Bojs, Karin. "Ötzi the Iceman." *My European Family: The FIRST 54,000 years*. London: Bloomsbury Sigma, 2017. 208–213. *Bloomsbury Collections*. Web. 26 Apr. 2023. <<http://dx.doi.org/10.5040/9781472941480.0029>>.

Downloaded from Bloomsbury Collections, www.bloomsburycollections.com, 26 April 2023, 14:42 UTC.

Copyright © Karin Bojs 2017. You may share this work for non-commercial purposes only, provided you give attribution to the copyright holder and the publisher, and provide a link to the Creative Commons licence.

Ötzi the Iceman

But before going further and following the first farmers of Skåne on their journey northwards into Sweden, I make a detour southwards to the Alps. At a museum in the northern Italian city of Bolzano, I pay a visit to Ötzi.

‘The Iceman from Tyrol’, as he is also known, was discovered in 1991 by a German couple on holiday, the Simons. They came across the body while out hiking near the Ötz Valley, hence the Iceman’s nickname. Assuming he was a mountaineer who had had a fatal accident, the Simons immediately rang the police and the Alpine rescue service. However, forensic experts quickly realised that Ötzi was very old – so ancient, in fact, that he was a case for archaeologists rather than forensics. He was, to be precise, 5,300 years old. For all those years he had lain frozen in the glacier until the ice was melted by unusually hot weather. As luck would have it, the German holidaymakers chose to turn aside from their waymarked path, so they happened to pass by just as Ötzi was beginning to thaw out.

And there was another coincidence: Ötzi had died just before it started to snow. Owing to the cold, the dry air and the protective covering of snow, which gradually turned into ice, his body was mummified by natural processes. Quite simply, he was freeze-dried.

Ötzi’s exceptionally well-preserved body and the artefacts discovered around him make him one of the most informative finds ever in European archaeology.

His story is an eventful one. For example, it was long unclear which country had a rightful claim on him. Eventually, it was established that he had been found 90 metres (295 feet) from the border, in the Italian region of

South Tyrol – which is why he is now in the museum in Bolzano.

A few years on, researchers discovered he had been the victim of a murder, albeit one committed 5,300 years ago. Someone had shot him from the back with an arrow that struck him high up on his left shoulder blade. The arrow hit a blood vessel, injuring him so badly that he must have bled to death within a few minutes. He also seems to have suffered a blow to the head just before he died, possibly as his killer attempted to pull the arrow out.

All this can be learned at the museum in Bolzano, where the visitor can look through a glass pane at Ötzi himself, lying naked and dried out in a cold store, his skin brown and leathery. You can also see a full-size reconstruction that shows what he probably looked like when alive (please see central plate section). It is based on the appearance of the corpse at the time of discovery.

The model shows a man aged about 45 and about 1.6 metres (5¼ feet) tall. Though thin, at just 50 kilos (110 pounds), he is nonetheless strong and lithe. His eyes are brown. He has a dark beard, and his dark brown hair is long and wavy, falling at least to his shoulders.

The exhibition also displays garments found where the glacier had thawed. There is a striped cloak of goat hide and a loincloth of goat leather. Ötzi's leggings were also made of goat hide, with deerskin laces designed to keep the snow out. Ötzi's cap is made of bearskin, while his shoes had deerskin uppers and bearskin soles, and were lined with hay. His belt, made from the hide of a calf, contained several tools of flint and bone.

He had a flint dagger, a large bow and a quiver made of chamois hide reinforced with hazelwood. The quiver contained a number of half-finished arrows made of young shoots from guelder rose trees (*Viburnum opulus*). A birch-bark container seems to have been used to carry glowing coals. If the glow went out, he would have been able to make fire again by striking a piece of pyrite against a piece

of flint and igniting a scrap of tinder fungus with the spark. He had on him all the tools for lighting a fire and keeping it going. There was also a woven net for trapping prey and a device for carrying the wildfowl he had killed. Researchers identified a mat made of grass fibres as a sort of raincape. They think a structure made of hazel twigs was a framework for a backpack, or possibly a pair of snowshoes.

The equipment bears striking similarities to that used by outdoor activities enthusiasts today. The materials used, of course, are quite different from today's glass fibre and synthetic fabrics that 'breathe'. There are no fewer than 18 types of wood in Ötzi's gear, plus hides, sinews and bones from various species of animal and fibres from several plant species.

His intestinal contents reveal that his last meal consisted of wheat, plant material and goat meat. His knee joints show signs of wear and tear, suggesting he led a vigorous life in the mountains. Nor are his teeth in perfect condition. The necks of his teeth are inflamed, for one thing. The chewing surfaces are worn, both by Ötzi's penchant for using his teeth as tools, and as a result of eating flour containing traces of millstone grit.

His lungs show traces of soot particles, showing he often sat next to smoky fires. He suffered from Lyme disease, spread by ticks, rheumatism, and an intestinal parasite called the human whipworm (*Trichuris trichiura*), which is borne by dirty water. He would often have suffered from pain in his joints and back.

This may explain why he had recourse to acupuncture. His skin bears tattoos shaped like tiny strokes. Many of them are at exactly the same points as those used by traditional acupuncturists. Presumably tattooing was a way of trying to dull the pain. Before Ötzi's tattoos were detected, acupuncture had been thought to be a purely Chinese tradition. However, there seem to have been similar ideas in Europe as far back as 5,300 years ago.

Earlier in his life Ötzi had broken some ribs and a nasal bone. His nails bear several horizontal furrows caused by illness, malnutrition or severe stress.

Isotopes in his teeth and bones indicate that he came from a valley about 60 kilometres (40 miles) to the east. However, he appears to have spent his adult life in a valley much closer to the spot where he was found.

There have been numerous speculations, some more well-founded than others, about Ötzi's identity. There is much to suggest that he was a herdsman who kept watch over his clan's livestock in the mountains. He may also have been the chieftain of a clan that was at loggerheads with other clans. Alternatively, he may simply have been a thief and bandit living the life of an outlaw – or maybe he was a shaman and coppersmith.

He cannot have been an ordinary, run-of-the-mill man, as his pack contained an axe with a copper blade. Ötzi died on the cusp of the Neolithic era – the farming Stone Age – and the period known as the Chalcolithic era (the Copper Age) in the Alpine region. Objects made of copper made their appearance at this time, but they were infrequent. A copper-bladed axe must have been a very rare and costly artefact.

Traces of arsenic in his body reveal that Ötzi himself worked as a coppersmith, which must have been a high-status craft. The ability to transform stones into gleaming metal with the aid of fire must have been regarded as something extraordinary – indeed, nothing short of magical.

Ötzi was the first prehistoric individual to undergo DNA analysis. In 1994, researchers were already able to analyse his mitochondria in general terms and establish his haplogroup. He turned out to belong to haplogroup K, which we now know to be a typical marker of the expansion of early farming in Europe.

It later emerged that haplogroup K was already present in very early Syrian farmers living 10,000 years ago. The same

group was also found in farmers belonging to the Starčevo culture in Hungary 7,800 years ago, and it was common among the Linear Pottery farmers of Germany 7,500 years ago. Today, about 6 per cent of the European population belongs to haplogroup K. It is more common among Kurds, Druze people and Ashkenazi Jews. However, more detailed subsequent analyses have shown that Ötzi belonged to a subgroup of haplogroup K that has no other known members today. It is known as K1Ö, with Ö standing for 'Ötzi'.

In 2011, researchers also succeeded in analysing Ötzi's Y chromosomes, enabling them to unravel his paternal lineage. This revealed that his closest relatives in Europe's present population are to be found mainly on Corsica and Sardinia. Ötzi's Y chromosomes belong to haplogroup G, again a typical marker for the expansion of early agriculture in Europe. To be precise, he is part of a subgroup called G2a4, which occurs in less than 1 per cent of the population of Europe as a whole. However, in southern Corsica and northern Sardinia, nearly a third of all men belong to this rare haplogroup.

This study was followed in 2012 by a very detailed analysis of the Iceman's nuclear DNA, which enabled the researchers to make statements about a number of his inherited traits. They could confirm that he had brown eyes and wavy brown hair. Moreover, he was genetically disposed to furred arteries, as researchers had already observed when they first examined his body, and he was unable to digest milk as an adult, since he lacked the enzyme that breaks down lactose. In other words, he was lactose intolerant.

These analyses of Ötzi's nuclear DNA confirmed that he was a typical representative of early Stone Age farmers, and that the people of Sardinia are those closest to him today. This can be explained by the fact the earliest farmers spread out over large areas of Europe, including the Alps and

Sardinia. New waves of migration affecting most of Europe have diluted the genetic material inherited from the first farmers. However, more isolated areas on islands and in mountainous areas of southern Europe have maintained clear traces of Europe's first farmers.