

Photo Story

DOI: 10.21570/EDGG.PG.44.48-53

Cultural landscapes of the Lower Engadine, Switzerland

Photos and text by Iwona Dembicz^{1,2} & Jürgen Dengler^{1,3,4}

¹ Vegetation Ecology, Institute of Natural Resource Sciences (IUNR), Zurich University of Applied Sciences (ZHAW), Grüentalstr. 14, 8820 Wädenswil, Switzerland; i.dembicz@gmail.com, juergen.dengler@zhaw.ch

² Department of Plant Ecology and Environmental Conservation, Faculty of Biology, University of Warsaw, ul. Żwirki i Wigury 101, 02-089 Warsaw, Poland

³ Plant Ecology, Bayreuth Center of Ecology and Environmental Research (BayCEER), University of Bayreuth, Universitätsstr. 30, 95447 Bayreuth, Germany

⁴ German Centre for Integrative Biodiversity Research (iDiv) Halle-Jena-Leipzig, Deutscher Platz 5e, 04103 Leipzig, Germany

Engadine is the name for the part of the Inn valley located in SE Switzerland, in the canton of Grisons. The valley bottom ranges from the Maloja pass at 1,815 m a.s.l. down to the Austrian border at 1,035 m a.s.l. The Lower Engadine is the section of the Engadine between Zernez and Martina, where the Inn, compared to the flat valley bottom of the Upper Engadine, is deeply carved into the terrain. On the one hand, the Lower Engadine is characterised by high mountains, Piz Linard at 3,410 m a.s.l. being the highest. Here are remote and largely untouched alpine landscapes such as those of the Swiss National Park, founded in 1914 and thus being one of the oldest in Europe and the only one in Switzerland. On the other hand, the cultural landscapes below the alpine belt here are still quite diverse and better preserved than in most other parts of Switzerland and Europe.

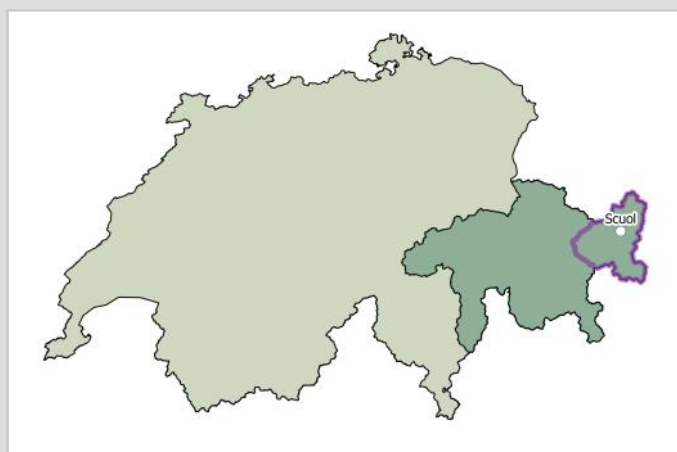
There are various reasons for the maintenance of structurally rich and biodiverse landscapes just here. Steep slopes have prevented, so far, strong intensification while the high Swiss agricultural subsidies ensure that most of the former grasslands are still managed as meadows and pastures. Compared to other places in Switzerland, the nitrogen input from the atmosphere is very low. Mass tourism has damaged many other parts of the Alps considerably but the Lower Engadine is only accessible by a relatively small road and, from the Swiss side, by railway, so mass tourism did not develop here to such a great extent. Moreover, the biodiversity of the Lower Engadine is enhanced by a diverse geology and steep south-facing slopes with a slightly continental climate, which supported the development of a rich xerothermic vegetation with its associated fauna. Agriculture is nearly exclusively animal-based, i.e. using meadows and pastures to feed cattle and other livestock. The grasslands below the alpine zone are semi-natural in the majority, with the exception of small areas around rocky outcrops and on steep rocky slopes, which might be free of forest

naturally. While the grasslands of the Lower Engadine have not remained untouched by the two main threats to European grasslands, i.e. intensification and abandonment, they are still in a comparatively good state and an attractive place for grassland ecologists to visit and survey.

Further reading

Braun-Blanquet, J. 1961. *Die inneralpine Trockenvegetation*. Fischer, Stuttgart, DE: 273 pp.

Zoller, H. 1995. *Vegetationskarte des Schweizerischen Nationalparks – Erläuterungen*. Flück-Wirth [Nationalpark-Forschung in der Schweiz No. 85], Zernez, CH: 108 pp. + map.



Location of the administrative district of Engiadina Bassa (Lower Engadine)/Val Müstair Region (marked with violet framing) in Switzerland, and in the canton of Grisons (darker green colour).



In the Lower Engadine, the villages like Vnà (pictured), are situated on the sunny terraces typically several hundred meters above the river.



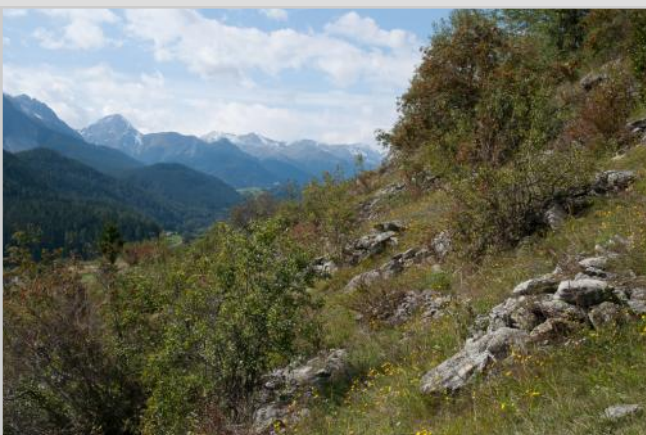
The Engadine takes its name from the river Inn (Romansh: En).



The richly structured cultural landscapes of the Lower Engadine, apart from grasslands, contains hedgerows, single trees and alleys, terraces and road verges, outcrops, stone heaps and stone walls. Thus the landscape is a diverse mosaic, full of colours throughout the seasons.



The grasslands are managed as pastures and meadows to feed mainly cattle, while other land uses such as beekeeping are also present. Maintenance of the traditional meadows on the steep slopes is challenging under present-day conditions and depends on subsidies: the scythe is meanwhile replaced by expensive high-tech machinery that allows mowing of even the steepest slopes. A championship for the best meadows rewards those farmers who maintain the most diverse meadows, while at the same time raising public awareness about the importance of species-rich grasslands.



Grassland types range from rocky outcrops, through steppic grasslands, semi-dry and mesic to wet grasslands. The picture to the left shows a steppic grassland with *Hieracium umbellatum*, the picture to the right a semi-dry grassland with *Salvia pratensis*, *Echium vulgare*, *Centaurea scabiosa* and *Trifolium montanum*.



Typical vascular plants of the semi-dry grasslands: *Cirsium eriophorum*, *Onobrychis viciifolia* and *Centaurea scabiosa* (from left to right).



The hedgerows and shrub patches harbour colourful fruits in autumn, here *Berberis vulgaris* (left) and *Rosa villosa* (right).



Particularly on and around rocky outcrops, the lichen and bryophyte flora can be rich: cryptogam community with *Hedwigia ciliata* agg. (left), *Rhytidium rugosum* (right).



The semi-natural grasslands, particularly the dry grasslands, also harbour a rich fauna: *Polyommatus icarus* (upper left), *Arcyptera fusca* (upper right) and a jumping spider, possibly a female of *Aelurillus v-insignitus* (lower left); and this diversity is reflected in the typical wall decorations on the Engadine houses, called *sgraffito*.



The fact that the Engadine was formerly an important traffic road over the Alps is reflected by many castles and fortified towers, which are now mostly ruins, like Ardez (upper right). Apart from *sgraffiti*, the Engadine houses are also decorated with paintings and flowers.