



SwissSoil: a field introduction to pedology for diverse audiences

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Providing sufficient field experience is highly beneficial to soil science education at all levels. Observing and describing soil profiles allow learners to witness the intrinsic interdisciplinarity of soil science and gain appreciation for soils as natural objects resulting from the interaction of multiple soil-forming factors. Providing meaningful field experience remains however challenging in a number of situations. For public outreach efforts, the time to prepare and travel to soil pits may be prohibitive; in soil courses with high enrollment, the cost and logistics of field trips may become equally problematic.

Our SwissSoil project aims to improve access to field activities on soils for schoolchildren, university students, continuing education participants and the general public. The general objective of the project was to provide access to permanent soil pits that could be used as a basis for self-guided soils tours or exercises.

In 2016, we opened five permanent soil profiles in contrasting settings on the university campus of Lausanne, all within a couple of minutes walk from public transportation stops. We performed detailed field descriptions and sampled each pedogenic horizon for biological, chemical, physical and micromorphological analyses. Upper year undergraduate students and MSc candidates were involved in these efforts, providing research and practica opportunities.

Using these data, we designed an educational open-access website providing an interpretive basis for the five soils. The website is designed to accommodate visitors with widely different background in soil science. It includes introductory-level information on soil formation and a video presentation of each profile, allowing the general public to make connections between field observations and soil-forming processes. Results of laboratory analyses are compiled under a different tab ('The Pedologist's Corner') and can be used as a basis for advanced exercises in upper-level soils courses.

The SwissSoil resource was well received during its first test in our 3rd year university soils course and 1st year field tour for the environmental science program. In addition, it has already been used by a variety of organisations including neighbouring university campuses, school groups, children's summer camps, the City sustainability office and a winegrower association. This interest shows that there was an unmet need for this sort of resource. This presentation will show the main features of the project and provide tips and lessons learned that should be useful to others tempted by a similar adventure.