

Short CV

Research focus

My limnology related studies focus on the reconstruction of past environmental changes from biological and geo-chemical records in lake sediment profiles; with a particular interest in the impact of atmospheric deposition and of climate driven changes on alpine lakes. I analyse diatom species composition as indicator for past environmental conditions. I am qualified in the application of multivariate statistics in environmental reconstructions.

I participate in leukaemia research of elderly patients as project manager and statistician evaluating the geriatric assessment of patients suffering from myelodysplastic syndromes.

General experience

I have been the project leader and principal investigator of several projects and have thus acquired experience in fund raising, research coordination, and project management. My projects have been granted by different funding agencies, including EU projects (participation in writing of 3 successful proposals), the Austrian Science Fund (FWF, 3 successful proposals), the Austrian Academy of Sciences (ÖAW), the Austrian Science Funding Agency (FFG), COST actions, and the Research Funding Programme of the Autonomous Province of Bozen. Recently I have been co-organizing international workshops and meetings within my research focus. I frequently give talks at international meetings and seminars.

Working experience

Since 2016	Guest scientist and external lecturer at the University of Innsbruck, Institute of Ecology
Since 2016	Senior Researcher, part time (50%) EURAC - European Academy of Bozen/Bolzano, Institute for Alpine Environment
Since 2015	Project coordinator and statistician, part time (25-50%) Medical University of Innsbruck, Department for Haematology and Oncology (Leukemia)
2012-2016	Research Assistant, part time interim replacement (50-75%) University of Innsbruck, Institute of Ecology
2003-2011	Research Associate, part time (50-75%), interrupted by maternity leave University of Innsbruck, Institute of Ecology
2001 – 2002	Research Associate, and Post Doc (grant holder), ended by maternity leave University of Heidelberg, Institute of Environmental Geochemistry
1999 – 2001	Post Doc (grant holder) University of Berne, Institute of Geology
1998 – 1999	Post Doc Research Fellow: EC project CHILL – 10 000 (ENV4-CT97-0642) University of Innsbruck, Institute of Zoology and Limnology
1997 – 1998	Research fellow: EC project MOLAR: Mountain Lake Research (ENV4-CT95-0007) University of Innsbruck, Institute of Zoology and Limnology
1995 – 1997	Research fellow: "Acidification of 70 high alpine lakes 1985-1995" University of Innsbruck, Institute of Zoology and Limnology
1993 – 1995	Research Fellow: EC project AL:PE-2: Acidification of Mountain Lakes (EV5V-CT92-C)" University of Innsbruck, Institute of Zoology and Limnology

Publications, Presentations, and Outreach

General Scientific Journals

Schneider T., Herzig A., **Koinig K.A.** and Sommaruga R. 2012. Copepods in Turbid Shallow Soda Lakes Accumulate Unexpected High Levels of Carotenoids. PLOS ONE 7, 8.

Sommaruga-Wögrath S., **Koinig K.A.**, Schmidt R., Sommaruga R., Tessadri R. and Psenner R. 1997. Temperature effects on the acidity of remote alpine lakes. NATURE 387: 64-67.

Ecology Journals

Kammerlander, B., **Koinig, K.A.**, Rott, E., Sommaruga, R., Tartarotti, B., Trattner, F., Sonntag, B., 2016. Ciliate community structure and interactions within the planktonic food web in two alpine lakes of contrasting transparency. Freshwater Biology 61, 1950-1965.

Ilyashuk, E.A., Ilyashuk, B.P., Tylmann, W., Koinig, K.A., Psenner, R., 2015. Biodiversity dynamics of chironomid midges in high-altitude lakes of the Alps over the past two millennia. INSECT CONSERVATION AND DIVERSITY 8, 547-561.

Ilyashuk, B.P., Ilyashuk, E.A., Psenner, R., Tessadri, R., **Koinig, K.A.**, 2014. Rock Glacier Outflows May Adversely Affect Lakes: Lessons from the Past and Present of Two Neighboring Water Bodies in a Crystalline-Rock Watershed. ENVIRON. SCI. TECHNOL. 48, 6192-6200.

van Drooge, B.L., Garriga, G., Koinig, K.A., Psenner, R., Pechan, P., Grimalt, J.O., 2014. Sensitivity of a Remote Alpine System to the Stockholm and LRTAP Regulations in POP Emissions. ATMOSPHERE 5, 198-210.

Schlueter, M., Hentzel, T., Suarez, C., Koch, M., Lorenz, W.G., Boehm, L., Duering, R.-A., **Koinig, K.A.**, Bunge, M., 2014. Synthesis of novel palladium(0) nanocatalysts by microorganisms from heavy-metal-influenced high-alpine sites for dehalogenation of polychlorinated dioxins. CHEMOSPHERE 117, 462-470.

Nevalainen L., Ketola M., Korosi J., Manca M., Kurmayer R., **Koinig K.**, Psenner R. and Luoto T. 2013. Zooplankton (Cladocera) species turnover and long-term decline of Daphnia in two high mountain lakes in the Austrian Alps. HYDROBIOLOGIA 1-17.

Holm T.M., **Koinig K.A.**, Andersen T., Donali E., Hormes A., Klaveness D. and Psenner R. 2012. Rapid physicochemical changes in the high Arctic Lake Kongressvatn caused by recent climate change. AQUATIC SCIENCES 74, 3: 385-395.

Kamenik C., **Koinig K.A.** and Schmidt R. 2005. Potential effects of pre-industrial lead pollution on algal assemblages from an Alpine lake. VERH. INTERNAT. VEREIN. LIMNOLOGIE 29: 535-538.

Mosello R., Lami A., Marchetto A., Rogora M., Wathne B., Lien L., Catalan J., Camarero L., Ventura M., Psenner R., **Koinig K.**, Thies H., Sommaruga-Wögrath S., Nickus U., Tait D., Thaler B., Barbieri A. and Harriman R. 2002. Trends in the water chemistry of high altitude lakes in Europe. WATER AIR AND SOIL POLLUTION: FOCUS 2: 75-89.

Rose N.L., Shilland E., Yang H., Berg T., Camarero L., Harriman R., **Koinig K.**, Lien L., Nickus U., Stuchlik E., Thies H. and Ventura M. 2002. Deposition and storage of spheroidal carbonaceous fly-ash particles in Europe mountain lake sediments and catchment soils. WATER AIR AND SOIL POLLUTION: Focus 2: 251-260.

Kamenik C., Schmidt R., **Koinig K.A.**, Agustí-Panareda A., Thompson R. and Psenner R. 2001. The chrysophyt stomatocyst composition in a high alpine lake (Gossenköllesee, Tyrol) in relation to seasonality, temperature and

land-use. BEIH. NOVA HEDWIGIA 122: 1-22.

Rose N.L., Shilland E., Berg T., Hanselmann K., Harriman R., **Koinig K.**, Nickus U., Trad B.S., Stuchlik E., Thies H. and Ventura M. 2001. Relationships between acid ions and carbonaceous fly-ash particles in deposition at European mountain lakes. WATER AIR AND SOIL POLLUTION 130: 1703-1708.

Koinig K.A., Büsing N., Wille A., Sattler B., Schmidt R. and Psenner R. 2000. Diatom communities in the ice cover of an alpine lake - their influence on pH reconstruction from fossil diatom assemblages. VERH. INTERNAT. VEREIN. LIMNOLOGIE 27: 1203.

Kamenik C., **Koinig K.A.**, Schmidt R., Appleby P., Dearing J., Lami A., Thompson R. and Psenner R. 2000. Eight hundred years of environmental changes in a high alpine lake (Gossenköllesee, Tyrol) inferred from sediment records. JOURNAL OF LIMNOLOGY 59: 43-52.

Sommaruga R., Psenner R., Schafferer E., **Koinig K.A.** and Sommaruga-Wögrath S. 1999. Dissolved organic carbon concentration and phytoplankton biomass in high-mountain lakes of the Austrian Alps: Potential effect of climatic warming on UV underwater attenuation. ARCTIC ANTARCTIC ALPINE RESEARCH 31: 247-253.

The MOLAR Water Chemistry Group, Mosello R. and 21 authors incl. **Koinig K.A.** 1999. The MOLAR Project: atmospheric deposition and lake water chemistry. JOURNAL OF LIMNOLOGY 58: 88-106.

Koinig K.A., Schmidt R., Sommaruga-Wögrath S., Tessadri R. and Psenner R. 1998. Climate change as the primary cause for pH shifts in a high alpine lake. WATER AIR AND SOIL POLLUTION 104: 167-180.

Palaeoecological and Quaternary Research Journals

Heiri, O., **Koinig, K.A.**, Spoetl, C., Barrett, S., Brauer, A., Drescher-Schneider, R., Gaar, D., Ivy-Ochs, S., Kerschner, H., Luetscher, M., Moran, A., Nicolussi, K., Preusser, F., Schmidt, R., Schoeneich, P., Schwoerer, C., Sprafke, T., Terhorst, B., Tinner, W., 2014. Palaeoclimate records 60-8 ka in the Austrian and Swiss Alps and their forelands. Quaternary Science Reviews 106, 186-205.

Catalan J., Pla-Rabés S., Wolfe A.P., Smol J.P., Rühland K.M., Anderson N.J., Kopáček J., Stuchlík E., Schmidt R., **Koinig K.A.**, Camarero L., Flower R.J., Heiri O., Kamenik C., Korhola A., Leavitt P.R., Psenner R. and Renberg I. 2013. Global change revealed by palaeolimnological records from remote lakes: a review. JOURNAL OF PALEOLIMNOLOGY: 1-23.

Ilyashuk E., **Koinig, K.A.**, Heiri O., Ilyashuk B., Psenner R., 2011. Holocene temperature variations at a high-altitude site in the Eastern Alps: a chironomid record from Schwarzsee ob Sölden, Austria. QUATERNARY SCIENCE REVIEWS 30: 176-191; doi: 10.1016/j.quascirev.2010.10.008

Schmidt R., Kamenik C., Tessadri R. and **Koinig K.A.** (2006): Climatic changes from 12,000 to 4,000 years ago in the Austrian Central Alps tracked by sedimentological and biological proxies of the lake sediment core. JOURNAL OF PALEOLIMNOLOGY. 35

Hirt A.M., Lanci L. and **Koinig K.A.** 2003. Mineral magnetic record of Holocene environmental changes in Sägistalsee, Switzerland. JOURNAL OF PALEOLIMNOLOGY.: 321-331.

Koinig K.A., Shotyk W., Lotter A.F., Ohlendorf C. and Sturm M. 2003. 9000 years of geochemical evolution of lithogenic major and trace elements in alpine lake sediments - the role of climate, vegetation and land-use history. JOURNAL OF PALEOLIMNOLOGY.: 307-320.

Koinig K.A., Kamenik C., Schmidt R., Agustí-Panareda A., Appleby P., Lami A., Prazakova M., Rose N., Schnell O.A., Tessadri R., Thompson R. and Psenner R. 2002. Environmental changes in an alpine lake (Gossenköllesee, Austria) over the last two centuries - the influence of air temperature on biological parameters. *JOURNAL OF PALEOLIMNOLOGY*. 28: 147-160.

Schmidt R., **Koinig K.A.**, Thompson R. and Kamenik C. 2002. A multi proxy core study of the last 7000 years of climate and alpine land use impacts on an Austrian mountain lake (Unterer Landschitzsee, Niedere Tauern). *PALAEOGEOGRAPHY, PALAEOCLIMATOLOGY, PALAEOECOLOGY* 187: 101-120.

Cameron N.G., Birks H.J.B., Jones V.J., Berge F., Catalan J., Flower R.J., Garcia J., Kawecka B., **Koinig K.A.**, Marchetto A., Sanchez-Casillo P., Schmidt R., Sisko M., Solovieva N., Stefkova E. and Toro V. M. 1999. Surface-sediment and epilithic diatom pH calibration sets for remote European mountain lakes (AL:PE Project) and their comparison with the Surface Waters Acidification Programme (SWAP) calibration set. *JOURNAL OF PALEOLIMNOLOGY*. 22: 291-317.

Medical Journals

Stauder, R., Yu, G., Bagguley, T., Fenaux, P., Symeonidis, A., Sanz, G., Cermak, J., Mittelman, M., Hellstrom-Lindberg, E., Langemeijer, S., Holm, M.S., Madry, K., Malcovati, L., Tatic, A., Germing, U., Savic, A., van Marrewijk, C., Guerci-Bresler, A., Luno, E., Droste, J., **Koinig, K.**, Smith, A., Bowen, D., de Witte, T., 2016. Comparison of 1690 MDS patients from the European Leukemia Net registry and reference populations – Evidence for a significant impairment in QOL in MDS and definition of predictors for diminished QoL. *Haematologica* 101, 16-17.

Book chapters (peer reviewed)

Auer, I.; Foelsche, U.; Böhm, R.; Chimani, B.; Haimberger, L.; Kerschner, H.; **Koinig, K. A.**; Nicolussi, K.; Spötl, C.; Dienhofer, G.; Godina, R.; Hofstätter, M.; Jurkovic, A.; Kaiser, A.; Kirchengast, G.; Koch, E.; Ladinig, A.; Matulla, Ch.; Olefs, M.; Potzmann, R.; Schöner, W.; Simic, S.; Spangl, W.; Weilguni, V. (2014): Vergangene Klimaänderung in Österreich. Chapter *Past Climate Change of the "Austrian Climate Report"*. In: Kromp-Kolb, Helga; Nakicenovic, Nebojsa; Steininger, Karl; Gobiet, Andreas; Formayer, Herbert; Köppl, Angela; Prettenhaler, Franz; Stötter, Johann; Schneider, Jürgen; Austrian Panel on Climate Change: Österreichischer Sachstandsbericht Klimawandel 2014. Wien: Verlag der Österreichischen Akademie der Wissenschaften, ISBN 978-3-7001-7699-2, S. 227 - 300. doi:10.1553/aar14s227

Koinig K.A., Schmidt R., Sommaruga Wögrath S. , Tessadri R. and Psenner R. 1998. Acidification processes in high alpine lakes. In: Haigh M.J., Krecek J., Raijwar G.S. and Kilmartin M.P. (eds.), *Integrated Ecological Management in Headwaters*. Balkema Publishers, Rotterdam, The Netherlands : 45-54.

Koinig K.A., Psenner R. and Schmidt R. 1999. Effects of air temperature changes and acid deposition on the pH history of three high alpine lakes. In: In Mayama S., Idei M. and Koizumi I. (eds.) (eds), *Proceedings of the 14th International Diatom Symposium 1996*. Tokyo, Japan. Koeltz Scientific Books, Koenigstein: 467-478

Koinig, K.A.; Psenner, R.; Tessadri, R. (2010): Early atmospheric pollution recorded in the sediments of high mountain lakes in the vicinity of mining areas. In: Anreiter, P.; et al. (editors): Mining in European History and its Impact on Environment and Human Societies. Proceedings for the 1st Mining in European History-Conference of the SFB HiMAT (12.-15.11.2009, Innsbruck). Innsbruck: innsbruck university press (IUP), S. 75 - 80.

Non peer reviewed

Koinig, K.A.; Starnberger, Reinhard; Spötl, Christoph (Hrsg.) (2014): DEUQUA 2014. 37. Hauptversammlung der deutschen Quartärvereinigung, Abstractband. 24.9.2014 - 29.09.2014, Innsbruck. Innsbruck: innsbruck university press (IUP) (= Conference Series). ISBN 978-3-902936-50-9. <http://diglib.uibk.ac.at/urn:nbn:at:at-ubi:3-353>

Psenner, R.; Ilyashuk, E.; **Koinig, K.A.** (2012): La misura dell'ambiente: dall'Antropocene all'Olocene. In: Multiverso 11

Sommaruga-Wögrath S., **Koinig, K. A.**, Bidner T., Fried J., Pfister P., Schafferer E., Sattler B., Sommaruga R., Tartarotti B., Psenner, R. (1998): Versauerungsentwicklung von 70 Hochgebirgsseen 1985-1995. (Acidification processes in 70 high alpine lakes 1985 – 1995). Bundesministerium für Land- und Forstwirtschaft, Wien. 1998

Oral Presentations at Conferences

I frequently give presentations at international conferences, workshops and meetings with over 30 oral presentations since 1994, over 15 invited lectures, over 20 poster presentations. Generally these presentations are given in English and often for a large audience of up to several hundred people.

Organization of Meetings, Workshops, Conferences

Since 2012, I have been co-organizing two international workshops (Quaternary climate change), two meetings (Diatoms and Quaternary), and two special sessions (Climate change in high alpine and arctic lakes).

Outreach and public relations

Over the last few years, I was interviewed several times by the national broadcaster for Ö1, Ö1 Kinderuni, Tirol Heute (TV station), and for national and local newspapers (Standard, Krone, Tirol Tageszeitung, Oberländer Bote). Our study about the climate impact on high alpine lakes was part of a “Universum” featured in autumn 2011. I also frequently presented the results of my research projects to the public during public talks, public days at the university, or school activity days at the university.