

landowners, industry and authorities. An inventory has been made and has served as the basis for a planned completion of exploitation and restoration which incorporates the following principal provisions:

- The southern half of the esker has so far been left untouched by mineral working, because it is covered by trees. When viewed from the south, therefore, the esker still seems to be fairly intact.
- The long wall of the pit should be left as an open profile and small section should be cut at right angles to this so that the meltwater deposits which form the esker can be studied in three dimensions.
- A small part of the opposite (northern) flank of the esker is to be carefully protected to demonstrate the original width of the esker.

- The esker rests on an impermeable till and, on top of this till, a small pond will be constructed to feed a braided river which later will change into a meandering river.
- Samples of the various rock types represented in the boulders of the esker will be selected and preserved for demonstration.

The overall aim of this plan is to provide an educational facility which will illustrate the elements of a late glacial landscape. At present, however, the project has not progressed further than the drawing board.

5. The "Geo Trail" in Carinthia (Southern Austria), its Inception and its Acceptance

By HANS P. SCHÖNLAUB*)

5.1. Introduction

The "Geo-Trail" concept has been initiated to present some of the most impressive geological phenomena of the Carnic Alps in Southern Austria to the interested public and to support the local tourist industry in its search for alternative attractions for visitors.

5.2. The Gail Valley

For almost two centuries, the Gail Valley in Carinthia and the surrounding mountains have been well known to be one of the most interesting geological areas in the Alps. Here is the only place which has a continuous fossiliferous record of the Earth's history – without any gaps – ranging from the Middle Ordovician to the Triassic. During the last decade, numerous research studies have yielded not only a very detailed knowledge of the rocks and fossils, but also new geological maps, and revised tectonic framework and interpretations.

5.3. The Geo-Trail

This newly acquired, broadly-based knowledge led to the idea of extending the area's appeal beyond the purely scientific aspects of earth science by presenting some of the most spectacular features to those members of the public who might be interested. Early in 1985, the Geological Survey proposed a presentation of this kind and this soon received approval from the officials from the communities involved and from representatives of the province of Carinthia. Financial sup-

port was promised and received from these communities, from the province, from the Austrian government, and from a few other sources; the final costs totalled more than 1,350,000 Austrian Schillings. The whole project was completed in the summer of 1988 and, since that time, the Geo-Trail has been generally welcomed and frequently visited.

The Geo-Trail covers an area of approximately 350 square kilometers. It consists of five geological trails which can be connected to form a super-trail with a length of more than 100 km at altitudes from 800 to 2300 m. Each trail consists of up to 13 stops, each marked by a plaque mounted on a wooden frame.

The plaques consist of resistant aluminium plates to which a UV-resistant printed foil is glued and each gives information concerning the scenery, the geology, the age of the rocks and fossils and their origin, etc. in non-technical language. At scenic points, additional information is given and this is presented in even larger plaques which include keys to the whole panoramic view.

In addition to the information given in the field, small displays of fossils and rocks have been set up in huts and other special places such as local museums; a book, summarizing all field and additional data, can be obtained for a very moderate price; even stickers, a T-shirt and a badge are available on request.

5.4. Conclusions

The first year operation proved the whole programme to be very successful. Hotel owners and private landlords have started to organise tours for their visitors, while other guided tours are still being run by the tourist offices. Despite the Geo-Trail's popularity, there has been neither exploitation of fossil localities nor any wanton damage to the information plaques. The future of the Geo-Trail seems assured for its maintenance has been guaranteed by the local communities.

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