



Dr. Benjamin Runkle is working at the CliSAP Junior Research Group "Regional Hydrology in Terrestrial Systems", University of Hamburg



Dr. Benjamin Runkle making a water quality measurement in Russia

Interview with Benjamin Runkle, Mai 2012

Benjamin Runkle has been working as a post-doctoral research scientist at the Institute of Soil Science at the University of Hamburg since 2010. Within the CliSAP Junior Research Group "Regional Hydrology in Terrestrial Systems" he is engaged in water and carbon cycles.

The interview was conducted in English.

What have been the main steps in your professional life thus far?

Between my bachelor's degree in Environmental Engineering and graduate work I spent two years working for a non-profit consulting firm, and learned a great deal about work itself, the need to contextualize science for policy discussions, and about the range of different organizations performing academic and government-oriented research. Then I graduated from the University of California-Berkeley researching plant water use and growth in saline soil environments and now I have a post-doc position at the Institute of Soil Science in Hamburg. Both have involved some degree of migrating through different research fields, which has exposed me to so much of the nexus of the carbon and water cycles in our environment. I seem to have moved almost fully from environmental engineering to environmental science, and sometimes I feel as if I am still learning the nuances between the two mentalities. In the CliSAP research group of Lars Kutzbach "Regional Hydrology of Terrestrial Systems", I now focus on the interaction of the water cycle and the carbon cycle over scales from 1 square meter to 1 square kilometre in natural, carbon-rich landscapes such as Siberian permafrost and boreal forest-peatland complexes.

What is your contribution to CliSAP?

I've met and mentored a number of graduate students in the program and have participated in a few of the activities designed to get the research groups talking to each other. I think my biggest role though is – as an active researcher and group member – helping to keep track of our group's various projects, students, and initiatives while at the same time focusing on my own research projects. One of the most fulfilling roles in my group has been to initiate and run a "journal club" to encourage critical reading and writing of research articles amongst our PhD and Master students.

Reversely, how CliSAP helped you most?

CliSAP has provided some great resources for our group and has allowed some transformative purchases to push our science to the forefront, to try new ideas, and to take advantage of other opportunities. The graduate school "School of Integrated Climate System Sciences" (SICSS) also provides a source of interesting and motivated students who have joined our group for different research projects.

What is the current situation of Post-Docs in CliSAP?

I think post-docs are well-supported in the sense that their advisors and working groups are integrated within this larger network and its set of resources.

Why did you choose a scientific career, and why in your specific working field?

I moved towards science from studying engineering, and still look for science with a real-world impact. My shift was encouraged by the thrill of discovering unknown processes and the calm encountered in more pristine environments. I started with a focus on water and the hydrological cycle after seeing the great impact of deserts and uncertain water supplies as a constraint to human and ecological health. The connection to carbon came later, but is certainly influenced by its importance as a key contributor to climatic change.

What would you do with a million Euros for your research?

A million Euros would be a real treat. I think our research group could really scale-up our results to see how our interesting field-scale results extend to the regional level. When you move up or down in spatial scales, newly important processes and feedbacks emerge. The dominant drivers of environmental processes at one scale are background noise at another scale. Discovering those behaviours would be thrilling for our research group, and important scientifically as a contribution to regional and global climate modelling efforts. If you know such funders, please send them our way!

What do you think is the role of science within society?

Science encourages creative approaches to rational ideas, and I think so much of society is run irrationally. People have a lot to learn about methods of inquiry, how to define priorities, and how to critically engage with the political and economic power structures that govern them.

Is there a politicization of climate science?

Unfortunately yes, and to the detriment of both politics and science. Too often people succumb to the "hot-topic" syndrome – bending their results or proposals towards the public eye, selectively reading the literature towards a pre-determined idea, or feeling the thrill of contrarianism rather than the cautioned eye of critical scepticism.

What constitutes "good" science?

Testing a hypothesis in a repeatable environment. Regrettably this repeatability is not always easy in nature, so we must subject our results to rigorous self-examination and be as careful as we can be in evaluating our measurement results and methods. To take a broader view, "good" science must reveal something fundamental about the relationships and rules governing our world (or universe). While I tend to find science more interesting when it is performed in the public interest, I do not think that goal is a pre-requisite of "good science".

Do you think that you are a role model for young students?

I hope that I express some enthusiasm for science that bridges the field, the lab, and the computer modelling world, and I hope my career path encourages those who meander through research questions to not feel lost.

Professionally, where would you like to be in 10 years?

I would like to lead an independent research group uncovering parts of the water-carbon interface in natural environments. Teaching and outreach activities are never far from my mind, and I hope they could be incorporated into such a position.

This interview was carried out by Prof. Dr. Mike S. Schaefer, head of the working group "Media Constructions" at the KlimaCampus Hamburg, and Prof. Dr. Hans von Storch, head of the Institute of Coastal Research at the Helmholtz-Zentrum Geesthacht.