



Ecological & Environmental Change Research Group

Global change research

Engler, R., Randin, C.F., and 26 others including Grytnes, J.-A. & Høistad, F. 2011. 21st century climate change threatens mountain flora unequally across Europe. *Global Change Biology* 17: 2330-2341. 10.1111/j.1365-2486.2010.02393.x

Herzschuh, U., Ni, J., Birks, H.J.B. & Böhner, J. 2011. Driving forces of mid-Holocene vegetation shifts on the upper Tibetan Plateau, with emphasis on changes in atmospheric CO₂ concentrations. *Quaternary Science Reviews* 30: 1907-1917. 10.1016/j.quascirev.2011.03.007

Stevens, C.J., Dupre, C., Dorland, E., Gaudnik, C., Gowing, D.J.G., Bleeker, A., Diekmann, M., Alard, D., Bobbink, R., Fowler, D., Corcket, E., Mountford, J.O., Vandvik, V., Aarrestad, P.A., Muller, S. & Dise, N.B. 2011. The impact of nitrogen deposition on acid grasslands in the Atlantic region of Europe. *Environmental Pollution* 159: 2243-2250. 10.1016/j.envpol.2010.11.026

Stevens, C.J., Dupré, C., Dorland, E., Gaudnik, C., Gowing, D.J.G., Diekmann, M., Alard, D., Bobbink, R., Corcket, E., Mountford, J.O., Vandvik, V., Aarrestad, P.A., Muller, S. & Dise N.B. 2011. Grassland species composition and biogeochemistry in 153 sites along environmental gradients in Europe. *Ecology* 92: 1544, *Ecological Archives* E092-128.

Stevens, C.J., Duprè, C., Gaudnik, C., Dorland, E., Dise, N.B., Gowing, D.J.G., Bleeker, A., Alard, D., Bobbink, R., Fowler, D., Vandvik, V., Corcket, E., Mountford, J.O., Aarrestad, P.A., Muller, S. & Diekmann, M. 2011. Changes in species composition of European acid grasslands observed along a gradient of nitrogen deposition. *Journal of Vegetation Science*, 22: 207–215. 10.1111/j.1654-1103.2010.01254.x

Willis, K.J. & MacDonald, G.M. 2011. Long-term ecological records and their relevance to climate change predictions for a warmer world. *Annual Review of Ecology, Evolution, and Systematics* 42: 267-287. 10.1146/annurev-ecolsys-102209-144704

Willis, K.J., Feurdean, A., Birks, H.J.B., Bjune, A.E., Bremen, E., Broekman, R., Grytnes, J.-A., New, M., Singareyer, J.S. & Rozema, J. 2011. Quantification of UV-B flux through time using UV-B-absorbing compounds contained in fossil *Pinus* sporopollenin. *New Phytologist* 192: 553-560. 10.1111/j.1469-8137.2011.03815.x

Yang, Y., Wang, G., Klanderud, K. & Yang, L. 2011. Responses in leaf functional traits and resource allocation of a dominant alpine sedge (*Kobresia pygmaea*) to climate warming in the Qinghai-Tibetan Plateau permafrost region. *Plant & Soil* 349: 377-387. 10.1007/s11104-011-0891-y

Herzschuh, U., Birks, H.J.B., Liu, X., Kubatzki, C. & Lohmann, G. 2010. What caused the mid-Holocene forest decline on the eastern Tibet-Qinghai Plateau? *Global Ecology and Biogeography* 19: 278-286. 10.1111/j.1466-8238.2009.00501.x

Herzschuh, U., Birks, H.J.B., Ni, J., Zhao, Y., Liu, H., Liu, X. & Grosse, G. 2010. Holocene land-cover changes on the Tibetan Plateau. *The Holocene* 20: 91-104. 10.1177/0959683609348882

Hobbs, W.O., Telford, R.J., Birks, H.J.B., Saros, J.E., Hazewinkel, R.R.O., Perren, B.B., Saulnier-Talbot, E. & Wolfe, A. 2010. Quantifying recent ecological changes in remote lakes of North America and Greenland using sediment diatom assemblages. *PLoS One* 5(4): e10026. 10.1371/journal.pone.0010026

Stevens, C.J., Duprè, C., Dorland, E., Gaudnik, C., Gowing, D.J.G., Bleeker, A., Diekmann, M., Alard, D., Bobbink, R., Fowler, D., Corcket, E., Mountford, O., Vandvik, V., Aarrestad, P.A., Muller, S. & Dise, N.B. 2010. Nitrogen deposition threatens species richness of grasslands across Europe. *Environmental Pollution* 158: 2940-2945.

Virtanen, R., Luoto, M., Rama, T., Mikkola, K., Hjort, J., Grytnes, J.-A. & Birks, H.J.B. 2010. Recent vegetation changes at the high-latitude tree line ecotone are controlled by geomorphological disturbance, productivity and diversity. *Global Ecology and Biogeography* 19: 810-821. 10.1111/j.1466-8238.2010.00570.x

- Willis, K.J., Bennett, K.D., Bhagwat, S.A. & Birks, H.J.B. 2010. 4°C and beyond: what did this mean for biodiversity in the past? *Systematics and Biodiversity* 8: 3-9. 10.1080/14772000903495833
- Bakke, J., Lie, Ø., Heegaard, E., Dokken, T., Haug, G.H., Birks, H.H., Dulski, P. & Nilsen, T. 2009. Rapid oceanic and atmospheric changes during the Younger Dryas cold period. *Nature Geoscience* 2: 202-205. 10.1038/ngeo439
- Kaufman, D.S., Schneider, D.P., McKay, N.P., Ammann, C.M., Bradley, R.S., Briffa K.R., Miller, G.H., Otto-Bliesner, B.L., Overpeck, J.T., Vinther, B.M. & Arctic Lakes 2k Project Members 2009. Recent warming reverses long-term Arctic cooling. *Science* 325: 1236-1239. 10.1126/science.1173983
- Sandvik, S.M. & Eide, W. 2009. Costs of reproduction in circumpolar *Parnassia palustris* L. in light of global warming. *Plant Ecology* 205: 1-11.
- Willis, K.J., Bennett, K.D. & Birks, H.J.B. 2009. Variability in thermal and UV-B energy fluxes through time and their influence on plant diversity and speciation. *Journal of Biogeography* 36: 163-1644.
- Chen, F., Yu, Z. Yang, M., Ito, E., Wang, S., Madsen, D.B., Huang, X., Zhao, Y., Sato, T., Birks, H.J.B., Boomer, I., Chen, J., An, C. & Wünnemann, B. 2008. Holocene moisture evolution in arid central Asia and its out-of-phase relationship with Asian monsoon history. *Quaternary Science Reviews* 27: 351-364. 10.1016/j.quascirev.2007.10.017
- Kausrud, K.L., Mysterud, A., Steen, H., Vik, J.O., Østbye, E., Cazelles, B., Framstad, E., Eikeset, E.M., Mysterud, I., Solhøy, T. & Stenseth, N.C. 2008. Linking climate change to lemming cycles. *Nature* 456: 93-98. 10.1038/nature07442
- Nybakken, L., Klanderud, K. & Totland, Ø. 2008. Simulated environmental change has contrasting effects on defensive compound concentration in three alpine plant species. *Arctic, Antarctic & Alpine Research* 40: 709-715. 10.1657/1523-0430(07-103) [NYBAKKEN]2.0.CO;2
- Eide, W. & Birks, H.H. 2006. Stomatal frequency of *Betula pubescens* and *Pinus sylvestris* shows no proportional relationship with atmospheric CO₂ concentration. *Nordic Journal of Botany* 24: 327-339.
- Rose, N. Birks, H.J.B. Helliwell, R., Jenkins, A., Kettle, H., Monteith, D., Muir, D., Rosseland, B.-O., Tipping, E., Thompson, R. & Woodward, G. 2006. Impacts of global change on Lochnagar, a remote Scottish mountain lake. In: *Global Change in Mountain Regions*. Price, M.F. (ed.) Sapiens Publishing, Dumfries & London. pp. 113-114.
- Heegaard, E. & Vandvik, V. 2004. Climate change affects the outcome of competitive interactions - an application of principal response curves. *Oecologia* 139: 459-466.

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University of Bergen | Department of Biology
Address: Postboks 7803, NO-5020 BERGEN
Office address: Thormøhlensgt. 53 A/B
Phone: +47 55 58 44 00
Fax: +47 55 58 44 50
Responsible for this page: Department of Biology
Contact: post@bio.uib.no
Responsible: Director of Communications
