

DEAD MEN TALKING

METALS AND MONUMENTS IN EUROPE

For someone who has been dead for more than 5,000 years, the Iceman has a lot to say. He's the best preserved corpse of an ancient man found yet. Most bodies that old have deteriorated until they're nothing more than bits of bones—but not the Iceman, even his eyeballs still remain.

Two hikers found the Iceman in the Italian Alps in the fall of 1991. A melting glacier had revealed the top half of his body. At first everyone thought he was a skier who got caught in a blizzard. Hundreds of people have accidents in the Alps every year. A policeman hacked the Iceman out of the glacier with an ice pick and ski poles he borrowed from passing hikers. He noticed an ax lying nearby that looked primitive, but didn't make much of it. What finally tipped him off to the fact he was dealing with an ancient body was

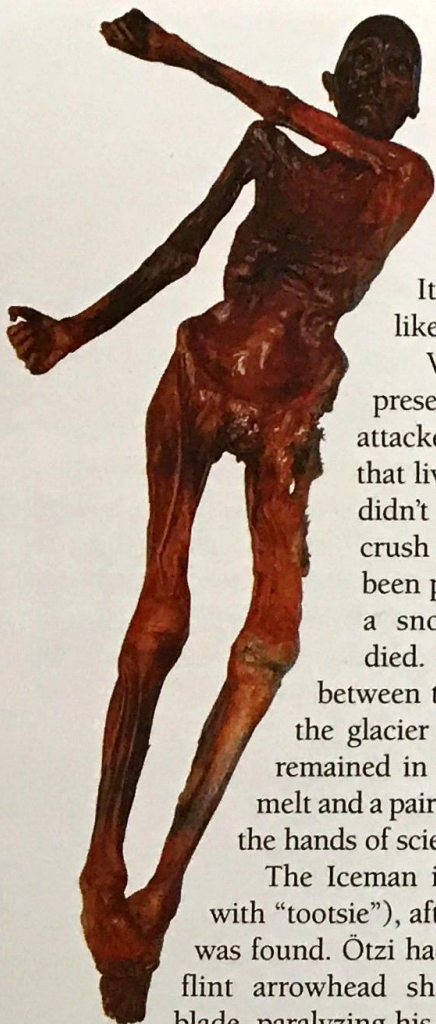


“ HUMAN REMAINS AND ARTIFACTS IN ITALY AND ENGLAND

EASY DOES (N'T) IT

Now that the world knew the Iceman was ancient, the way that he was removed from the glacier seems almost barbaric. His ribs may have been cracked when he was pried out of the ice. The jackhammer used to break up the ice slipped several times and tore through the corpse. It severed the Iceman's dried flesh to the bone around his left hip, buttock, and thigh. The frozen brain shattered from repeated blows to his head against the ice as people tried to yank him free. And his upper left arm snapped in two when he was forced into a wooden coffin. Not only do scientists grieve over the damage done to the Iceman's body, but also over the lost information that could have been obtained through careful excavation.

44 *Homo sapiens sapiens* remains, Ötztal Alps, Italy, 5,300 years ago



Ötzi's body is kept in cold storage in a museum in Italy at a temperature of about 20 degrees Fahrenheit to prevent further decay.

the flesh. Fresh corpses exposed to the elements have a milky appearance. Fat in the skin mixes with moisture in the air and turns soapy. But the Iceman's skin wasn't white. It was brown and leathery—like an overcooked turkey.

Why was this body so well preserved? Why hadn't it been attacked by flies, foxes, and bears that lived in the mountains? Why didn't the weight of the glacier crush the Iceman? He must have been protected from predators by a snowstorm shortly after he died. He lay facedown in a gully between two ridges. The ridges held the glacier away from him. There he remained in a deep freeze until a freak melt and a pair of hikers delivered him into the hands of scientists.

The Iceman is known as Ötzi (rhymes with "tootsie"), after the Ötztal Alps where he was found. Ötzi had been shot in the back. A flint arrowhead shattered his left shoulder blade, paralyzing his left arm. He died from the wound. Was he a shepherd murdered for his flock? A trader killed for his wares? While some scientists struggle with the questions about his death, others work on Ötzi for information about his life. They wonder if Ötzi can tell them what life was like for Europeans 5,300 years ago.

First scientists wanted to know where Ötzi grew up. They looked at the minerals in his tooth enamel. Food contains minerals from the water and soil where it is grown. As teeth develop they use these minerals for building blocks. Scientists compared the mineral content in Ötzi's teeth to soil in different areas to pinpoint where he spent his childhood.

They determined that he spent his childhood just south of where he was found and his adult life 37 miles north of where he was found.

Then scientists asked Ötzi what people ate in Europe 5,300 years ago. Ötzi's colon answered. It contained wild goat, barley, and cereal. His last supper was red deer and more grain. They found evidence of cooked bread made from wheat—not wild wheat, farmed wheat. Europe had begun farming. They also found pollen in his colon that he must have swallowed in the spring—and that came from plants in Italy. Ötzi had died in the spring on his way out of Italy.

Although Ötzi's colon told scientists that people were farming in Europe, it didn't tell how farming *got* to Europe. Did people like Ötzi bring seeds and cows from fertile farmlands? Or did the northerners hear rumors about other people farming and experiment on their own? Don't even get those scientists started on why. Some argue that climate change was pressuring the Europeans to get busy farming so there would be food on hand. Others argue that there were so few people in Europe that what grew wild was plenty. So why did they begin to farm? Ötzi's colon isn't saying.

Could Ötzi tell scientists how healthy Europeans were 5,300 years ago? Ötzi had arthritis and hardening of the arteries. He'd suffered from a stroke—and recovered. His lungs were black from hearth smoke. His intestines were loaded with parasites that he'd caught from animals. He had fleas. But he didn't have any tooth decay!

Not only had Ötzi avoided rotting; all his stuff had been spared, too. Things that rarely survive thousands of years were found with him—clothing, a wooden ax handle, arrows. Scientists figured that people in Europe had to have worn clothing to keep warm. They just didn't know what the clothes looked like. Now Ötzi's things would show them. His shoes were made from leather and plant fiber and stuffed with grass for warmth. They kept his feet warm and dry. His leggings were made from animal skins. In fact, most of his clothing was made from animal skins. If Europeans were weaving cloth, Ötzi isn't telling.

PEAPODS AND FAMILY PORTRAITS

Plants have family trees, too. Crop evolution can be tracked through the plant's DNA. Scientists begin by collecting DNA from the plant's wild ancestor and then follow the DNA changes created by farming.



44 Bearskin cap, Ötztal Alps, Italy, 5,300 years ago

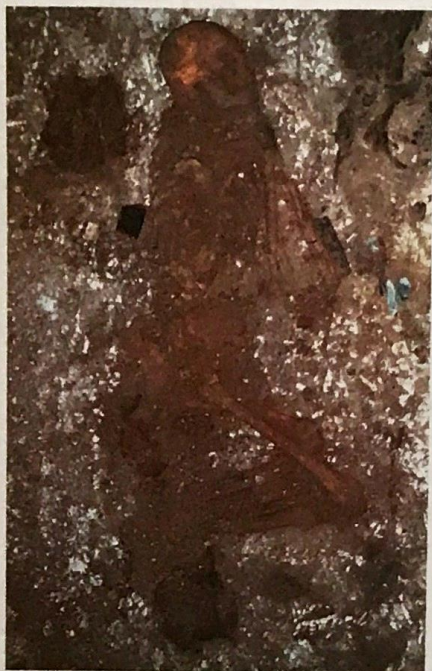
Two of his arrows still had feathers. They were attached in such a way to make the arrow spin. Ötzi must have known that if an arrow spins, it will fly true. It won't tip up. It won't tip down. It will fly straight. Ötzi understood physics!

He also carried fire around with him—embers wrapped in maple leaves, tucked into a birch-bark container. But the item Ötzi carried with him that is most curious was his ax. What was a Stone Age European doing with a copper ax? Not many people had started making things out of metal yet. That started in the Bronze Age. It was still the Stone Age—wasn't it?

In May 2002 archaeologists in Britain found the remains of a man who was from the early Bronze Age, about 4,300 years ago. In his grave were things made from metal to prove it. Buried with

him were one hundred items, including three copper knives and a pair of gold earrings. The archery equipment from which he got his name includes 16 stone arrowheads and a slate wrist guard. The Amesbury Archer picks up the story where the Iceman left off.

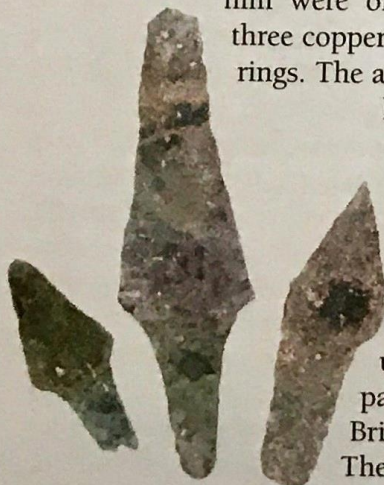
The Archer's tooth enamel shows that he grew up in the Alps—the Iceman's part of the world—not in Britain where he was buried. They both died when they were about the same age—around 40



This is all that remains of the Amesbury Archer, who was buried 4,300 years ago along with his possessions.

66 *Homo sapiens sapiens* remains, Amesbury, England, 4,300 years ago

66 Copper knives, Amesbury, England, 4,300 years ago



BRONZE AGE

5,300 years ago
Ötzi the Iceman killed in the Alps

About 5,000–3,500 years ago
Stonehenge built and used in England

4,300 years ago
Beginning of the Bronze Age in Europe; Amesbury Archer buried near Stonehenge, England

years old. And they both suffered. The Archer appears to have had an accident a few years before he died that ripped his left kneecap off. The injury would have made the Archer walk with a stiff leg that he had to swing out to the side. He had an abscess on his jaw and a bone infection. He was in constant pain.

The Archer didn't die alone in the mountains like the Iceman. He was buried. And he was buried elaborately. It seems as if all the items placed in his grave were for him to use in the afterlife. He had everything he might need—clothes, tools, weapons, and pots. It looks as if the Archer was a rich and powerful man. In our world rich and powerful is not something new. But for early humankind it was. Throughout most of the Stone Age, humans owned only the basics. They were buried in groups. Someone mourning their death might sprinkle them with red paint, but rich burials were not common because rich lives weren't either.

As the Stone Age came to an end, and trading things caught on, society changed. "Rich" and "poor" now had meaning. Some scientists believe it was the desire for luxuries—such as amber, copper, and gold—that pushed farming into Europe. People needed something to trade for that nicely polished flint ax. That something could be food.

Both the Iceman and the Archer have second names that link them to where their bodies were found. The Archer's second name is the King of Stonehenge. A henge is an enclosure used for ceremonies. Stonehenge, near the village of Amesbury where the Archer was found, is without a doubt the most famous henge, but not the only one by a long shot. Henges appear all over the British Isles, France, and Ireland. There are henges so small you can barely do more than lie down in them, and there is a henge so large that it encircles an entire village.

Clearly the henges were important. No one puts in that kind of effort, lugging 20-ton stones more than 100 miles, without a good reason. Some archaeologists believe that the henges began as cattle enclosures. At a henge centuries older than Stonehenge, archaeologists found the remains of a fence and gate. Could this henge have held cattle? Some

The giant stones at Stonehenge come from 20 miles away. Scientists debate how they were transported to this spot in what is now Wiltshire, England. As each of these stones weighs more than 25 tons, it was no easy task!



“ Stonehenge, Wiltshire, England, 4,300 years ago

mega + lith = “large” + “stone”
 Megaliths are the large stones that form prehistoric monuments.

henges were aligned on the midsummer sunrise or the mid-winter sunset. The stones were lined up to point to the spot on the horizon where the sun would rise or set. The coming of the growing season, the time of the harvest, the winter rest, would all have great importance to a farmer.

Before Stonehenge was the **megalith** we know today, it was nothing more than a circular bank and ditch. It wasn't until the Archer's time, hundreds of years after it was first built, that the stones were moved in. Archaeologists suspect that the Archer was connected somehow to Stonehenge. The time is right. The location is right. The Archer was buried just three miles from the monument. And it appears from his grave goods that he was a rich and powerful person—important enough to direct the project. Or maybe the Archer was just visiting—drawn to the area by the spiritual pull of Stonehenge. We know he was a traveler. His tooth enamel places him in the Alps; the copper in his knives came from Spain and France. Some things we'll never know. The Iceman and the Archer have their secrets. They're not blabbermouths, after all.