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# Editorial



Alexander J.B. Zehnder  
Director of the EAWAG

Although the critical role of alpine areas for the hydrological cycle and river discharge dynamics has long been recognized, knowledge on the biological, chemical, and physical dynamics of alpine streams has been scarce. A number of innovative scientists have been attracted by these “dull” environments with apparently low biodiversity and limited interaction between the physico-chemical environment and the biota. James V. Ward was one of them.

When he joined us at EAWAG in 1995, we had done little research in alpine areas. He gathered together a group of young enthusiastic scientists to start research on the ecology of alpine streams. Fieldwork was carried out throughout the year rather than being restricted to the warmer summer months. This approach allowed the group to have a broader view and provided many new insights. The gained knowledge will help us in taking measures to protect alpine aquatic systems for the safety of densely populated regions at lower altitudes, and in preserving the aesthetic value and biodiversity of mountain ecosystems. In this issue, James Ward and his collaborators summarize their work – a fascinating story about the structure and functioning of alpine aquatic systems.

The United Nations has proclaimed 2002 as the International Year of the Mountains. The goal is to foster international awareness of the global importance of mountain ecosystems, which are increasingly threatened by modern civilization. Global Change research and the recently increased incidence of disasters originating from alpine regions (avalanches, massive floods) have clearly shown that alpine regions – thought to be pristine for a long time – are also seriously impacted by human activities. Rising tem-

peratures for example have shifted the limits of permafrost to higher altitudes and have thus destabilized mountain slopes. In the Alps above tree line, heavy precipitation in the fall used to accumulate as snow. The water now runs off instantly and occasionally provokes large floods in lower regions.

James V. Ward is retiring soon. His uncompromising commitment to science and particularly to stream ecology has made him a fine and exceptional scholar. Just as his review article in 1994 in *Freshwater Biology* on the *Ecology of Alpine Streams* sparked the interest of many, I am sure the work presented here will further increase understanding of these ecosystems and help us appreciate the value of alpine streams, both in Switzerland and elsewhere. I hope the work reviewed in this issue of EAWAG news will make a lasting contribution to the goals proclaimed by the United Nations.

