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Alpine Summer Farms – Upland Animal Husbandry and Land Use Strategies in the Bernese Alps (Switzerland)

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Alpine archaeology; survey; ‘Alpwirtschaft;’ building remains; cultural landscape; Middle Ages; Modern Age.

Introduction

In 2003, 2004 and 2006 the Archaeological Service of the Canton of Bern carried out alpine archaeological surveys in three valleys of the Bernese Oberland.¹ The primary aim of the survey was to enlarge the list of archaeological sites based on which the Archaeological Service reacts to construction projects. The results were a positive surprise. About 400 new archaeological sites—mostly dating to the Middle Ages and Modern Age—could be recorded. A doctoral project will analyse the results of the field surveys.²

The archaeological structures found include remains of building foundations, installations beneath rock shelters, animal pens and field boundary walls. They relate to seasonal alpine animal husbandry (‘Alpwirtschaft’), which has been an important economic factor in this region since the Middle Ages. In addition tracks and pathways, ore extraction sites and sites related to other industrial activities were documented. As the surveys were only carried out systematically above the timber line, the majority of sites are situated between 1600 and 2000m a.s.l.

This paper will present medieval and (early) modern land use of ‘Alpwirtschaft’ as well as local adaptations of the buildings—and their locations—to this rough alpine terrain. The Mägisalp, Hasliberg will be used as a case study.

Along the Way South – Economy and Topography

The borough Hasliberg is located in the Oberhasli region in the far east of the Canton of Bern (Fig. 1, upper left corner). During the Middle Ages, the region was not under control of the cities. It was, instead, under the influence of the monasteries of Interlaken and Engelberg. Following their economic interests, they both played a significant role in the medieval development of alpine pastures.³

The region’s inhabitants led a predominantly agricultural existence, living from animal husbandry and growing crops. The region lies at the centre of a system of Alpine passes such as the Grimsel, Brünig, Susten and Jochpass. As such, it was part of a system of transalpine trade in cattle and hard cheese until the building of the railway tunnel through the St. Gotthard massif at the end of the 19th century. Seasonal animal husbandry, or ‘Alpwirtschaft,’ has continued as part of the local economy to the present day. Tourism and hydroelectric power plants, however, have played increasingly dominant roles in the local economy during the past century.

1 For details of the methodology see Ebersbach and Gutscher 2008.

2 For preliminary results see Andres 2012.

3 Glauser 1988; Sablonier 2008, 63–85.

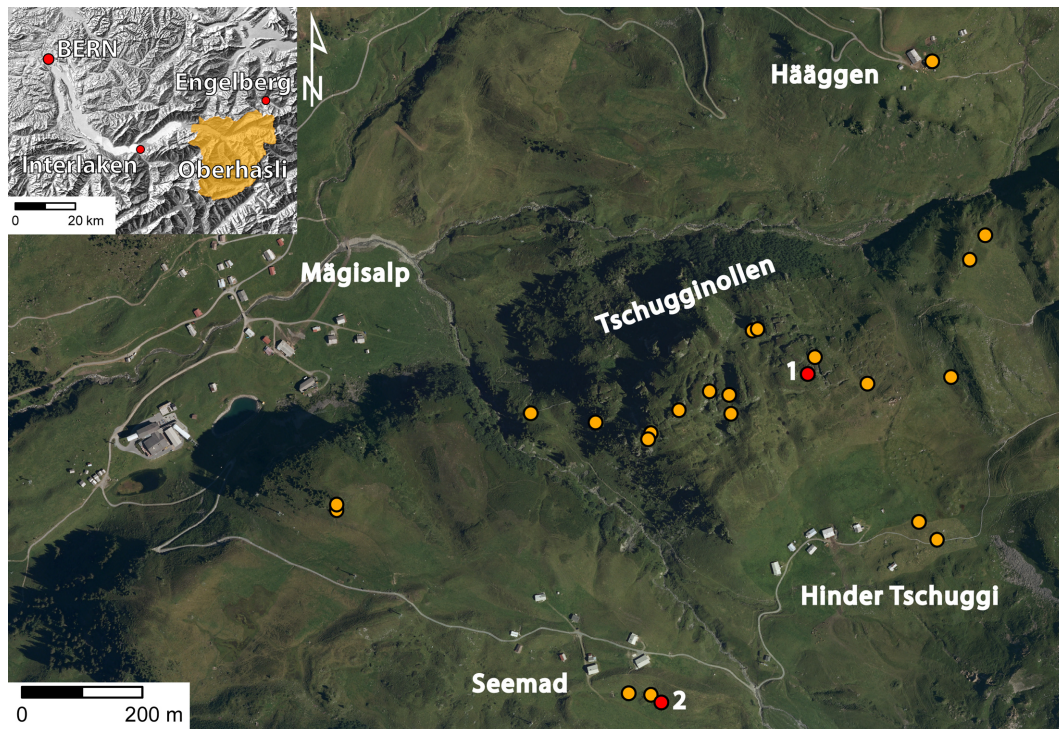


Fig. 1 | Location of the Oberhasli region (inset) and orthophoto of Mägisalp showing known archaeological sites (yellow points) on the 'Oberstafel' Hinder Tschuggi, Seemad and Hääggen. Red points: location of archaeological remains shown in Fig. 2. Nr. 1: building remains on the Tschugginollen; Nr. 2: building remains near Seemad.

The Hasliberg landscape can be described as basin-shaped. Until the end of the 19th century AD the permanent settlements (all situated between 1000 and 1300m a.s.l.) were only connected by footpaths and mule trails. The higher parts of the landscape consist of terraces, knolls and steep slopes and are divided into three Alps. Further Alps are located in the Gen Valley directly to the east.

Moving up – Land Use Strategies of 'Alpwirtschaft'

Like in most of Switzerland, the 'Alpwirtschaft' consists of a three-part system, utilising the vegetation on various elevations. The valley farm can be described as the first stage of the 'Alpwirtschaft.' Until the middle of the 20th century the crops grown here between spring and autumn were predominantly used to feed the animals over the winter. So as not to use the already tight valley bottom resources, the animals are driven onto the alpine pastures of the second stage ('Unterstafel') in May or June for a duration of three to four weeks. These pastures lie above the forest line at ca. 1600–1700m a.s.l. During the high summer the third stage ('Oberstafel') is used for a few weeks only, due to the short growing season. Before returning to the valley floor at the end of September, the animals spend a number of weeks on the pastures of the second stage again.

The Mägisalp was first recorded in 1372. The pastures of both alpine stages are easily recognised (Fig. 1). The Mägisalp 'Unterstafel' (second stage) is located in the lower part of the basin-shaped landscape at 1700m a.s.l. The third stage ('Oberstafel') consists of the Alps Hinder Tschuggi and Seemad, which are separated by a stream and lie on a plateau at 1900m a.s.l. Also used as 'Oberstafel' is the Hääggen, located on a terrace further north at 1960m a.s.l.

As in other regions, dry stone walls that are maintained to this day separate ‘Alps’ or pastures from one another. These are built using fieldstones cleared from the pastures and often follow natural landscape features such as knolls and streams. Walls are also erected along escarpments to prevent animals from falling down them.

The choice of location for buildings was made with their protection in mind even long before concerns about insurance. The attempt was always made to place the buildings in such a way that they would be least likely to be damaged by landslides, floods or avalanches. Most free-standing structures in the research area are protected by natural rock outcrops or ridges. Other buildings were constructed directly against large blocks or rock faces, using the natural rock as part of the construction while taking advantage of its protective properties.

The locations show a preference for natural terraces, making construction easier and providing space for a number of buildings. Scree accumulations were often chosen as well, as they offer ample building material in the immediate surroundings.

From Alp Hut to Ruin – Distribution and Interpretation of Archaeological Remains

When comparing the distribution of present buildings used in alpine animal husbandry and archaeological remains, it becomes evident that in the past buildings were spread more widely across the landscape and that they were more numerous. A good example of the changing land use can be observed on the Tschugginollen, a knoll on the Mägisalp with a rather special topography. Protected from avalanches, the pastureland softly ascends from the east. From the west, however, the hill presents itself as steep and craggy. Ascending the knoll one is unexpectedly presented with a labyrinth of small canyons. This apparently stony and inaccessible area therefore seems unsuitable as pasture. Yet the presence of a large number of hitherto undated archaeological remains shows that the Tschugginollen was relatively intensely used in the past (see Fig. 1). These building-like structures were built directly against the often overhanging rock faces forming natural roofs. On the one hand there are semicircular dry stone wall structures, which might be interpreted as shelters for shepherds or might have served as small animal pens (Fig. 2, Nr. 1; for geographical locations see Fig. 1, Nr. 1). On the other hand, a number of rectangular structures have been observed in the canyon system. These might have been cellars used for storing milk. At present, all buildings related to ‘Alpwirtschaft’ are situated south of the knoll and the steeper parts are no longer in use as pastures.

The problems surrounding the interpretation of archaeological remains, resulting from alpine surveys, are shown by three building remains near ‘Oberstafel’ Seemad. The first building is rather badly preserved, of small dimensions (inside measurements ca. 3.5×2.5m) and integrates a flat rock in its west wall. A second rectangular structure (inside measurements ca. 13×7m) has a paved terrace in front of it and can be interpreted as a dairy because of the hearth located against the back wall over which the cheese vat would have hung (Fig. 2, Nr. 2; for geographical locations see Fig. 1, Nr. 2). Outside the front of the third building a paved terrace was found as well. This building is almost square (inside measurements ca. 9.5×8.5m) and within its outline an L-shaped wall was found, but no hearth. As none of the buildings have been excavated it is hard to say anything about their dates or functions. It is thus necessary to combine the information provided by other sources, such as written records, oral history, historical pictorial evidence and old maps, still existing alpine architecture as well as archaeological evidence from other regions.⁴ It is known that the two larger buildings at Seemad were destroyed by avalanches in the early 20th century, thus explaining why this area is no longer exploited.

4 e.g., Meyer et al. 1998.

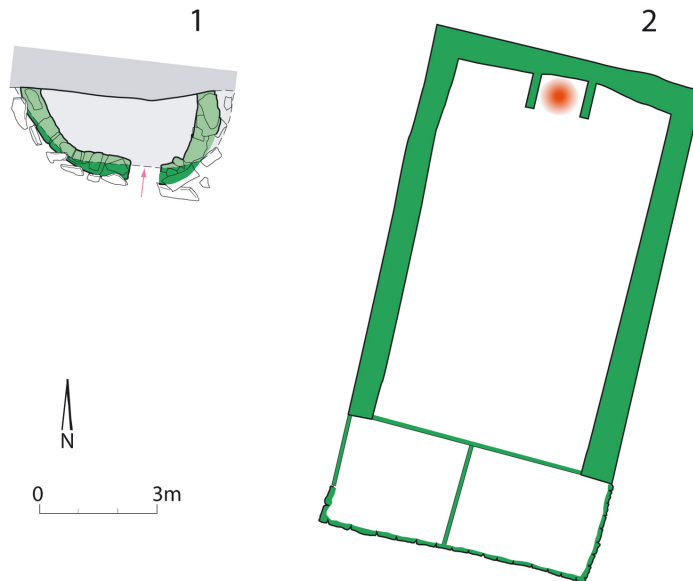


Fig. 2 | Nr. 1: Semicircular wall remains on the Tschugginollen, built against a rock face, which forms a natural roof; Nr. 2: building remains of a dairy building near Seemad including a hearth (red) and paved terracing on a supporting wall.

The more easily reachable Alps are accessible by motorised transport these days and have changed the way they tend to function. Nowadays, not all Alps are equipped with cheese making facilities. Instead the milk is transported to the dairy at the ‘Unterstafel’ (second stage).

The Continuity of Cultural Landscapes

The alpine landscape has seen heavy impact by ‘Alpwirtschaft.’ What is perceived as a natural landscape by city dwellers is a cultural landscape shaped over millennia. Prehistoric use of alpine zones in the Alps has been archaeologically proven.⁵ Pollen analysis and the study of botanical macro-remains from sediments of mountain lakes in the Bernese Oberland, however, show that during the Middle Ages a further widespread opening of the landscape took place through the elevation of the alpine grazing zones.⁶ Due to forest clearing, the forest line was forced down and the original grasslands grew and were from then on kept open because of regular grazing.

Only in the 20th century did alpine pastures start to be given up and naturalisation and reforestation took place. Early tourism (since the late 19th century) and later hydroelectric power plants have gained economical prominence and started to replace alpine animal husbandry as the main economic factor in the Oberhasli. And just like ‘Alpwirtschaft,’ the buildings and infrastructure that come with these new lines of business, such as cable cars and reservoirs, keep affecting and moulding the cultural landscape of the region and threaten its archaeological remains.

5 e.g., Reitmaier 2010.

6 Wick et al. 2003, 264–265; Lotter et al. 2006, 301–302.

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