Anna-Maria Kriechbaum

Nutrition in Nazi Concentrations Camps
A Comparison between the SS and Prisoners at the Concentration Camp Mauthausen

Summary

Prisoners in concentration camps lost their identity. They were reduced to a number, the SS took most of their personal belongings. Nutrition was a special part of this loss of identity of the prisoners. Records about the nutritional situation show broad discrepancies between the nutritional possibilities available to the Nazis and those of the prisoners, something confirmed by contemporary witnesses. This article compares the nutrition of prisoners and SS perpetrators in the Mauthausen concentration camp. This is partly achieved by considering the archaeological evidence found in Mauthausen. The finds clearly show signs of deliberate alterations by those imprisoned, who aimed to recover their personal identity. It also demonstrates distinct differences in nutrition between SS perpetrators and prisoners at Mauthausen.

Zusammenfassung

Introduction

People of different cultures were imprisoned in Mauthausen. They thus had very diverse cultural eating habits, which contributed to the cultural identification of each individual. With imprisonment in a concentration camp, the individual lost his/her right to personal eating habits (Stahl 2010, 73, 76). Looking at the written records about nutrition in the concentration camps, there are big discrepancies between Nazi documents and the records of formerly imprisoned contemporary witnesses concerning the given amount of food. Thus, according to SS records the food supply of Mauthausen’s prisoners was much more diverse and the rations much larger, than what we know from contemporary witnesses reports (Maršálek 2006, 54, 55; Perz 2013, 38, 39, 111, 112). While it is important to describe the agonies prisoners at concentration camps had to go through, it is also important to show the very different life that the SS perpetrators, working in such a camp, were leading. If we look at the records about nutrition in the camps, it becomes clear that archaeological evidence has hardly been considered to date. In this paper we compare the nutritional situation of prisoners and SS men working in concentration camps and also take archaeological finds into consideration.

Nutrition of prisoners in the Mauthausen concentration camp

The provision of food was the responsibility of the administration of a concentration camp and also of the local bureau for nutrition (Perz 2013, 39; Maršálek 2006, 55). Due to missing pages dealing with the period between 1938 and October 1941 in the administrative report of the concentration camp at Mauthausen, as well as the relatively small number of imprisoned people in Mauthausen at that time, there are very few records about nutrition during the first two years of the camp (Perz 2013, 12–13; Maršálek 2006, 137). Nevertheless, there are a few records from contemporary witnesses which tell us about their experiences in that period. Franz Jany, a former prisoner in Mauthausen, tells us of the following daily food rations: a cup of coffee substitute in the morning, soup for lunch (mostly cabbage with water) and 20 g margarine with bread for dinner (Maršálek 2006, 29).

From August 1st 1940 onwards, there was an official rate of food rations provided for prisoners which was changed several times (Maršálek 2006, 55 – see Table 1). Furthermore, those prisoners who worked in the armaments industry, some prisoners who worked in the quarry and all the prisoners excavat-

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<thead>
<tr>
<th>August 01st 1940 – May 14th 1942</th>
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<th>Starting March 01st 1945</th>
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<tbody>
<tr>
<td>Meat products</td>
<td>400 g – 280 g</td>
<td>280 g – 200 g</td>
<td>200 g</td>
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<tr>
<td>Fat (margarine...)</td>
<td>200 g</td>
<td>170 g – 182.5</td>
<td>182.5 g</td>
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<tr>
<td>Curd cheese</td>
<td>100 g</td>
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<tr>
<td>Bread</td>
<td>2740 g</td>
<td>2,450 g – 2,525 g</td>
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<tr>
<td>Sugar</td>
<td>80 g</td>
<td>80 g</td>
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<tr>
<td>Jam</td>
<td>100 g</td>
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<td>Nutriments</td>
<td>150 g</td>
<td>150 g</td>
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<tr>
<td>Flour</td>
<td>225 g</td>
<td>125 g</td>
<td>125 g</td>
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<tr>
<td>Skimmed milk</td>
<td>—</td>
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<td>1.75 l</td>
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<tr>
<td>Coffee substitute</td>
<td>84 g</td>
<td>63 g</td>
<td>62.5 g</td>
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<tr>
<td>Potatoes</td>
<td>3,500 g</td>
<td>5,000 g</td>
<td>2,800 g</td>
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<td>Vegetables</td>
<td>2,800 g</td>
<td>2,600 g</td>
<td>4,000 g</td>
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ing tunnels received extra food. These rations were also varied several times (MARŠÁLEK 2006, 54 – see Table 2). The reason for the changes in official food rations were, according to the administrative report, problems with the harvest and in supply (PERZ 2013, 61, 187–188, 194–195, 203, 283). A further reason seems to have been the increasingly difficult food supply to the soldiers at the front. To guarantee their food supply, a cutback of the prisoners’ food rates had at least been considered (STÅHL 2010, 240). Although the official rations were richer in calories than the actual food received by the prisoners, they would still not have provided the calories needed to be able to continue doing the hard work a lot of the prisoners had to do (MARŠÁLEK 2006, 55). According to STÅHL (2010, 131), the theoretical plans for the daily meals in Wiener Neustadt, one of Mauthausen’s subcamps, contained an average of 3,000 kcals. Looking at the menu given for prisoners dated November 8–14th 1942, it shows a comparatively high amount of calories (2,500–3,000 kcal per day and person), but this is still not enough for people doing heavy labour in a quarry, for example (STÅHL 2010, 130–131).

Before I go further, it is important to remember, that this number of calories is only theoretical and not even near to the actual number of calories the prisoners’ meals actually contained. The actual amount of calories needed for people doing heavy labour lies approximately at 3,200/3,300 kcal for women, and 4,200/4,300 kcal for men (STÅHL 2010, 86). In contrast, the actual amount of calories that the prisoners received lay mostly between 1,400 and 1,500 kcal per day. Records of contemporary witnesses tell us about the even worse situation regarding the nutrition of prisoners during the last months of the camp (MARŠÁLEK 2006, 56). According to the records of former prisoner BAUM (1965, 19), prisoners received a few bites of mouldy bread for breakfast and soup in the evening, which confirms the reports of only between 600 and 1,000 kcal per day in the last months before the end of the war (MARŠÁLEK 2006, 56). There were even lengthy periods when the prisoners didn’t get any bread at all (BAUM 1965, 71). In his confession, SS-Standartenführer Ziereis, the commander of the camp, admitted weekly cutbacks of foot rations during the last months of the camp’s existence. According to him, the prisoners received no bread or meat at all over the last twelve days (WIESENTHAL 1946, 2). According to Pavel Branko, another former prisoner, they received only coffee substitute and a few pieces of mouldy bread during the last days (VEREIN FÜR GEDENKEN UND GESCHICHTSFORSCHUNG IN ÖSTERREICHISCHEN KZ-GEDENKSTÄTTERN 2013, 231).

There were also certain foods listed in the official food list for prisoners (see Table 1) which were reportedly never given to them, skimmed milk for example. A weekly ration of 1.75l skimmed milk per person was on the list of intended food for prisoners of concentration camps from the end of April 1944 onwards (MARŠÁLEK 2006, 54).

What did the meals of the prisoners look like in reality? There are many reports of contemporary witnesses describing their daily meals during their time in Mauthausen. Their reports are very similar. For breakfast, they received approximately 0.5l substitute coffee and 0.5l soup. At noon between 0.7 and 1.0l soup containing approximately 200 g turnip, 50 g potatoes, 20 g meat, a little flour or nutrient solution and water. In the evening, the imprisoned got 300–400 g bread, 25 g of sausage, sometimes around 25 g of margarine. On Saturday or Sunday evenings one tablespoon

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</tr>
<tr>
<td>Fat</td>
<td>100 g</td>
<td>100 g</td>
<td>100 g</td>
<td>56.66 g</td>
</tr>
<tr>
<td>Bread</td>
<td>1,400 g</td>
<td>1,400 g or less</td>
<td>1,400 g</td>
<td>1,100 g</td>
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of jam and one tablespoon of curd cheese were distributed instead of sausage (Maršálek 2006, 55; Verein für Gedenken und Geschichtsforschung in österreichischen KZ-Gedenkstätten 2013, 162). As previously mentioned, the amount of food distributed in 1945 was even smaller (Baum 1965, 19, 71). Certain groups of prisoners, such as Soviets, Poles, Jews or sick prisoners received even smaller portions than the rest of the prisoners (Maršálek 2006, 58; Stahl 2010, 62). In the case of Soviet prisoners, the administration justified their even worse treatment by reference to the ‘Treaty about Treatment of Prisoners of War’ which the Soviets had not signed at that time (Perz 2013, 59).

Alongside the small amount of food, there are also records mentioning its poor quality, for example, reports of former prisoners which tell us about rotten food (Baum 1965, 71). There are also complaints about rotten potatoes in the administrative report which mean that the SS was aware of this problem. Nevertheless, those rotten potatoes were given to the prisoners in their soup (Perz 2013, 40, 50–51, 194). Further regarding the food quality, there are also reports of low-quality meat (meat coming from emergency slaughter or animals that died in accidents etc.) being put into the prisoner’s soup from 1943 onwards. The reason for using that kind of meat lies in its cheapness as it was banned from sale in the regular food trade. From March 1943, some sort of tea replacement containing local plants was given to the prisoners instead of imported black tea (Perz 2013, 141–142).

Despite the permanent hunger and famine, there was also a great deal of cooperation between the imprisoned individuals. Acts like stealing food from the kitchen and sharing it with fellow prisoners were very dangerous, but they also saved many lives (Verein für Gedenken und Geschichtsforschung in österreichischen KZ-Gedenkstätten 2013, 215; Baum 1965, 61; Maršálek 1950, 9–10, 14). According to Maršálek (1950, 16) it was possible to steal 20–40 loaves of bread per day starting from the day on which a well-disposed political bread capo was installed. Beginning in 1940, privileged prisoners were allowed to shop in a special prisoners’ canteen. There, it was sometimes possible to buy additional food. However, this food was mostly inedible causing drastic health effects when consumed (Stahl 2010, 166).

As of October 29th 1942, the prisoners were allowed to receive food parcels sent by their relatives. Those parcels were not directly distributed to the prisoners, but, instead, the SS took away the more valuable food (e.g. bacon, butter, cakes). On receiving his package, the prisoner also had to share its content with the block elder (Maršálek 2006, 57; Stahl 2010, 66).

Some prisoners in higher positions acquired additional food for themselves by stealing it from the other prisoners. Others, who had access to the kitchen or the food storage areas, tried to steal as much food as they could. They used it for themselves and others. This stolen food saved the lives of many prisoners. Furthermore, some prisoners sold the stolen food to people from the SS. This means that the SS knew about the stealing and condoned it, as they benefited from it themselves (Stahl 2010, 156).

Between November 1942 and January 1943, there were food inspections in different concentration camps, including Mauthausen. The inspector of nutrition was Dr. Ernst Schenck who later conducted nutrition experiments in Mauthausen. He criticised the small doses of protein and fat as well as the low doses of vitamins in the prisoner’s daily food. Nevertheless, his only recommendations were to increase the amount of protein in the food. Further changes were not recommended, as otherwise, according to him, the civilian population would have suffered as a result (Stahl 2010, 145, 280).

Beginning in 1944, there was an observable tendency to adjust the food rations according to an individual’s qualifications and the importance of the different workplaces. This applied particularly to prisoners who were involved in projects related to the relocation of the armaments industry below ground (Perz 2013, 40, 226–227). In June of the same year, a part of the prisoners nutrition was changed to raw vegetables at the behest of Himmler. This occurred because he was convinced that this kind of nutrition could improve the poor health of the imprisoned. In addition to that, the prisoners got Sauerkraut to...
eat. To produce Sauerkraut, eight basins with a capacity of about 50 tons were built in the basement of the prisoner’s kitchen building (Perz 2013, 234, 263).

Taking a closer look at the nutrition situation during the last few months of the camp, we can take the storage of potatoes during that time for an example of the extreme reduction of the prisoners portions. In September 1944, according to the administrative report, 13,468 kg potatoes were needed. On November 18th 1944, the delivery of those potatoes was recorded in that report. The supply should have been enough to take care of the prisoners and the SS in Mauthausen and the subcamps at Gusen until July 31st 1945. However, as a result of the evacuation of many prisoners from other camps to Mauthausen from the beginning of 1945 onwards, the food supply was not guaranteed to last until the end of July 1945. Nevertheless, at the time of the camp’s liberation, the food storage contained sufficient potatoes to feed all the prisoners for another four months (Perz 2013, 262–263, 279–280; Baum 1965 105). Taking into account the previously reported extremely poor nutrition status during the camp’s last months, which was even worse than the months before (Maršálek 2006, 56; Baum 1965, 19), this demonstrates the drastic reduction in food portions and a possible plan to slowly starve the prisoners.

There are also a few cases of cannibalism reported where parts of the muscles or inner organs were cut out and eaten. To do this, prisoners used spoon shafts which were manually modified to knives (Stahl 2010, 83) (Fig. 1).

**Drinking water**

The SS used water from the nearby Danube which was pumped up to the concentration camp. A filter system was in fact available, but was never cleaned throughout the years. The water of the camp was contaminated with the bacteria *Escherichia coli* and other things. The prisoners were at liberty to drink this contaminated water, but doing so resulted in intestinal infections. Cases of typhus were also associated with drinking the water (Stahl 2010, 90).

**The prisoners kitchen building**

The prisoners’ food was prepared in the kitchen building, which was the second building on the right of the roll-call area, located opposite the barrack of the prisoners, (Stahl 2010, 60; Mitchell 2012, 2, 7, 15). Numerous cauldrons each with a capacity of between 300 and 500 litres stood in the cooking hall, which was on the ground floor. There were also rooms for washing the vegetables, offices, cold storage rooms and other storage areas. The cellar included a room for storing potatoes and other store rooms. From June 1944, tubs for Sauerkraut were installed in the cellar (Stahl 2010, 60–61).

As a result of the permanent expansion of the camp, cooking capacity was not sufficient for all prisoners from October 1941 onwards, so that cooking took place in two shifts (Perz 2013, 59). Another result of the increase in numbers was a shortage of large pots for the distribution of soup. For this reason there are records of additional purchases of such pots in the administration report (Perz 2013, 163, 172, 201, 215).
To be able to prepare meals in such large numbers, there had to be an extremely high number of prisoners working in the kitchen. These prisoners carried out jobs such as peeling potatoes, washing cauldrons, carrying the pots or cooking. The group who had to peel the potatoes consisted of 163 to 200 people in 1943. Prisoners assigned to an indoor site such as the kitchen, the SS canteen or the food store had the advantage of access to additional food. Another benefit was the low usage of calories in comparison to prisoners working in the quarry and hence less weight loss over the same period of time (Stahl 2010, 120–121; Mitchell 2012, 2, 7).

Archaeological finds of prisoners’ eating devices

Own a bowl or any other vessel that could hold soup was one of the main requirements for survival in the concentration camp (Verein für Gedenken und Geschichtsforschung in österreichischen KZ-Gedenkstätten 2013, 96). Among the finds from Mauthausen, are several billy cans which the prisoners used for soup (Fig. 2).

If the prisoner did not have a vessel for soup, he did not get any. This fact, which led to reported thefts of eating devices among the prisoners, led to prisoners carrying the spoons and bowls on their person (Verein für Gedenken und Geschichtsforschung in österreichischen KZ-Gedenkstätten 2013, 96). Among the archaeological finds, there are spoons which have a hole in their shaft for tying them to the prisoner (Fig. 3).

Furthermore, the prisoners often marked their few possessions with their prisoner’s number, initials, names or something else. One billy can, for example, shows such marks: Manually scratched numbers, which could maybe represent the prisoners’ own identification number and a triangle, which could possibly represent the prisoner’s prisoner category (see Fig. 2).
Such marks ought to secure the prisoners possession against theft or make it retrievable in case of theft (Stahl 2010, 80), but such markings were also important to preserve the prisoner’s identity and dignity.

As there were not enough bowls, other vessels and spoons for every prisoner, the administrative report tells us about orders of such objects. On November 25th 1942, a delivery of 8,000 steel spoons marked with a “G” (= “Gefangener”, German for prisoner) is noted. So far, we have no spoons marked with a “G” among the archaeological finds. Deliveries of wooden spoons are also noted in the administrative report. Three deliveries of 5,000 wooden spoons each were listed on May 25th 1943, September 25th 1943 and April 4th 1944 (Perz 2013, 115, 164, 184, 215). Such wooden spoons have not yet been found.

Nevertheless, bowls and spoons were goods in short supply. Often there were only a few bowls in each barrack and the prisoners had to share them so that everyone could receive some soup (Stahl 2010, 80).

The expansion of the camp in 1944 was reflected in deliveries of dishes for the prisoners from Dachau. 3,000 pieces of cutlery, 500 bowls and 5,000 cups were delivered from there on April 27th 1944. On September 7th 1944 there was another delivery of 3,000 bowls (Perz 2013, 222, 261–262).

Due to the fact that the possession of forks and knives was forbidden, knives in particular were manufactured illegally by hand (Perz 2013, 257; Verein für Gedenken und Geschichtsforschung in österreichischen KZ-Gedenkstätten 2013, 96, 202). They were made of spoon shafs or any other materials the prisoners were able to obtain. They also used old saw blades for example as can be seen in Fig. 4 (Verein für Gedenken und Geschichtsforschung in österreichischen KZ-Gedenkstätten 2013, 96, 202).

Reports tell us about the varying of nourishing content during soup distribution in Mauthausen. People at the beginning of the line for soup, mostly got fluid and hardly any other content, whereas those at the end of the line, when the tank of soup was almost empty, received most of the vegetables (Verein für Gedenken und Geschichtsforschung in österreichischen KZ-Gedenkstätten 2013, 97, 99). Although the latter got more of the nourishing parts, there are also reports of sand and stones in the soup (Stahl 2010, 170). An artistic portrayal by the former prisoner Ángel Hernández García called ‘La soupe’ shows us, that large pots were used for the distribution of the soup (Verein für Gedenken und Geschichtsforschung in österreichischen KZ-Gedenkstätten 2013, 96). One of these pots is preserved among the archaeological finds (Fig. 5).

Nutrition of the ill

In the sanitary camp (the former Russian camp), the prisoners had to cope not only with the complete lack of running water there, but also with food rations of only half of those of healthy prisoners (Verein für Gedenken und Geschichtsforschung in österreichischen KZ-Gedenkstätten 2013, 162, 166; Marsálek 2006, 57). The sanitary camp had its own kitchen (Stahl 2010, 140; Theune 2015, 16). According to the SS, the diseased got additional food, such as milk, eggs, butter and curd cheese. There are no confirmations from former prisoners of such additional supplies (Stahl 2010, 140).
What did the food rations in the sanitary camp look like? According to former prisoner Maršálek (2006, 58), the diseased got the following daily portions in 1943 and 1944: 0.5 l soup or coffee substitute, 0.5 l turnip soup, approximately 360 g brown bread and 20 g margarine. In 1945, a cutback of food rates for prisoners took place. From now on the sick got 0.25 l coffee substitute, 0.4 l turnip soup and until March 3rd 1945 in irregular intervals 360 g brown bread, afterwards there was only 100 g to 200 g brown bread in irregular intervals.

A few ill privileged prisoners might be accommodated in the SS infirmary. Those prisoners received, according to the administrative report, extra food rations in the form of milk, butter, eggs and sometimes meat. The camp statistics from May 15th 1944 show that these privileged prisoners only represented a very small percentage of all sick prisoners. On that day, 50 sick prisoners were listed in the SS infirmary and 5,723 in the sanitary camp (Ptěz 2013, 227).

### Nutrition Experiments

On August 12th 1942, Heinrich Himmler authorised nutrition experiments in concentration camps (Stahl 2010, 246). In the camp at Mauthausen three different kinds of nutrition experiments took place: Famine-oedema observations, experiments with different forms of nutrition and experiments with a type of synthesized sausage. The head scientist in those experiments was former nutrition inspector Dr. Ernst Schenck (Stahl 2010, 280, 282, 294).

The famine-oedema observations aimed to analyse the health consequences of the oedemas. Primary attention was laid on changes in the blood circulation and cardiac functions. A possible connection between nutritional condition and the size of the oedemas was also to be examined. 60 prisoners were used for this examination. Out of those, 48 were Poles, Soviet citizens or Yugoslavs. Five prisoners were French, five were German, one a Czech and one a Bulgarian. The observation started in July 1943 and lasted until May 1944. Each prisoner was observed for approximately six weeks. 20 of the 60 prisoners had to undergo an ECG to determine changes in cardiac functions. The outcomes of these observations are unknown (Stahl 2010, 280–281).

The experiments concerning different forms of nutrition took place in summer 1943 and from December 1943 until July 1944. The aim of these experiments was to determine the most suitable form of nutrition for prisoners. 450 prisoners were investigated during the first experiment conducted in summer 1943. Three groups each consisting of 150 people were given a different kind of nutrition. The first group received the standard prisoners nutrition, the second group got the same as the first group but in addition 30 g of yeast per person daily. The third group got a so-called “Eastern form of nutrition” consisting of 200 g millet, 550 g of ground wholegrain, 1,200 g vegetables, 400 g potatoes plus a portion of fat and salt. This group did not get any bread at all. During the period of this experiment, the prisoners had to work in the quarry. Schenck concluded absurdly that all these forms of nutrition were suitable for the prisoners. According to him, they even improved the prisoner’s health conditions (Stahl 2010, 283).

In the course of the second period of experiments (December 1943 until July 1944) a total of 370 prisoners, mostly consisting of invalids, ill people, and people who were older than 55 years old, were analysed. This time again three groups of prisoners each received different forms of food. The first group, consisting of 150 people, received the previously mentioned “Eastern form of nutrition”, this time composing 1,000 g ground millet, 650 g ground rye, 1,000 g vegetables, 25 g fat, 20 g flour, sweet pepper spice and 60 g salt. It has to be said, and this applies also to the first period, that this amount of food only existed on paper and was never actually delivered to the prisoners. Instead, they received significant smaller portions consisting of a thin slurry made of corn, wheat, barley, millet or ground oats three times a day. Oedemas occurred more frequently in this group compared to the other two groups examined as a consequence of the highly liquid form of nutrition.
The second group, consisting of 110 people, received the standard prisoner’s
nutrition, while the third group, also consisting of 110 people, received the
same as the second with additionally 30 g of yeast. Schenck attributed the
development of oedemas among the first group to a protein deficiency. Fur-
thermore Schenck held this form of nutrition responsible for better health
in contrast to the other two forms of nutrition. During the experiment, all of
the participants had their weight controlled and 20 prisoners had their urine
controlled. The occurrence of oedemas was measured, a blood check took
place and an analysis of Vitamin B₁ and Vitamin C was carried out. 20 prison-
ers of each group had to go through a monthly ECG. Upon completion of the
experiment, 48 of the prisoners were sent to a “Recovery Camp” which actu-
ally meant their death, eight prisoners are reported to have been discharged
and at least 116 are reported to have died. The highest mortality rate of 53 %
was among the group receiving the standard prisoner’s food. For this reason
that form of nutrition was decided to be the most inappropriate form of nutri-
tion for the camp’s prisoners (Stahl 2010, 283–287, 289, 291; Maršílek 1950,
64). There do not, however, seem to have been any changes in nutrition as a
consequence of this fact. On the contrary, as previously mentioned, the food
rations became even smaller (Maršílek 2006, 56; Baum 1965, 19).

According to reports from contemporary witnesses, who had to take part
in the experiments and survived, the protocols of these experiments do not
reflect the actual procedure taking place. This refers both to the reported
amount of food and to the methods used in the experiment (Stahl 2010,
287–288).

To counteract the protein deficiency, a so called “Biosyn-technique” was
developed. By using this technique, a meatless “Biosyn-sausage” which was
relatively rich in proteins was created. Mycelium was used for this. To find out,
whether the human body was able to deal with such a sausage, it was fed to
prisoners in the concentration camp Mauthausen. This started in July 1943 in
spite of the well-founded concerns that existed even beforehand. As a con-
sequence of the consumption of the Biosyn sausages, many prisoners were
afflicted with intestinal diseases or even died (Stahl 2010, 294–295, 303–304).

The consequences of the poor nutritional situation

Malnutrition over such long periods of time caused drastic vitamin defi-
ciency. According to former prisoners, open and purulent wounds occurred
as a result of such deficiencies and did not heal (Verein für Gedenken und
Geschichtsforschung in österreichischen KZ-Gedenkstätten 2013, 167).
Many prisoners died due to undernourishment because a massive reduction
of body fat and proteins took place (Verein für Gedenken und Geschichts-
forschung in österreichischen KZ-Gedenkstätten 2013, 167; Stahl 2010, 199).
During the period 1941 to 1943, when Soviet prisoners were held separate-
ly and were receiving half the normal food rations, that group of prisoners
suffered especially from high mortality rates due to malnutrition (Pétrz 2013,
60–63).

Women and adolescents showed hormonal consequences due partly to
malnutrition. In the case of adolescents, hormonal development was dis-
turbed, which often resulted in puberty occurring at the very late age of 18
to 20. The hormonal imbalances of women often resulted in menstrual disor-
ders (Hottinger 1948, 35–37; Bauer 2009, 104).

Immediately after the liberation of the prisoners, many of them showed a
Vitamin A hypovitaminosis, a Vitamin B avitaminosis, a Vitamin C hypovita-
minosis as well as an iron deficiency (Stahl 2010, 199). Those deficiencies led
to many different consequences (Hottinger 1948, 40, 45–46, 158–176). Many
of those prisoners, who survived until the liberation of the camp on May 5th
1945, died afterwards as a consequence of voracious eating which their body
was not able to withstand (Bundesministerium für Inneres 2005, 142; Hot-
tinger 1948, 114).
Those, who survived the imprisonment at a concentration camp, had been shaped by the time spent in the camps. As a result of the malnutrition suffered, many of the former imprisoned handled food very carefully and rarely threw food away (Stahl 2010, 84).

**Nutrition of the SS perpetrators stationed in the Mauthausen concentration camp**

Not only the prisoners, but also the SS had to live on precise food rations. The official food rations for the SS depended on which camp they were stationed in. For example, the men at the camp on the Loibl Pass were assigned a better food ration and a mountain bonus, which the men at Mauthausen did not receive. It is noted in the administrative report, that there were also changes to SS food rations. Such changes were noted on June 27th 1943 and September 1st 1944. In the course of the cutback in September 1944, the official ration of fresh meat was reduced from previously 680 g to 640 g per week. The daily bread ration was cut from 700 g to 650 g (Perz 2013, 171).

Perz’s assumption (2013, 171) that such cutbacks in food rations led to the increased willingness of SS men to help themselves by taking food intended for the prisoners seems to be true. According to Maršálek (2006, 55), the SS and the civilian staff had been stealing food from the camp’s prisoner food supply. The sugar ration intended for prisoners is mentioned as a concrete example. Sugar was never handed on to the prisoners but instead was acquired by the SS and possibly also some of the civilian staff for their own purposes (Stahl 2010, 152–153). In contrast to the deterioration of the nutritional situation of the prisoners in 1944, special rations were given weekly to the SS during the period November 27th to December 24th 1944. These included an additional 240 g meat per week. On December 24th, when the SS celebrated the “Julfest”, additional articles for soldiers consisting of 500 g of so-called Printen (a type of gingerbread), 60 g of sweets and one cigar or three cigarettes per person were distributed. According to the administrative report, a bottle of wine, 0.5 l of spirituous beverages, 50 cigarettes, 500 g pastries, 125 g of biscuits, 180 g sweets and 250 g apples were distributed per person at the Julfest 1943 (Perz 2013, 200–201, 284–285).

Normally, the daily meals of the SS personnel in Mauthausen began with soup, sweetened coffee or tea and bread with jam or honey for breakfast. Once a week they had stew with meat, vegetables and potatoes for lunch. The remaining days of the week the men had soup, fish or meat, vegetables and potatoes for lunch and alternatingly compote or pudding for dessert. The dinner consisted of soup, coffee or tea, butter, sausage and cheese sandwiches (Maršálek 2006, 56).

**Drinking water**

Due to the bad quality of the water in the camp, the SS and civilian staff were forbidden to drink it if it had not been boiled beforehand. A special mineral water, called “Sudetenquell” was bought for them. The contaminated water was suspected to be responsible for typhus which also occurred among the SS during the summer of 1941 (Perz 2013, 141–142).

**Archaeological finds of the SS perpetrators’ eating devices**

The SS kitchen and the SS food store were located in the SS barracks area (Stahl 2010, 61). As a result of its high breakage rate, tableware was often ordered to replace broken objects. One of the supplying companies was called Rechberger. This company provided the necessary tableware objects several times. Alongside plates, cutlery, cups and glasses, there are also reports of
coffee pots, beer glasses, grog glasses and jugs for lemonade being delivered. There were also tableware deliveries in 1944 for the use of the SS arriving from other camps such as Auschwitz. Such a delivery on September 18th 1944 was noted in the administrative report. This delivery included 10,000 forks, the same number of spoons and 900 pieces of earthenware (Perz 2013, 63–64, 129, 174, 190, 257).

Not only many fragments of tableware but also parts of glasses for wine and sparkling wine have been found (Fig. 6).

A spatula and a frying pan can also clearly be assigned to the SS, since we know, that the prisoners’ food was cooked in large cauldrons (Stahl 2010, 60) and therefore, that such equipment was more likely to be used in the preparation of the perpetrators’ food. A knife displaying the Reichsadler testifies that the SS had the possibility of buying and using knives, unlike the prisoners.

Fragments of Fanta bottles, which can in some cases be assigned to the active period of the camp, also seem to clearly belong to the SS and not the prisoners. Fragments of beer bottles are evidence of alcohol consumption by the SS while the prisoners suffered.

A fragment of a glass, with the label “Imke” is a possible indicator for the use of honey (the German “Imkerei” means apiary). According to Marsálek (2006, 56), the SS regularly had honey for breakfast, so this find can clearly be assigned to the perpetrators.

Acquisition and storage of food

The concentration camps received the necessary food through the local food bureau, which handed out coupons. The food bureau for Upper Austria was in charge of assigning food coupons to Mauthausen (Perz 2013, 59; Bauer 2009, 50). These were used to acquire the food needed.

The camp also had an agricultural holding, the manpower of which was mainly based on prisoners. The herb garden alone covered an area of 3,300 m² (Perz 2013, 64–65). Furthermore, there was a fruit orchard and a nursery, including a greenhouse (Stahl 2010, 61).

According to the administrative report, the yield of dried spices in 1941 was a total of 333 kg, while a total of 121 kg sunflower seeds was harvested (Perz 2013, 64). In July 1944, a profitable harvest was reported. Only the yield of beans was reported to be below average (Perz 2013, 246). On September 30th 1944, a profitable harvest was reported again. The yield of celery, onions, leeks and lettuce was particularly satisfactory. The yield of tomatoes and cucumber was reported to be only average, due to belated planting. In this entry in the administrative report, it is mentioned for the first time that parts of the harvest were also used for the prisoners’ food (Perz 2013, 267).

The camp even had its own pig farm. Waste from the camp was used for feeding the pigs. The number of pigs increased monthly. At the end of July 1944, the piggery held 122 pigs, by the end of August 1944 there were already 127 pigs and by December 15th, 1944 the number of pigs had increased to 134 (Perz 2013, 103, 120, 246, 260, 283).

Nevertheless, the yields of the camp’s own agricultural holdings alone were not enough to provide all the food needed for the prisoners and the SS (Perz 2013, 203).

Due to the fact that thousands of prisoners and many SS-officers had to be supplied in the camp, huge storage capacities for food were needed. A large part of the food supplies was stored in the food depot (Stahl 2010, 61).

Linked to the problems of not having enough storage areas for the food was the permanently increasing number of prisoners. This meant that huge amounts of food could not be stored appropriately. The potato storage problem is an example of this situation. At first, the potatoes were stored in rented carts, later it was necessary to excavate earthen cellars (Perz 2013, 50, 110–111). In 1942 additional potato bunkers were built in order secure sufficient storage room. Unfortunately in 1943 the storage room was still not enough due to the
increasing number of prisoners. Only half of the potatoes needed could be stored in these bunkers. The drastic increase in the number of prisoners in 1944 resulted in a fresh lack of food storage. New storage possibilities had to be found once more. A barrack was therefore used for food storage. As a result of the permanently increasing number of prisoners, there was also a shortfall in the bread supply as the bakery in Linz (Heeresbäckerei) was not able to deliver sufficiently large amounts of bread. For this reason the camp built its own bakery (Gusen III). In the meantime, additional bakeries were hired in 1944 to deliver additional bread. These were the bakeries “Brotfabrik und Kunstmühle” in the town of Steyr and the bakery “Ringbrotwerke Neuhauser und Obermeyer” in Linz (PERZ 2013, 51, 137, 187–189, 213, 260–261; MARŠÁLEK 2006, 56). The storage of bread took place in so-called “bread-collection-points” (BAUER 2009, 60).

From December 26th 1944 onwards, the bakery at Gusen III was integrated into Mauthausen’s administration. Bread production at Gusen III was never able to provide enough bread for the camps in Mauthausen and Gusen, so that the Linz and Steyr bakeries continued their bread deliveries. This was because Gusen III was never completed. Not all of the ovens there were installed before the end of the war (STAHL 2010, 124–125).

Conclusion

Summing up, the nutrition of Mauthausen’s prisoners can be described as follows: It was a form of nutrition mainly consisting of low calorie vegetables (turnip, greens) as well as an exaggerated percentage of carbohydrates (potatoes, bread) in comparison to proteins and fat. Sawdust and bits of sweet turnip were added to the bread. There are also reports of mouldy bread and of rotten potato peel in the soup. Even though there was a high percentage of carbohydrates in the prisoners food, the total amount was insufficient as was the total amount of proteins and fat. Parts of the meals were of bad quality, inedible for human beings or even harmful to the human body. In contrast, the quality and quantity of the SS men’s meals was good and as diversified as possible (STAHL 2010, 197, 200).

While it is not always possible to assign archaeological objects to either the SS or the prisoners, there are many objects for which this can be done. Objects like plates or “normal” spoons without any manual modifications can often not be assigned to a certain group. The fact, that during the last days of the camp, when the SS had fled, the prisoners used objects which previously belonged to the SS (BAUM 1965, 19), is another difficulty. It means that the location where an object was found is not the sole indicator for its previous owner.

On the basis of the few archaeological items presented here which could be assigned to a certain group, one can, however, clearly recognise the nutritional differences between the SS personnel and the prisoners in the camp at Mauthausen.

Bibliography


BAUM 1965: B. Baum, Die letzten Tage von Mauthausen (Berlin 1965).


Konzentrationslagern (Basel 1948) 13–120.
Wiesenthal 1946: S. Wiesenthal, KZ Mauthausen (Linz/Wien 1946).