

Editorial by Axel Borsdorf



This edition of *eco.mont* includes some articles on uplands, i.e. the Swabian Alb and the Elbe Sandstone Mountains (Saxon Switzerland). This poses the question how a journal on protected mountain areas defines mountains (Gebirge). The question appears deceptively simple, but various disciplines define the term differently, as I would like to show for the geodisciplines. For geology any firm ground is mountainous, so even a low plain or a flat valley may be the root of a mountain. Geologists see mountains as structures of the Earth which have a homogenous composition (Brinkmann 1990: 164). For geography, orographic and morphogenetic characteristics define the term (Neef 1981: 484). Geographers thus call any group of solid forms which are clearly separated by an orographic boundary from lower-lying surroundings mountains, including the related valleys and high

plateaus. Mountains owe their absolute elevation to endogenous processes and their relief to exogenous ones. For geology, mountains are thus a structural element (Großscholle), for geography, a specific surface formation, i.e. a sculptural element, composed of the interrelation of solid forms, hollow forms (valleys, basins) and flat areas, primarily shaped by erosion processes (erosion, denudation).

We might add that mountains often enjoy a specific regional climate or represent a climatic divide, often include various deposits and the headwaters of rivers. Their vertical variability makes them hotspots of biodiversity, while their intensive internal morphodynamics make them a potential risk for the local population. For transport they often represent an obstacle and land use has had to be adapted to the different altitudes or altitudinal zones.

The editors of *eco.mont* share the geographic understanding of mountains, with the added detail that, for the purposes of our journal, a relief intensity of at least 300 m distinguishes our idea of mountains from that of hills. This means that we do not just count Alpine-type mountains (i.e. mountain ranges formed by older or more recent glaciation) but also volcanic (stratified and shield volcano, flood basalt plateaus), crystalline and cuesta landscapes of steps, ridges or rocky outcrops, made up of sediments, as mountains, as long as they rise at least 300 m above their surroundings and include protected areas. This understanding, plus the focus on protected areas, distinguishes *eco.mont* from its sister journals RGA (*Revue de géographie alpine – Journal of alpine research*) and MRD (*Mountain Research and Development*) with their focus on high mountain ranges.

The protected upland areas in this issue resemble each other in the excellent management, which could act as a model for other parks. Where they differ is in the process of their emergence. Until a few years ago, the area of the Swabian Alb Biosphere Reserve was an army training ground, ravaged by track vehicles and criss-crossed by trenches. Natural resettlement with flora and fauna and the careful introduction of tourism, which provided economic impulses after the departure of the military without damage to nature, plus the sustainable use of the Alb with typical forms of transhumance and stationary animal husbandry, as well as arable farming on rendzinas are challenging research topics that have not received much attention to date and can be approached from a disciplinary or interdisciplinary angle.

In Saxon Switzerland we find a completely different situation. Here tourism started in the 19th century and has become a problem due to the huge number of visitors who now need to be channelled. A comparison of the two cuesta landscapes, the Swabian Alb, made of Jurassic limestone, and the Saxon Switzerland, made of Elbe sandstone, exemplifies the key challenges for the tourist use of protected areas. On the one hand, the protected area management needs to guard against overuse and on the other, it might want to encourage tourism to ensure the livelihood of the local population.

The current edition does of course include articles on mountain ranges of the Alpine type, starting with the Natura 2000 area Iseltal. Helmut Kudrnovsky reports on an endangered plant species found along Alpine rivers. The references almost amount to a bibliography and are a valuable compilation of the state of the art.

The Swiss National Park with its winding pass roads is an Eldorado for motorcyclists. Andrea Jauss and Norman Backhaus discuss the problems and challenges for the park management in connection with the Ofenpass section of the road. Traffic-geographic aspects of protected mountain areas have hitherto been a marginal issue in *eco.mont* and we hope to encourage other authors with this article.

Mojca Stubelj Ars' article looks at the behaviour of hikers in Triglav National Park. How environmentally aware are they, at home and on holiday? Her study is based on a survey of hikers over two summers and finds quite a positive situation.

In the management section of this issue Karsten Grunewald deals with the challenges of climate change for the management of Pirin National Park. In doing this he picks up on the Madrid Action Plan, which defines it as a task for biosphere reserves – and indeed other protected areas – to tackle. This park in the south-west of Bulgaria is particularly suited for such a study as the projected effects of climate change will be especially severe there. Glacierets are expected to disappear altogether with a warming of 2 °C by the end of this century.

Florian Knaus reports on lessons learnt in monitoring at Entlebuch Biosphere Reserve. BRIM, i.e. Biosphere Reserve Integrated Monitoring, is the order of the day for all biosphere reserves but has been implemented only by a few. This is why the experiences from Entlebuch are important and could encourage further BRIM activities in other reserves.

The network sentinel lakes in the French Alps and in Corsica was set up to find answers to the many questions on the overall functioning of high-altitude lakes. A larger group of authors reports on this network that serves to encourage multi-disciplinary studies and to establish long-term monitoring.

Also in this issue is a report by a group of authors on the EU-funded project recharge.green. Promoting the production of energy from renewable sources is a challenge for the Alps. Large potentials of hydro-, wind and solar energy, as well as biomass and geothermal energy are as yet unused. But each of these sources of energy has negative impacts on ecosystems and biodiversity. It will be interesting to see the solutions developed in this project.

This brings us to the end of this editorial. Legal issues have prevented us from implementing the complete open access envisaged in the last issue as quickly as we had hoped. Moreover, we have applied for start-up funding from the Austrian Science Fund for a shift to open access. We have, however, succeeded in finding a solution to open immediately a large part of articles from previous issues for free download. We hope to increase the citation rate and with it the impact factor of our journal with this move. We kindly ask you, our readers and authors, to cite the excellent peer-reviewed and indexed articles in our journal. With each registered citation this – your – journal gains in status.



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