention in aquatic food webs – some trophic concepts are useful, but most are not.

Scientific conferences:

de Wit, H. A., Granhus A., Larssen, T., Lindholm, M., Ranneklev, S. B., Kainz, M. (2009): Norwegian catchment study of forest management effects on Hg leaching and Hg food chain accumulation. 9th International Conference on Mercury as a Global Pollutant, Guiyang, China.

Heissenberger, M., Watzke, J., and Kainz M. (2009): Influence of nutrition on fatty acid profiles of riverine, lacustrine and aquaculture-raised salmonids of pre-alpine habitats. Arctic Charr meeting 2009. Stirling, Scotland.

Masclaux, H., Bec, A., Kainz, M., Desvilettes, C., Jouve, L., and Bourdier G. (2009): Combined effects of food quality and temperature on somatic growth and reproduction of two freshwater cladocerans. American Society of Limnology and Oceanography (ASLO), Nice, France.

Completed MSc theses 2009

Matthias Mayr, BOKU (March 2009)

Marvin Pölzl, University of Vienna (February 2009)

Andreas Weilhartner, University of Vienna (April 2009)

Rebecca Gimbo, IHE Delft (April 2009)

Michael Edinger, University of Vienna (July 2009)

Martin Heissenberger, University of Vienna (September 2009)

Clemens Karwautz, University of Vienna (November 2009)

Completed PhD theses 2009

Gabriel Singer, University of Vienna (June 2009)

Katharina Besemer, University of Vienna (June 2009)

Awards

Nina Welti – Scholarship of the Akademisch-Soziale Arbeitsgemeinschaft Österreichs

Katharina Besemer – Ruttner Award for the best publication within her PhD work

Martin Heissenberger – Ferry Stahrmühlner Award (Haus des Meeres)

Elisabeth Bondar - Dr Reinhard Liepolt Award 2009 (awarded by the Austrian committee of the International Association for Danube Research)

Guest researchers

Tijana Nolic, University of Belgrade, Serbia (June-July 2009)

Stuart Bunn, Griffith University, Australia (March 2009)

Ngoc Pham, Singapore-Delft Water Alliance/SDWA, Singapore (June-July 2009)

Gourvindu Saxena, Singapore-Delft Water Alliance/SDWA, Singapore (June-July 2009)

Astrid Wulfsen, TU Delft, The Netherlands (May-July 2009)

Annie Chalifour, University of Quebec, Montreal, Canada, (September-December 2009)

Philippe Juneau, University of Quebec, Montreal, Canada (November 2009)

International co-operations

Tom Battin: guest professorship at Uppsala University, Sweden (March-September 2009)

Thomas Hein: Invited participant at the ESF Exploratory Workshop IDEAL (September 2009, Birmingham, UK)

Summer interns

Cornelia Wöber (Liptox)

Brigitte Fehring (Bioframes)

Matthias Hadek (BERG)

Tanja Koll (Bioframes)

Lukas Hartmann (BERG)

Scientific events and teaching at the WKL

December 10-11, 2009: University of Vienna / WasserCluster Lunz – closed meeting – head: Tom Battin

November 16-17, 2009: BOKU / WasserCluster Lunz – workshop project ProFor – head: Thomas Hein

November 11-12, 2009: Amt der NÖ Landesregierung/Abt. Wasserwirtschaft – Introduction “Fish in State Administration” – seminar – head: Gerhard Käfel

November 3-6, 2009: BOKU – “Kerner von Marilaun Workshop” – head: Andreas Muhar, 40 participants

October 28-29, 2009: NÖ Landesregierung – “Fish passes II” – seminar – head: Gerhard Käfel

October 19-24, 2009: NÖ Landesakademie – 20th MSc course Management & Environment, head: Susanne Bäuerl

October 4-16, 2009: BOKU – Water quality evaluation “Lunz II” – course, head: Otto Moog.

Course-no. 812304, 812305, 812368 and 812369

September 28 – October 2, 2009: BOKU – Fish ecology, head: Günter Unfer, 31 participants, Course-no. 812306

September 23-24, 2009: NÖ Landesregierung – “Fish passes I” - seminar, head: Gerhard Käfel

September 14-15, 2009: BOKU – Workshop project management, head: Günther Unfer

September 17-19, 2009: Teacher seminar about the University of Vienna, head: Gabriele Weigelhofer

August 31 – September 4, 2009: University of Vienna – Outdoor training, head: Thilo Hofmann

August 16-27, 2009: University of Vienna – “Aquatic biocenoses” – course, head: Johann Waringer

April 14 – June 26, 2009: IPGL – course, 14 students

June 29 – July 1, 2009: BOKU – Proseminar in Lunz, Department for Economics and Social Sciences

June 22-27, 2009: NÖ Landesakademie – MSc course Management & Environment, head: Susanne Bäuerl

June 20, 2009: Open house day in collaboration with the TU Graz, art project, head: Hans Kupelwieser

June 16-20, 2009: University of Vienna – course “Spezielle Kenntnis der Schutzgüter: Arten/montan/alpiner Lebensräume”, head: Georg Grabherr

June 17-19, 2009: University of Vienna – course “Environmental-chemical practice”, head: Franz Jirsa

June 15-19, 2009: Vienna International School – project week, head: Malcolm Skirrow

June 8-10, 2009: BOKU – nutrient seminar, head: Thomas Hein, Course-no. 812001

June 4-6, 2009: University of Vienna – Aquatic ecology – field methods, head: Martin Kainz

April 27-May 3, 2009: BOKU – practical course “Lunz I”, head: Matthias Jungwirth, 277 students, Course-no. 812101 and 812106

April 15-18, 2009: University of Vienna – practical course, head: Andreas Richter

March 25, 2009: Land NÖ – seminar “Environmental Management”, head: Karl Marchart

February 24-26, 2009: Workshop project “Biowetman”, head: Thomas Hein, 25 participants

Press releases

umwelt & wir – 1/09 – Natura 2000 competition “Von starken Schulkonzepten bis zur Freiwilligenarbeit”

Bezirksblatt – January 2009 – “Forschung ganz transparent”

Bildung & Wissen – January 2009 – “Den CO₂-Kreisläufen auf der Spur”

VP-Blatt lunz am see – February 2009 – “Fachtagung im WasserKluster”

NÖN – January 2009 – “Die gesunden Fette im Fisch”

NÖN – March 2009 – “Experten unter sich”

VP-Blatt lunz am see – March 2009 – “Wissenschaft und Kunst im WasserKluster”

NÖN – March 2009 – “WasserKluster: Gastprofessor aus Australien”

NÖN – April 2009 – “Expertenrunde im WasserKluster Lunz”

NÖN – June 2009 – “Süßwasser für Singapur”

NÖN – June 2009 – “Wasser-Forscher für einen Tag”

dieuniversitaetonline – September 2009 – “The important role of inland water in the carbon cycle”

Pollution online – September 2009 – “Scientists Say Climate Change Mitigation Strategies Ignore Carbon Cycling Processes Of Inland Waters”

naturschutz.at – September 2009 – “Binnengewässer beeinflussen den globalen Kohlenstoffkreislauf erheblich”

standard.online – “Rückhalt von Sedimenten”

Der Standard online “Observer” – September 2009 – “Flussmündungen versinken zusehends”

Nature Geoscience - September 2009/Vol.2 No. 9: 598-600 – “The boundless carbon cycle”

NÖN – September 2009 – “CO₂-Forschung: Neue Erkenntnis”

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