



**“down below & up on top”**  
Großfragant theme-trail

**DRÜBER  
&  
DRUNTER**

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Remains of the processing plant, Großfragant, around 1930.  
Photo: Umlauf Private Archive, Villach, Klagenfurt

## **down below & up on top**

The “down below & up on top” footpath takes as its twin themes the copper mining of former times and alpine-pasture farming in the Fragant. In the alpine region, mining and agriculture were always closely intertwined. And the Großfragant was no exception: many farmers or smallholders found work in copper mining, as pitmen, woodcutters, charcoal burners, or carters. Mining in the Großfragant continued over the course of three centuries, until, at the end of the First World War, it was all finally closed down. To this day, abandoned galleries, remains of walls, waste heaps, and rusty tools and machine-parts bear witness to the once intensive mining of the earth’s mineral resources.



Forward extension of a gallery using a drill press, Imperial and Royal Gravel-Ore Mining, Großfragant, around 1916.

Photo: Austrian Picture Archive, Austrian National Library (ÖNB), Vienna



Großfragant mining area, 1916.

Photo: Austrian Picture Archive, Austrian National Library (ÖNB), Vienna

## MINING

In 1524 large tracts of Upper Carinthia were ceded as a fief by Archduke Ferdinand I to his treasurer, Gabriel Salamanca. Mining rights were also included. In the deed of gift, the Großfragant was not yet mentioned in its own right. However, two years later first documentary reference is made to the “perkwerch” (mine) in the Fragant. The “Berglehensbuch” (register of mountain fiefs) of 1536 shows that by then a string of trades and crafts were being practised in both the Große Fragant and the Kleine Fragant. In 1689 a cattle-herder discovered copper-bearing rocks. Johann Adam Stampfer, a mining expert, got to hear of this and two years later contrived to acquire the mining rights. He had obviously recognised the value of the ore deposits. In 1691 the Großfragant copper mine was established and Stampfer started excavating the ores, with a workforce of a single foreman and eight miners. The ore that they recovered (pyrites of copper, iron and sulphur) was processed in the original smelting hut on the Raggabach stream. In her “House Book, written by Mrs. Stampfer, born a Dellatore, wife of the master of the furnaces in Vordernberg”, Maria Elisabeth Stampfer, Johann Adam’s wife, recorded the events of the day as well as incidents in her own family. In those days, mining was thought of as exclusively men’s work. In the culture and customs of mineworkers, there was no place for women. According to time-honoured superstition, women in mining brought bad luck. Despite this, almost all patron saints of mining were female, such as Saints Anna, Elisabeth and Barbara. Among the few exemptions from the taboo status assigned to women was that which applied



Mountain blacksmith, Großfragant 1916.

Photo: Austrian Picture Archive, Austrian National Library (ÖNB), Vienna

to mine visitors. As early as 1681, for example, Maria Elisabeth Stampfer, the aforementioned owner's wife, had entered the Walchen copper mine near Öblarn (Styria). Her husband and their son, Hans Josef, were responsible for preparations for commissioning the copper mine in the Großfragant. Of her first inspection of the facilities, then still under construction, she wrote: "On 27<sup>th</sup> August 1691 I travelled in the name of God to Carinthia and, the Lord be praised, I found the mine in a good state. Father has had everything built up from scratch and I met 120 people there, whom Hans Josef needed for the building work. They were outsiders who had had to make their way to the Erzberg (ore mountain) and there are also craftsmen of all sorts there, bricklayers and carpenters, who were brought here even from so far afield as the country of the Salzburgers."

### **"Glück auf" – "I wish you luck in finding a new lode"**

In the 18<sup>th</sup> century, when Fragant ore mining was at its peak, around 300 mineworkers were employed to exploit its copper deposits. By the mid-1820s that workforce had shrunk to some three dozen. The ore's high sulphur content made processing very difficult. Sulphur escaping up the chimney during smelting damaged surrounding vegetation. The residual sulphur was mainly used in gunpowder production. Between 1740 and 1780 about 1,700 tons of aggregate material were recovered each year, from which approximately 56 tons of copper and 224 tons of sulphur were extracted. Extremely high-quality, arsenic-free sulphur was produced by sublimation in innovative sulphur furnaces. Nevertheless, the local powder mills preferred



Gallery workmen, Großfragant, around 1915.

Photo: Austrian Picture Archive, Austrian National Library (ÖNB), Vienna

lower quality, and therefore cheaper, Sicilian sulphur. Increasing competition from cheap foreign-produced copper and high production and transportation costs on account of the alpine location made ore mining ever less profitable – appallingly bad management did not help either. In 1834 copper mining stopped altogether. Around 1900 the copper mines were indeed reactivated for a number of years. And with the increased demand for raw materials during the First World War, they were purchased by the Imperial and Royal War Ministry. However, in 1918-9 the Großfragant copper mines closed forever.

Originally, copper ore was only transported down into the valley in winter, using sledges and so-called sack trains. Around 1906-7 a 4,400m-long wagonway was laid out for transporting the ore. From that time onwards, it was possible to take advantage of the gentle gradient and push fully-laden wagons (known as “Hunte”) on rails as far as the top-station of the 2,240m long cableway – which had also just then been constructed. In the early days, manpower or horsepower was used to haul the loaded ore-wagons along the rails. During the First World War two petrol-driven locomotives were brought into service. The ore was taken down to Außerfragant on the goods-cableway, to a point near to today’s wagonway carpark. During the last years of the War, it was then transported along another rail track as far as the Semslach-Ost cableway station, before it finally reached the Tauern Railway station in Obervellach.

Today only the occasional wooden railway sleeper reminds us of the arduous transportation of ore on the old wagonway. Situated at an average altitude of 1,700m, it has now become a wonderfully appointed footpath that leads up into the Großfragant. Ore first started to be transported down into the valley by means of the wagonway and cableway only at the beginning of the 20<sup>th</sup> century. Before that, bringing



Cableway Grafenberg–Außerfragant, around 1915.  
Photo: Austrian Alpine Association, Klagenfurt

it down could only begin once there was enough snow. Shortly after midnight on designated transport nights, between 30 and 40 workmen filled coarse sacks with ore stones and then lashed them onto sledges. Each vehicle carried a load of some 300 kilograms. From two o'clock in the morning the dangerous downhill journeys started, over rough, steep paths, down to a place known as the "Puchertratte". There the mineworkers emptied their sacks, took them back uphill and then repeated the same dangerous routine another four or five times.

From the Puchertratte, it took something like another hour to transport the ore to Innerfragant, courtesy of a sack train. This involved workmen loading the ore into pigskin sacks; these were then conveyed down into the valley along "Riesen" (similar to the channels of a toboggan run) that had been specially prepared for this purpose. Each sack puller had to transport about ten sacks into the valley; they were tied together in a long train, one after the other, and each weighed about 70 kilograms. Following the path of the "Riesen", these sack trains were always guided downhill in looping serpentine. This was supposed to make it easier for the driver to keep the load under control. The descent into the valley required absolute concentration,







A line of men with ore-wagon on the wagonway, Großfragant, around 1916.

Photo: Austrian Alpine Association, Klagenfurt

if the load were not to plummet into the abyss, taking the driver headlong with it. As early as 1556 this daring technique had been described by Georgius Agricola: “On these sacks a courageous driver takes a seat and, not without risk of death, steers the sacks downhill with a stick in his hand.” On arrival in Innerfragant, the precious goods were transferred to horse-drawn carts and transported to the smelting works on the banks of Raggabach stream.

## Hard work, poor pay

Where there is ore to mine we'll stick around,  
in order to scrape, drill, and cut;  
we work our shifts on time,  
to make new tunnels.  
Hard behind our leather aprons sits the foreman  
making the cutter, the separator, the sorter sweat.

Großfragant pit rhyme, around 1750

Wo Erz zu hauen wir verbleiben,  
um zu schrämen, bohren, scheiden,  
wir halten pünktlich unsre Schichten,  
um neue Gäng' zu richten.  
Am Arschleder uns der Hutmann sitzt,  
dass Hauer, Scheider, Klauber schwitzt.  
Großfraganter Grubenreim, um 1750

The so-called “Arschleder” (literally “backside leather”) was a leather apron that protected the seat of a miner’s trousers as he made his way – in places sliding – to and from the workface; it also served to keep out the wet and the cold. It was often only after advancing on foot for hours that the mineworkers first reached the copper-bearing seams, where they performed their dangerous daily tasks, whether in mining or



Wagons on the company railway in the former Großfragant mining area, around 1916.

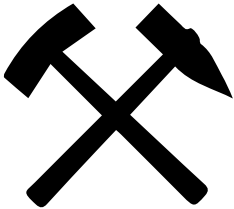
Photo: Austrian Picture Archive, Austrian National Library (ÖNB), Vienna

transportation of ore. Until the beginning of the 19<sup>th</sup> century, pitmen carried the ore out of the galleries in baskets. This operation was not only cumbersome and time-consuming, but also a risk to life and limb, because these men were expected to scale slippery tree-trunk ladders in poor light, carrying a basket on their back that often weighed more than 70 kilograms. The work in the narrow galleries was energy-sapping, especially because in some places it could only be performed with a stooping posture. Damp galleries with little oxygen, monotonous diet, lack of medical care and of social welfare all conspired to make the already hard work of mining more difficult still. Working in support roles, as water carriers and as lamp holders, even children did heavy-duty jobs in the pits.

Before the use of blasting powder (from the beginning of the 18<sup>th</sup> century), mine workings could only be driven forwards into the rockface by undercutting – that is, by hand, using hammers and pickaxes. The wage of the Großfragant miners was calculated on the basis of work carried out (piecework) and working hours (shiftwork). A shift consisted of eleven to twelve hours. As the galleries were pushed forwards, they were mostly given an uphill gradient. This meant that the ore dropped down to the mineworker and seeping water could run off downhill. The names of the galleries were sometimes taken from the day when work started on them, or when an ore seam was discovered, but they might also make reference to the forename of an appropriate miner. However, mine managers, foremen or simple miners could also christen galleries. Many of the given names have religious origins. So galleries situated at altitudes sometimes in excess of 2,000m above sea level were called (Saint) John, (Saint) Francis, Christ's Ascension, Heart of Jesus, Holy Ghost or Holy Trinity. One of the workings that was richest in ore was called Our Lady's gallery and the longest bore the name Divine Providence.



Cluster of huts on the Schwageralm alpine pasture, Großfragant, 1930s.  
Photo: Umlauf Private Archive, Villach, Klagenfurt



### **Miner's hammer & pick**

**Miner's hammer and pick, historically the most important miner's tools, are the symbol of mining. Even today, this symbol is commonly used in timetables to denote "on workdays" and on maps, where it is used to mark mining areas.**

Towards the end of the 18<sup>th</sup> century the Großfragant mountain workforce consisted of "2 foremen, 3 assistant foreman, 4 sump-minders or 'Punzenwärter', 4 pit keepers, 8 pit carpenters, 3 mountain blacksmiths, 84 stone-hewers, 38 carriers including youths, 12 ore cleaners, 9 ore cutters, 1 wood- and path-master with his 11 servant labourers." This means that the workforce consisted of a total of 179 men, women and children. (Carl Rochata, 1878)

Of course, all these mineworkers also had to be fed – and there was not always enough bread, flour, lard, bacon and meat to go round. Consequently, many mineworkers also ran a small farm as a side-line, a so-called pitman's smallholding. All summer long, mineworkers were able to stock up with a little milk, butter and cheese straight from the dairy huts.

Towards the end of the First World War the Großfragant mineworkers and their families suffered from "the bitterest of hunger", as a document written by the works management in August 1918 shows: "In their desperation, the people sustain themselves mainly by theft of small livestock from the mountains in the Großfragant, the Kleinfragant and Innerfragant, but they also steal company property, tools and drive belts, which they exchange for foodstuff from the farms."



Gang saw, Imperial and Royal Gravel-Ore Mining, Großfragant, around 1916.  
Photo: Austrian Picture Archive, Austrian National Library (ÖNB), Vienna

## Pitch & sulphur

Towards the end of the 18<sup>th</sup> century 52 people worked at the smelting works on the banks of the Raggabach stream. The sulphur vapours that escaped during the smelting process damaged not just the surrounding vegetation, but also the health of the smelters and sulphur-workers who were employed there.

Until the middle of the 19<sup>th</sup> century Carinthian woodlands were the main source of supply for the wood and charcoal used in the mines and hammer mills. Significantly, the quantities of wood required in the copper mining business were very substantial. Smelting operations consumed wood in the form of charcoal, whilst in the mines timber was required for constructing the galleries and as pit-props, securing and supporting the rock underground. Soaring demand for wood in the mining sector led to conflicts of interest with the farmers. To strike a balance between forestry and the demand for wood, landowners and the local government issued their own Mining Code, designed to prevent destruction of forests by law, to regulate the agricultural use of woodland and to demand reforestation. Maintaining a sufficient stock of trees was not just a pre-requisite for uninterrupted production in the mining and metallurgy sectors; it was an especial priority because tax income from mining had become a very significant consideration for the local nobility.

In the 18<sup>th</sup> century copper mining businesses in the Fragant provided work for more than two dozen tree-fellers and several master charcoal burners, whose job it was to ensure the availability of sufficient wood and charcoal. For the poorer inhabitants of the Mölltal valley the production of charcoal was a welcome supplementary source of income, all the more so since purchasing the locals' charcoal was significantly cheaper for business purposes than producing charcoal at fixed rates from the woodlands



Processing plant, Imperial and Royal Gravel-Ore Mining, Großfragant, around 1916.  
Photo: Austrian Picture Archive, Austrian National Library (ÖNB), Vienna

designated for that purpose. Apart from ore and water, woodland and timber were the most important basic resources for copper production and processing. Because of this, special Forest Orders were issued, setting out clear guidelines for foresters, loggers and master charcoal burners, to ensure that wood as a resource could be sustainably managed. At the beginning of the 19<sup>th</sup> century annual use of designated woodland for the Großfragant copper trade, accounted for some 400 cubic cords of wood (about 2,720m<sup>3</sup>). In 1840 mountain woodland extending over an area of around 4,000 Joch (about 230 hectares) was made available free of charge to the Großfragant businesses for one-off clearance. Uncontrolled extraction of pitch (resin) had a detrimental effect on the mountain forests, because it involved drilling holes into the tree trunks. Resin was tapped either by collecting spruce pitch (“Pechklauben”) or by Loriet drilling, which was then very widespread. This technique involved drilling a hole into larch trunks in order to extract the highly sought-after turpentine (known as Loriet or Lörget). Around 1890 the Imperial and Royal Forest Administration deemed the collection of pitch to be an “habitual act of sacrilege committed everywhere in the Mölltal valley mountain forests”, and resolved to try and restrict it by legislative monitoring.

## Gunpowder & hair-powder

Because of its excellent quality, Fragrant copper was keenly sought-after and sold well right up into northern areas. Amongst its principal customers until the middle of the 18<sup>th</sup> century was the Möllbrücke brass works. Brass is an alloy of copper and zinc and



Processing plant, interior, Imperial and Royal Gravel-Ore Mining, Großfragant, around 1916.  
 Photo: Austrian Picture Archive, Austrian National Library (ÖNB), Vienna

even today it is used for making fittings, decorative chains and musical instruments. In earlier centuries, a multitude of tools and household appliances were made of brass, such as weights (for scales), chandeliers, bells, pipes, spoons, hairpins, buttons, pans, knitting needles, thimbles, and many more. The sulphur produced in the Fragant was used until the 19<sup>th</sup> century – amongst other things – for sulphuring wine as a preservative measure, and even as hair powder. Fragant copper mining experienced its final heyday during the First World War, when copper was just as important for the armaments industry as sulphur was for gunpowder production. The chief customer for sulphur was the Blumau Gunpowder Factory; it had been established in 1890 by Dynamit Nobel AG and shortly afterwards was taken over by the Military Administration. Towards the end of the First World War this huge factory employed 18,000 people; it processed more than 900 tons of pyrites from the Fragant between the months of March and July 1916 alone.

### Employees and mined copper ore

Year	Workers	Mining output in tons
1815	no data	840
1909	46	700
1910	29	300
1911	15	266
1912	8	no data
1915	14	500
1916	428	6 000
1917	326	5 000
1918	200	1 200
1919	19	no mining



Women in the Sorting Hut, Imperial and Royal Gravel-Ore Mining, Großfragant, around 1916.  
Photo: Austrian Picture Archive, Austrian National Library (ÖNB), Vienna

## Copper & honey

**The Latin name for copper is *cuprum*, which is derived from *aes cuprium*, meaning “ore from the island of Cyprus”, where there was already copper mining in antiquity. In those days, honey mixed with copper shavings was used for healing wounds.**

Under the Military Administration, preparation of the ore for smelting already took place here in the Großfragant. In 1915-6 they had a processing plant built near today's youth hostel, where crushers and sieves reduced the ore stones to uniform particles the size of grains of corn, before an ore-washing plant separated low-grade and ore-rich particles. Tapping (known as “Abstufen”) the ore stones to remove waste, gathering up and sorting the resulting material, and ore-washing were tasks usually carried out by women. To house the women, the Military built a twelve-square-metre annexe, adjacent to the accommodation for the Russian prisoners of war.

Since time immemorial, mining has been thought of as a bastion of masculinity; but women have in fact always performed important ancillary tasks. The proportion of women (and children) in Carinthia's mining and metallurgy workforce between 1857 and 1914 amounted to an average of 20 percent. Whilst the men worked predominantly in specialist areas, women took care of the lower paid, unskilled jobs.

In addition to military personnel and civilian women and men, hundreds of Russian prisoners of war were also deployed as mineworkers during the war years. In November 1915 the Imperial and Royal War Ministry ordered Russian prisoners of war to be sent to the copper mine in the Großfragant, which at that stage had only just been



Accommodation for the Russian prisoners of war, Imperial and Royal Gravel-Ore Mining, Großfragant, around 1916.

Photo: Austrian Picture Archive, Austrian National Library (ÖNB), Vienna



## РУССКИЕ ВОЕННОПЛЕННЫЕ

Russian prisoners of war

purchased. To watch over them, there was a team of professionals, such as locksmiths, blacksmiths and joiners. In the galleries, the prisoners of war had to work in groups and were separated off from the other mineworkers. Under strict surveillance and completely segregated, they were accommodated in louse-infested wooden barracks. In 1916 and 1917 as many as 260 Russian prisoners of war were at work in the copper mines. In October 1918, a month of heavy snowfall, 40 of them were assigned solely to clearing snow from the wagonway and to collecting fire wood.

Four young Russian prisoners of war died because of the persistent cold and the wet conditions, compounded by malnutrition, insufficient medical care and, not least, general exhaustion. Wasili Gritschenkow was killed by an avalanche. On account of the quantity of snow, his corpse could not be taken down into the valley, so he was buried in the Großfragant, alongside Paul Kiritschenko and Ivan Koza. Julian Bogma was buried in Flattach.

On 18<sup>th</sup> December 1918 all of the premises and warehouses of the Großfragant Imperial and Royal Gravel-Ore Mining business were looted. In 1919 the Austrian State Office took control of mining and the Großfragant became subject to the Federal Coal and Steel Administration. One year later, mining ceased and in 1921 the processing plant also fell silent. The final 123 tons of aggregate material were transported from the site in the following year. In 1926 the Großfragant Mountain Administration was





Former mine settlement, Großfragant 1934.

Old mountain refuge house or mountain lodge (formerly the administration building; top left),  
Youth hostel (formerly carpentry and saw mill; below).

The Hernausstöckl hut (formerly joinery; below, middle of the picture),  
the Schoberkeusche (front, right), former medical hut (behind).

Photo: Austrian Picture Archive, Austrian National Library (ÖNB), Vienna

definitively abandoned – the wagonway rails were lifted; the cableway and processing facilities were dismantled. In the year after that, maintenance of the galleries was also discontinued and within three months they had flooded with water. In 1927 the Klagenfurt Section of the German and Austrian Alpine Association (DuÖAV) took out a lease on the land and buildings from the Federal Coal and Steel Administration. Two years later the DuÖAV purchased the entire complex of huts and mine-workings for the sum of 14,200 Austrian Shillings.



Herdsmen in the Großfragant, 24<sup>th</sup> August 1976.  
Photo: Annemarie Stotter, Lienz



Cows grazing on the alpine pasture, Garnitzental, 1950s.  
Photo: Josef and Maria Pacher, Grafenberg

## ALPINE PASTURE

The term “alpine pasture” refers to high-altitude areas that are grazed by cattle during the summer months, and that have close economic ties with a home farm. From the 13<sup>th</sup> century onwards, population growth and the mild mountain climate encouraged seasonal settlement in alpine locations. Surviving contemporary tax books (rent rolls) from the spiritual and secular feudal estates, make it possible to see just how many cattle and sheep were to be taken up to the alpine pasture – and how much annual alpine pasture tax was to be paid. But as regards the realities of everyday life, there are only sparse records concerning the dairymaids, cheese-makers, herdsman and their helpers. It was only with the more labour-intensive use of high-altitude meadowlands, that information about alpine-pasture farmers became more plentiful. Julius Heinrich Gottlieb Schlegel depicted the everyday life of herding and grazing very vividly in his booklet “Journey through parts of southern Germany and the Veneto”, published in 1798. His travels also took him through Carinthia: “The cattle-herders’ usual garb is a big green felt hat, or one of flimsy wood, a grubby shirt, a short jacket, leggings made of leather or poor cloth and wooden shoes, sometimes hob-nailed, sometimes not. They sit all alone on a crag, often for days on end, in these unpopulated surroundings, constantly exposed to the oppressive heat of the sun, which burns them completely brown; to occupy themselves they have at best small handicrafts, such as making plaited sandals or wooden shoes. Black bread and cheese is their food for the whole day long and their drink is milk or brandy, which



Driving the cattle, Großfragant 1940.

Photo: Annemarie Stotter, Lienz

they usually carry with them in a wooden bottle; this for want of water or indeed snow, although this can always be found in the hollows where no ray of sunlight reaches. Towards evening the herdsman rounds up his cattle and drives them with him back to their encampment.”

Private alpine pastures are managed either by an individual farm or a private person. As a rule, they are mostly the smaller pastures, often at lower altitudes. The ownership of an Agricultural Community’s alpine pasture belongs to several farms, meaning that the property is parcelled out into shares. Agricultural Communities are categorised as “corporations under public law”. A special way of separating out ownership from management is found in the so-called Servitude Alpine Pastures or Forestation Alpine Pastures. The servitude guarantees that one or more authorised persons may avail themselves of grazing rights, subject to formally documented regulation, on property that they do not own. In such cases, the owner of the property is usually the Federal Government (Austrian Federal Forestry Office), the Province or big private landowners. Authorisation for grazing in woodlands (Forestation rights) usually also includes certain entitlements regarding gathering wood, watering rights, rights of ways and “Schneeflucht rights” (literally “snow-fleeing rights”: entitlement to move cattle away from areas affected by extreme weather). In terms of area, the Agricultural Communities account for the largest proportion of Carinthian alpine pastures. The “Großfragant and Kleinfragant High Alpine Pasture” Agricultural Community has use of a pasture area that covers around 1,000 hectares. This is divided into four “grades” according to altitude: “forest plots” (which include authorisation for pasture usage in woodlands owned by the Austrian Federal Forestry Office), the Sadnigalm alpine pasture, the Schoberalm alpine pasture and finally the Bogenitzen. The summer sees rotation of pastures, as the livestock are driven



Dairymaids in the Großfragant, 1940s.  
Photo: Johanna Sternath, Villach

from one individual alpine pasture up to – or over to – another. This means that the alpine pastures at different altitudes are affected by the impact of grazing one after the other (staggered farming). A decision to change pastures is usually dependent upon the condition of the vegetation, but occasionally it is also linked to fixed dates. Since the 1990s the Bogenitzen has no longer been needed as a pasture because of reduced livestock numbers; in former times livestock (cattle and horses) stayed there from late-August to mid-September.

Driving livestock up to the higher-altitude alpine pastures was not without risks, for either human being or animals: “In the old days, driving the livestock – that were all over the place – up to another pasture was almost like a merry ride to heaven. Often you had to stand at dangerous spots. You needed to be steady on your feet, with only two hands’ breadths on either side and sky-high rock faces, but you had to press on, without the choice. Every time we had to drive the livestock up there, we first prayed a Paternoster, and then the gate was opened.” (Johann Gugganig, Grafenberg in the Mölltal valley, 2009)

In the past, private alpine pastures were farmed as intensively as possible. On account of high staffing costs and the general lack of trained alpine pasture personnel, private pastures have become more extensively farmed (with lower labour input) over recent decades, and have converted to keeping just mother cows and/or heifers. Whenever possible these days, the cattle on any individual alpine pastures are taken care of by outreach from their home farm. There are instances of livestock-keeping being abandoned completely on some private pastures. More specifically, in the Summer of 1974 there were still fourteen dairymaids in the Großfragant, on the corresponding number of managed, private alpine pastures; they produced around 1,000 kilograms of mountain butter and over 2,500 kilograms of curd cheese. In



Hand-scything alpine meadows in the Großfragant, 1937.  
Photo: Johanna Sternath, Villach

2018 only two dairymaids were still at work processing milk. “In those days, all the huts in the Großfragant were managed, up to twelve dairymaids, and often even more, used to be up there. None of them got paid at all; they all came from a farm anyway. There always used to be two keepers for the cattle on the high-alpine pastures. It has all stopped now; as for the cattle, there are practically only heifers left.” (Johanna Sternath, Villach 2009)

## **Pasture maintenance & hand-scythed mountain meadows**

The animals themselves always have been the most efficient maintainers of the alpine pastures. Mature and young cows, heifers, horses, goats and sheep complement each other in all sorts of ways as they graze. For example, horses are valued because they like pastures that have already been grazed; they clean up a field and even feed on the grass that has been spurned by the cattle. Goats are cost-effective “helpers” too, not even drawing the line at clearing away unwanted dwarf shrubs. In high summer they congregate with the sheep on isolated steep slopes, where easily digested grasses and herbs grow.

Alpine pastures continue to be highly prized because, with all those healthy herbs and the biodiversity, they offer grazing animals a wealth of nutrients and ingredients. “A single feed of alpine pasture hay is better than three feeds of farm hay”, as popular wisdom has it. This explains why, alongside grazing itself, mowing the alpine pastures has always been accorded a special significance. Production of hay was mainly



Großfragant, 1960s.

Photo: Annemarie Stotter, Lienz.

restricted to steep, difficult-to-access mountain slopes, the so-called “Bergmähder” (hand-scythed mountain meadows). Harvested under difficult circumstances, alpine pasture hay was of very good quality; it was fine, rich and nutritious. For the home farm, mountain hay represented a feeding basis that was a matter-of-life-and-death, because the number of cattle to be over-wintered was always dependent on the quantity of fodder available.

Usually a team of several men was sent out to scythe the alpine pastures. Soon after the snow had melted, the steep grassland slopes were cleared of stones to ensure that the scythes did not suffer too much damage during summer-mowing. The gap of four to six weeks in July and August between the first mowing of the valley meadows and the grain harvest, was the time for scything the mountain meadows. Hand-scything required not just stamina but also skilled craftsmanship. The mowers took the sharpening-steel and hammer with them into the mountains, and of course they could not forget the whetstones and water-filled “Kumpf” (a horn-container for the whetstone). They started work early in the morning, when the damp grass made scything a little easier. After a brief breakfast and depending on the weather, there was further scything or hay-making took over. Turning the hay and raking it together required skill and this task was usually performed by women. Mowing on the steepest mountain slopes and bringing home the winter fodder – which was often something of an adventure – attracted the attention of travellers and folklorists from a very early date. In the motif of the “wild haymakers”, down-to-earth alpine life morphed into an heroic romantic dream.

This dangerous mountain life exercised a fascination of its own, which resonates (for example) through a report about hand-scything mountain meadows in the Mölltal valley, written by Johann Jenull, for the magazine “Carinthia” in 1817: “In the high



The evening after bringing home the hay, Innerfragant, winter 1956.

Photo: Annemarie Stotter, Lienz

Alps, where none of the stronger plants, no small trees, no crooked timber can still thrive, here can be found the broad and vast, yet sparse, steep, naked meadows of the valley and mountain dwellers. Here it is that – shod with weapon-like crampons – they swing their gleaming scythes over terrible precipices, all to gain hardly finger-length, but aromatic, precious grasses for their cows (...). Trusting in his God, his steady head and the crampons on his feet, the farmer with his farmhands spends the month of August in this, the usual way, rich and satisfied by virtue of the simple fact of being blissfully unaware of any unfulfilled needs.”

The mountain hay was either stored in little hay barns, or piled up in a cone shape, around spruce poles two or three metres tall, the so-called “Heustriste”. The careful construction of such a “Triste” required a certain amount of experience: first the ground was covered with green alder, to protect the hay from rising moisture. Then the hay had to be trampled down well, so as to prevent the haystack disintegrating in wind and bad weather. To ensure that the water could run off and the hay would not begin to rot, a cut-turf roof was finally placed on top. “Heustristen”, like hay barns, were carefully positioned in spots where there was no avalanche risk.

## Hay hauling

In winter the alpine pasture hay was transported down into the valley on sledges, or with the help of similar devices, which, depending on the design and region, were known as “Taxn”, “Ferggln” or “Schloapf”. When the hay was transported, the unit of measure was the “Fuder” or “Fuada” (one load of hay, weighing 300 to 400





Hay hauling, Großfragant, around 1960.  
Photo: Josef and Maria Pacher, Grafenberg

kilograms). Until around Christmas the hay remained on the alpine pasture and was then brought in across the snow to the home farm. The saying “Light matins mid-night mass, dark barns” meant that the hay had already been brought home by Christmas Eve, so that the full hay barns were “dark”; “Light barns, dark matins mid-night mass”, on the other hand, meant that it was high time to bring home the hay from its alpine pasture storage.

Hauling the hay was a dangerous job. Sometimes the hay stacks that had been built in summer lay so deep in snow that only the tall poles used in their construction marked the locations. Or again, when the snow was very loose or deep, the hauliers might well sink in and their loads slip off on top of them. If the trail down into the valley was icy, they would need all their strength for braking the downward momentum of their load. Nevertheless, and dangerous as it was, bringing in the mountain hay was a welcome break from the routines of everyday working life: “After hauling the hay down we got something to eat from the farmer – the one we had fetched the fodder for – soup with a bit of meat, that was my favourite. It was like going to a wedding; that’s the way it was.” (Anton Spöttling, Grafenberg in the Mölltal valley, 1996) From an early date the fearlessness of the hauliers elicited the admiration of town-dwellers; in 1817 Johann Jenull gave his readers an emotively charged account of winter transport of mountain hay at the head of the Mölltal valley:

“The far more dangerous part – very often life-threatening (and with loss of life not uncommon) – is the part where the hay is brought home in the middle of winter. Only in this season, when all is frozen hard, mountains and valley alike cloaked in deep snow, can the farmer even think about transporting his hay home from the high mountains. This ‘Hatzen’ (hay hauling) business is always something for the whole neighbourhood; usually the farmers agree among themselves that all the farmhands



Hay hauling, Großfragant, around 1960.  
Photo: Josef and Maria Pacher, Grafenberg

will gather together to help complete this dangerous work on one particular day for a first neighbouring farm, and on another day for a second neighbour, and so on down the line until the very last one. No horse, no ox can be used for pulling loads in the bare, extremely steep and pathless Alps; every haulier brings his own sledge, and the whole crowd of them gathers at night, between 10 and 11 o'clock, at the appointed house whose hay is to be fetched in. A frugal supper is eaten, to fortify the men for the laborious work ahead and each one gets some brandy. At 12 midnight a short prayer is said and now a line of men pulling sledges sets out from the house under the light of the Moon, heading up to the high-mountains, to the hay stacks deep in the snow. After an extremely arduous walk of between 5 to 6 hours, the sledge-train arrives at the alpine meadow. The precious treasure is at once freed from the snow; the hay from the ricks is bound together into smaller loads, the so-called 'Alpfuderl', and each of these bundles – defying a hundred dangers – is lowered on ropes over the steep crags; there, it is manhandled over level or uphill stretches and dragged to the place where the sledges are waiting. Here each load is transferred to a sledge, and it is then that the faster, and doubly dangerous, downhill journey starts, over the steep mountains and towards home, where the train of sledges is usually not expected until after 4 o'clock in the afternoon. Happy the inhabitants of the Alps – so long as they reach the brown huts in their long fodder-convoy without accident! Amidst festive cheering, a sumptuous haulier's feast of baked pasta, 'Schmalzmuß' (a sweet pasta dish), soured peas, honey balls, dumplings and sauerkraut awaits them on their return home."

Management of the hand-scythed mountain meadows is unquestionably time-consuming and involves high personnel costs, the more so because, as a rule, there is hardly any scope for mechanisation. Over the years, increasing profits from the valley



Social gathering in the Großfragant, 29th September 1936.

Photo: Annemarie Stotter, Lienz

meadows have compensated for the comparatively low mountain hay yields. Since the 1960s the hand-scything of the alpine pastures has increasingly been restricted to the green areas near the huts. Even nowadays, these areas are still fertilised and they are scythed at least once a year. Many mountain meadows that were formerly hand-scythed have now been reforested, some of them being used as pasture. A lot of the alpine pastures at lower altitudes, that could once boast a wealth of diverse species and were studded with flowers and herbs, are now overrun with woody plants that have grown as weeds.

The effort previously invested in producing mountain hay today looks increasingly uneconomic: "In summer there was hand-scything going on in the Großfragant. As soon as the work was finished at home, all of us went up to the alpine pasture to scythe the steep slopes. There were small barns everywhere. There the 'Tristen' (hay stacks supported by spruce poles) were made.

(...) Of course, it was also pretty dangerous, when the slope had to be scythed right up to the ridge. You had to be 'fastened' for that bit. We took with us a special suspension rope about 30 metres long, on to which the loads of grass were attached, one after the other. Then it was lowered as far as a stretch where it was no longer so steep. Below there was somebody who pulled the rope. Sure, there were occasions when we got rope-burns on our clothes as a result." (Johann Gugganig, Grafenberg in the Mölltal valley, 2009)



Ochsentrieb, Großfragant 1958.  
Photo: Annemarie Stotter, Lienz

### How now brown cow?

In 2018, Susi was the most popular calf's name in Austria. This was followed by Bella, Sissi, Lilli, Heidi and Lisa. For male calves Max, Willi and Moritz were front-runners. No later than seven days after birth, each calf is given a clearly identifiable ear-mark. It is usually at this point that the calves are also given their names, such as (for example) Resi, Alma, Zenzi, Golde, Ruby, Butterle, Schoberle, Cindy, Gloria, Berta, Milena, Lärche (larch) or Kirsche (cherry).

## Alpine-pasture idyll

Work on an alpine pasture is generally associated with hardships and deprivations, yet paradoxically, "going up to the alpine pasture" has always also meant a welcome break from everyday life in the valley. Although work routines on the pasture are dictated by the need to fulfil precise tasks and duties, up there people mostly feel "freer" and more autonomous than at home. Outside of its strictly regulated work rhythms, life on the alpine pasture seems to make it possible to live more independently. In their recorded observations, travellers on the Grand Tour in the 18<sup>th</sup> and 19<sup>th</sup> century only occasionally differentiated between their "romantic" ideal of living on the alpine pasture and the meagre reality of everyday life there: "The herdsman's hut is far more primitively furnished than that of the dairymaid. It very rarely has a window, almost never a table. A part of the floor, separated from the rest of the hut by



Großfragant, around 1960.  
Photo: Annemarie Stotter, Lienz

stones, serves as a stove. The inside of the pan used for cooking polenta reveals a thick crust of food scraps. Everything is dirty and greasy, everywhere the feminine touch is missing. The herdsman sees no more than a few people during the weeks of summer, and so he is sometimes tight-lipped, harsh, unsociable. You hardly ever hear him sing. Calmly brooding, he spends his days smoking his pipe and digging up gentian roots. With strangers he is certainly coarse, but not inhospitable. For sure, in that situation one has to be extremely frugal and one needs to be particularly partial to sheep and goat milk." (Michel Knittl, 1889)

In addition to processing milk, dairymaids on the alpine pasture were also expected to do all the jobs in the barn, to take care of the livestock and to do the cooking and housework in the hut. The men were responsible for scything the meadows, for tending fences and for all the woodwork. The Alpine-Pasture Survey of 1950-2 recorded that overall numbers of men and women were in balance. A total of 2,416 persons were counted on the Carinthian alpine pastures. Yet, in terms of skilled personnel, women clearly outnumbered men (1,128 female skilled workers, as opposed to 572 males). In Upper Carinthia there were in general more women than men on the alpine pastures. Until the middle of the 20<sup>th</sup> century all odd-jobs and agricultural tasks were performed exclusively by the application of muscle power and with the help of horses and cattle. The physical strength required seemed automatically to relegate women to a secondary status. The so-called women's work was less highly valued and, therefore, women were paid less. Unequal pay for male and female farm personnel was normal practice in the valley and it was certainly replicated on the alpine pasture. Of the dairymaid's busy day, Knittl reported the following: "The dairymaid's life is definitely not as monotonous as one might think, and there's no room for idle boredom on an alpine pasture. At around four o'clock in the morning, the cows are milked;



Processing milk in the Großfragant, 1930s.

Photo: Annemarie Stotter, Lienz

after a quick breakfast, the cattle are then driven out. All dairymaids need to accompany their cattle. Their grazing place is decided by the herdsman. Then she turns to cheese-making. The sour milk is skimmed and then poured into a cauldron on the stove. With a moderate fire under the cauldron, the cheese is separated out from the milk. This cheese is pressed in a linen cloth to remove excess water, salt is mixed in and it is compacted into the standard shape. Finally it is placed on a shelf in the back-hut, where it dries out and becomes rock-hard. After the cheese has been fished out of the cauldron, the remaining greenish, translucent, somewhat sour-tasting curd-cheese liquid is boiled for a prolonged period. The reason is that another layer of cheese-like material then precipitates out and settles at the bottom of the cauldron. This has no taste. It is placed on a plate and in two or three days it ferments, becoming quite hot in the process. Then it is salted and shaped into a ball. This is what is called 'Kasmachet'. It is grey and has as sharp a taste as Quargel (a type of acid cured cheese). They make cheese soup with it, simmering pieces of Kasmachet in diluted milk.

Churning butter is tedious, especially in cool weather. The cream is poured into tall tubs with tapered necks and then the thick liquid is mixed and kneaded, using a pole fitted at its lower end with a round, perforated slat. Churning continues until butter separates out and is ready to be shaped into elongated round pats. This job often takes hours. And then the morning is over.

In the afternoon the dairymaid has to collect animal feed – fodder for the cows so that they stand still during milking, and food for the pigs in the barn next to the hut. She hoists a large pannier onto her back, and with a long alpenstock in her right hand, she sets off down a slope with a sixty to seventy degrees gradient – because where the slopes are gentle, they are already grazed by the livestock. So, the dairymaid can only look for grass in places with such steep slopes that livestock aren't allowed to roam



Dairymaids in the Großfragant, 1940s.  
Photo: Annemarie Stotter, Lienz

there, because of the danger of falling. She cuts the grass with a sickle and fills her pannier. With the heavy load of green, often wet grass on her back, she makes her way back to her hut, climbing narrow paths across the dangerously steep slope.

Once she has made sure there is enough animal feed, the dairymaid goes out again to pick arnica ('Kraftrosen'), or to dig up gentian roots. In the evening the herd returns once more. One after another the cows are led into the barn, milked and then driven out again, because they have to stay out in the open all night long. As soon as the cows are milked and the pigs fed, the evening meal needs to be prepared; perhaps polenta and coffee, or dumplings, or maybe just a pot of boiled milk. After the evening meal, a couple of women come round for a neighbourly visit.

Indeed, life on the alpine pasture is not easy for a dairymaid. It is common for a cow or calf to get stuck in places from which it can't get down again. And then the dairymaid has to spend the whole night searching for the animal right across the alpine pasture, so that she can rescue it, sometimes putting her own life at risk. Accidents often happen. Two years ago, in the Großfragant I happened to arrive at a spot where a fine cow was just then being butchered. It had fallen from a rock face behind the hut."

## Copper & bacteria

**Copper vessels have been valued since time immemorial on account of the metal's antibacterial effect. As in brewing beer, copper cauldrons are also used in cheese-making, because these kill off many of the germs.**



Großfragant, 1940s.

Photo: Annemarie Stotter, Lienz

Just as it is today, a dairymaid's working routine was filled with a multitude of onerous activities. Knittl also provides further interesting insights. On his Alpine hiking expeditions he found that, with few exceptions, the dairymaids' huts were perfectly cleanly, and he also tried to correct the 19<sup>th</sup> century reading public's stereotypical images of the dairymaids' appearance. Here is what Knittl has to say about different types of dairymaids:

"What do dairymaids look like, then? Are they really as attractive as we are sometimes led to believe in books? I have been asked that question often enough, when returning from one of my longer mountain tours. Someone else holds forth: Isn't that right, the famous dairymaids are nothing but dirty, old hags? 'No', to both questions. The fact is, the dairymaid is of course nothing special, but simply the farmer's daughter or his maid. Some are young, some are old, one is pretty, another ugly, this one cleanly and that one dirty. At some huts I have met girls of surprising freshness and rustic beauty, but then at others, old women with damp, red eyes, toothless mouths with drooping jaws and large goitres on their necks."

Life on the alpine pasture has often been written about and even more frequently celebrated in song. Early travellers' reports of pretty-as-a-picture dairymaids cast a tremendously attractive spell over city-dwellers in the valleys. It seems they really believed that people on the alpine pastures devoted themselves to every conceivable lust and debauchery. Many representations of mountain life served to reinforce this belief.

In the 18<sup>th</sup> century, there were growing concerns amongst church leaders about the unsupervised cohabitation of men and women on the alpine pastures. These clergymen feared an increasing "Sittenverwilderung" – an abandonment of civilised moral standards; even music and dance were deemed reprehensible by the Christian





Großfragant, 1940s.

Foto: Annemarie Stotter, Lienz

guardians of public morality. In some cases, women were even forbidden by the Church to work as dairymaids on the alpine pastures. Or they were obliged to appear before the ecclesiastical dignitaries for a so-called face check. After intensive evaluation of her appearance, the clerics then decided whether or not a woman should (morally) be allowed to work on the alpine pasture. This peculiar dairymaid inspection, the so-called “Sendinnen-Wapplung”, was often circumvented by smart alpine-pasture owners, who sent a “wrinkled, old woman” for inspection, whereas it was an “agile, young girl” who actually went to the alpine pasture.

## Butter side up?

The isolated alpine pastures have preserved their traditional mode of farming over the course of the centuries. Although they are now in decline, cattle, horses, sheep and goats still graze there in summer. These pastures are the mountain farms’ feed reserve and using them significantly alleviates the burden of work on home farms. For the farmers, taking their livestock up to the mountains means reducing the workload. Chores such as mucking out, feeding and – where applicable – milking cease to be necessary in the valley during the summer months, a season when farmers are in any case preoccupied with hay-making and harvesting.

In the years after the Second World War profound structural changes gradually began to take effect. And these also impacted on mountain farming. Because of the declining agricultural workforce and the related growth in mechanisation, mountain farmers were forced to refocus their businesses on increased grassland utilisation and



Großfragant, around 1990.

Photo: Annemarie Stotter, Lienz

market-oriented livestock farming. Since then, higher production costs for mountain-farm produce, as compared with produce from so-called favoured areas for agriculture, have increasingly become an existential threat to mountain farm businesses. If collectively agreed wages were to be paid, these farms would, for the most part, no longer be able to survive. Not even direct payments or other kinds of subsidy for mountain farmers would come anywhere near to compensating for the disadvantages of geographical location and fierce price competition. Ever more farm businesses are dependent on additional sources of income. So, many farmers and farmers' wives work as waiters/waitresses, carpenters, dredger operators, freighters, ski-lift attendants, salespersons or tunnel workers. On top of all the many jobs involved in farm work, a second income is vital for keeping the main business going.

In addition to the declining economic fortunes of the alpine pastures, their social function is dwindling too. For example, just a few decades ago one came across many more alpine-pasture personnel in the Großfragant. Almost all huts were occupied and managed and each dairymaid/dairyman normally had two or more cows to take care of. From an early stage economists found fault with the low productivity of this kind of farming. Yet, the family-run farms followed other laws than those of economics and were never part of a purely profit-oriented system. These days more and more small-scale agricultural businesses are being forced to close their doors for ever – a process which also leaves its marks on the alpine pasture landscape. In this context, alongside changing climatic conditions, it is above all the decline in livestock numbers that is having a negative impact. The precious open pastures are becoming overgrown. Owing to the shortage of alpine-pasture personnel, the manual work of clearing encroaching saplings can no longer be adequately performed. The much-vaunted “romance” of the alpine pastures is something that no-one has much time



for these days. Apart from a few hackneyed clichés, all the talk has long been about proper access roads, functional alpine-pasture buildings and, wherever possible, a reliable electricity supply, so that the surviving alpine-pasture farms continue to operate, indeed are able to continue to operate.

If agricultural use of the alpine pastures ceased, they would lose much of their ecological diversity and their recreational value would also be diminished. Discussions that have long been going on about the future function of farmers as “maintainers of landscape” or “landscape gardeners” mostly emanate from the standpoint of sections of the population (hikers, nature conservationists, intellectuals), who have no farming credentials and whose perceptions of landscape have for more than two centuries primarily been defined in terms of its “beauty”. Many farmers would counter these arguments by pointing out that their present role in maintaining the cultural landscape is performed as a positive side-effect of their vital agricultural work, but it is not the real driving force behind their business operations.

The range of possible and alternative uses for alpine pastures has opened up dramatically: in winter they are skiing areas, and in summer, holiday destinations for hikers, mountain-bikers and paragliders. Vacant Dairymaid’s huts are rented out to tourists; alpine-pasture villages spring up with five-star facilities; restaurants and cable-cars are built, all increasingly dominating the mountain landscape; dogs run free and chase the grazing livestock – or the livestock chases the dogs; a supermarket delivers milk, butter and cheese to the alpine pasture – the horror scenarios are endless, but at least in this part of the world, they can still be regarded as very much the exception.

**“When the cattle leave, woodland takes over”**

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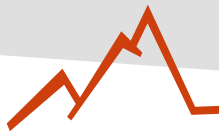
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