

= Lindow Man =

Lindow Man , also known as Lindow II and ( in jest ) as Pete Marsh , is the preserved bog body of a man discovered in a peat bog at Lindow Moss near Wilmslow in Cheshire , North West England . The body was found on 1 August 1984 by commercial peat @-@ cutters . Lindow Man is not the only bog body to have been found in the moss ; Lindow Woman was discovered the year before , and other body parts have also been recovered . The find , described as " one of the most significant archaeological discoveries of the 1980s " , caused a media sensation . It helped invigorate study of British bog bodies , which had previously been neglected in comparison to those found in the rest of Europe .

At the time of death , Lindow Man was a healthy male in his mid @-@ 20s , and he may have been someone of high status , as his body shows little evidence of heavy or rough work . There has been debate over the reason for Lindow Man 's death , for the nature of his demise was violent , perhaps ritualistic ; after a last meal of charred bread , Lindow Man was strangled , hit on the head , and his throat cut . Dating the body has proven problematic , but it is thought that Lindow Man was deposited into Lindow Moss , face down , some time between 2 BC and 119 AD , in either the Iron Age or Romano @-@ British period . The body has been preserved by freeze @-@ drying and is on permanent display at the British Museum , although it occasionally travels to other venues such as Manchester Museum .

= = Background = =

= = = Lindow Moss = = =

Lindow Moss is a peat bog in Lindow , an area of Wilmslow , Cheshire , which has been used as common land since the medieval period . It formed after the last ice age , one of many such peat bogs in north @-@ east Cheshire and the Mersey basin that formed in hollows caused by melting ice . Investigations have not yet discovered settlement or agricultural activity around the edge of Lindow Moss that would have been contemporary with Lindow Man ; however , analysis of pollen in the peat suggests there was some cultivation in the vicinity . Once covering over 600 hectares ( 1 @, @ 500 acres ) , the bog has now shrunk to a tenth of its original size . It is a dangerous place ; an 18th @-@ century writer recorded people drowning there . For centuries the peat from the bog was used as fuel , and it continued to be extracted until the 1980s , by which time the process had been mechanised . Lindow Moss is a lowland raised mire ; this type of peat bog often produces the best preserved bog bodies , allowing more detailed analysis . Lowland raised mires occur mainly in northern England and extend south to the Midlands . Lindow Man is one of 27 bodies to be recovered from such areas .

= = = Lindow Woman = = =

On 13 May 1983 , two peat workers at Lindow Moss , Andy Mould and Stephen Dooley , noticed an unusual object ? about the size of a football ? on the elevator taking peat to the shredding machine . They removed the object for closer inspection , joking that it was a dinosaur egg . Once the peat had been removed , their discovery turned out to be a decomposing , incomplete human head with one eye and some hair intact . Forensics identified the skull as belonging to a European woman , probably aged 30 ? 50 . Police initially thought the skull was that of Malika Reyn @-@ Bardt , who had disappeared in 1960 and was the subject of an ongoing investigation . While in prison on another charge , her husband , Peter Reyn @-@ Bardt , had boasted that he had killed his wife and buried her in the back garden of their bungalow , which was on the edge of the area of mossland where peat was being dug . The garden was examined but no body was recovered there . When Reyn @-@ Bardt was confronted with the discovery of the skull from Lindow Moss , he confessed to the murder of his wife . It was later radiocarbon dated , revealing it to be nearly 2 @, @ 000 years

old . " Lindow Woman " , as it became known , dated from around 210 AD . This emerged shortly before Reyn @-@ Bardt went to trial , but he was convicted on the evidence of his confession .

= = Discovery = =

A year later a further discovery was made at Lindow Moss , just 820 feet ( 250 m ) south @-@ west of the Lindow Woman . On 1 August 1984 , Andy Mould , who had been involved in the discovery of Lindow Woman , took what he thought was a piece of wood off the elevator of the peat @-@ shredding machine . He threw the object at Eddie Slack , his workmate . When it hit the ground , peat fell off the object and revealed it to be a human foot . The police were called and the foot was taken away for examination . Rick Turner , the Cheshire County Archaeologist , was notified of the discovery and succeeded in finding the rest of the body , which later became known as Lindow Man . Some skin had been exposed and had started to decay , so to prevent further deterioration of the body , it was re @-@ covered with peat . The complete excavation of the block containing the remains was performed on 6 August . Until it could be dated , it was moved to the Macclesfield District General Hospital for storage . As the body of Malika Reyn @-@ Bardt had still not been found , it was thought possible the body might be hers , until it was determined to be male , and radiocarbon dated . The owners of the land on which Lindow Man was found donated the body to the British Museum , and on 21 August it was transported to London .

At the time , the body was dubbed " Pete Marsh " ( a pun on " peat marsh " ) by Middlesex Hospital radiologists , a name subsequently adopted by local journalists , as was the similar " Pete Bogg " ( a pun on " peat bog " ) . The find was announced to the press during the second week of investigation . As the best preserved bog body found in Britain , its discovery caused a domestic media sensation and received global coverage . Sparking excitement in the country 's archaeological community , who had long expected such a find , it was hailed as one of the most important archaeological discoveries of the 1980s . A Q.E.D. documentary about Lindow Man broadcast by the BBC in 1985 attracted 10 million viewers .

Lindow Man 's official name is Lindow II , as there are other finds from the area : Lindow I ( Lindow Woman ) refers to a human skull , Lindow III to a " fragmented headless body " , and Lindow IV to the upper thigh of an adult male , possibly that of Lindow Man . After the discovery of Lindow Man , there were no further archaeological excavations at Lindow Moss until 1987 . A large piece of skin was found by workmen on the elevator on 6 February 1987 . On this occasion , the police left the investigation to the archaeologists . Over 70 pieces were found , constituting Lindow III . Although the bone was not as well preserved as that of Lindow Man , the other tissues survived in better condition . The final discovery was that of Lindow IV on 14 June 1988 . Part of a left leg and buttocks were found on the elevator , from a site just 50 feet ( 15 m ) west of where Lindow Man was found . Nearly three months later , on 12 September , a right thigh was discovered in the peat on the bucket of a digger . The proximity of the discovery sites , coupled with the fact that the remains were shown to come from an adult male , means that Lindow IV is probably part of Lindow Man .

= = Remains and investigation = =

Lindow Man marked the first discovery in Britain of a well @-@ preserved bog body ; its condition was comparable to that of Grauballe Man and Tollund Man from Denmark . Before Lindow Man was found , it was estimated that 41 bog bodies had been found in England and Wales and 15 in Scotland . Encouraged by the discovery of Lindow Man , a gazetteer was compiled , which revealed a far higher number of bog bodies : over 85 in England and Wales and over 36 in Scotland . Prior to the discovery of the bodies in Lindow Moss , British bog bodies had been a relatively neglected subject compared to European examples . The interest caused by Lindow Man led to more in @-@ depth research of accounts of discoveries in bogs since the 17th century ; by 1995 , the numbers had changed to 106 in England and Wales and 34 in Scotland . The remains covered a large time frame .

In life , Lindow Man would have measured between 5 ' 6 " and 5 ' 8 " ( 1 @. @ 68 and 1 @. @ 73 m )

tall and weighed about 132 pounds ( 60 kg ) . It was possible to ascertain that his age at death was around the mid @-@ 20s . The body retains a trimmed beard , moustache , and sideburns of brown hair , as well as healthy teeth with no visible cavities , and manicured fingernails , indicating he did little heavy or rough work . Apart from a fox @-@ fur armband , Lindow Man was discovered completely naked . When he died , Lindow Man was suffering from slight osteoarthritis and an infestation of whipworm and maw worm . As a result of decalcification of the bones and pressure from the peat under which Lindow Man was buried , his skull was distorted . While some preserved human remains may contain DNA , peat bogs such as Lindow Moss are generally poor for such a purpose , and it is unlikely that DNA could be recovered from Lindow Man .

Lindow Man and Lindow III were found to have elevated levels of copper on their skin . The cause for this was uncertain as there could have been natural causes , although a study by Pyatt et al proposed that the bodies may have been painted with a copper @-@ based pigment . To test this , skin samples were taken from places likely to be painted and tested against samples from areas where painting was unlikely . It was found that the copper content of the skin of the torso was higher than the control areas , suggesting that the theory of Pyatt et al may have been correct . However , the conclusion was ambiguous as the overall content was above that expected of a male , and variations across the body may have been due to environmental factors . Similarly , green deposits were found in the hair , originally thought to be a copper @-@ based pigment used for decoration , but it was later found to be the result of a reaction between the keratin in the hair and the acid of the peat bog .

Dating Lindow Man is problematic as samples from the body and surrounding peat have produced dates spanning a 900 @-@ year period . Although the peat encasing Lindow Man has been radiocarbon dated to about 300 BC , Lindow Man himself has a different date . Early tests at different laboratories returned conflicting dates for the body ; later tests suggested a date between 2 BC and 119 AD . There has been a tendency to ascribe the body to the Iron Age period rather than Roman due to the interpretation that Lindow Man 's death may have been a ritual sacrifice or execution . Explanations for why the peat in which he was found is much older have been sought . Archaeologist P. C. Buckland suggests that as the stratigraphy of the peat appears undisturbed , Lindow Man may have been deposited into a pool that was already some 300 years old . Geographer K. E. Barber has argued against this hypothesis , saying that pools at Lindow Moss would have been too shallow , and suggests that the peat may have been peeled back to allow the burial and then replaced , leaving the stratigraphy apparently undisturbed .

Lindow Man 's last meal was preserved in his stomach and intestines and was analysed in some detail . It was hoped that investigations into the contents of the stomach would shed light on the contemporary diet , as was the case with Grauballe Man and Tollund Man in the 1950s . The analysis of the contents of the digestive system of bog bodies had become one of the principal endeavours of investigating such remains . Analysis of the grains present revealed his diet to be mostly of cereals . He probably ate slightly charred bread , although the burning may have had ritual significance rather than being an accident . Some mistletoe pollen was also found in the stomach , indicating that Lindow Man died in around March or April .

One of the conclusions of the study was that the people buried in Lindow Moss may have had a less varied diet than their European counterparts . According to Jody Joy , curator of the Iron Age collection at the British Museum , the importance of Lindow Man lies more in how he lived rather than how he died , as the circumstances surrounding his demise may never be fully established .

= = = Death = = =

As the peat was cleaned off the body in the laboratory , it became clear that Lindow Man had suffered a violent death . The injuries included a V @-@ shaped , 3 @.@ 5 @-@ centimetre ( 1 @.@ 4 in ) cut on top of his head ; a possible laceration at the back of the head ; ligature marks on the neck where a sinew cord was found ; a possible wound on the right side of the neck ; a possible stab wound in the upper right chest ; a broken neck ; and a fractured rib . Xeroradiography revealed the blow on top of the head ( causing the V @-@ shaped cut ) was caused by a relatively blunt

object ; it had fractured the skull and driven fragments into the brain . Swelling along the edges of the wound indicated Lindow Man had lived after being struck . The blow , possibly from a small axe , would have caused unconsciousness but Lindow Man could have survived for several hours afterwards . The ligature marks on the neck were caused by the tightening of the sinew cord found around his neck , possibly a garrotte or necklace .

In the case of some injuries , such as the laceration on the back of the skull , it is not possible to confirm whether they took place before or after death due to the body 's state of decay . This is also the case for the wound in the upper right chest . The cut on the right of the neck may have been the result of the body becoming bloated , causing the skin to split ; however , the straight edges to the wound suggest it may have been caused by a sharp instrument such as a knife . The ligature marks on the neck may have occurred after death . In some interpretations of Lindow Man 's death , the sinew is a garrotte used to break the man 's neck . However , Robert Connolly , a lecturer in physical anthropology , suggests that the sinew may have been ornamental and that ligature marks may have been caused by the body swelling when submerged . The rib fracture may also have occurred after death , perhaps during the discovery of the body , but is included in some narratives of Lindow Man 's death . The broken neck would have proven the fatal injury , whether caused by the sinew cord around Lindow Man 's neck tightening , or by blows to the back of the head . After death , Lindow Man was deposited into Lindow Moss face down .

= = Interpretation = =

Archaeologist Don Brothwell considers that many of the older bodies need re @-@ examining with modern techniques , such as those used in the analysis of Lindow Man . The study of bog bodies , including these found in Lindow Moss , have contributed to a wider understanding of well @-@ preserved human remains , helping to develop new methods in analysis and investigation . The use of sophisticated techniques , such as computer tomography ( CT ) scans , has marked the investigation of the Lindow bodies as particularly important . Such scans allow the reconstruction of the body and internal examination . Of the 27 bodies recovered from lowland raised mires in England and Wales , only those from Lindow Moss and the remains of Worsley Man have survived , together with a shoe from another body . The remains have a date range from the early 1st to the 4th centuries . Investigation into the other bodies relies on contemporary descriptions of the discovery .

The physical evidence allows a general reconstruction of how Lindow Man was killed , although some details are debated , but it does not explain why he was killed . In North West England , there is little evidence for religious or ritual activity in the Iron Age period . What evidence does survive is usually in the form of artefacts recovered from peat bogs . Late Iron Age burials in the region often took the form of a crouched inhumation , sometimes with personal ornaments . Although dated to the mid @-@ 1st century AD , the type of burial of Lindow Man was more common in the pre @-@ historic period . In the latter half of the 20th century , scholars widely believed that bog bodies demonstrating injuries to the neck or head area were examples of ritual sacrifice . Bog bodies were associated with Germanic and Celtic cultures , specifically relating to head worship .

According to Brothwell , Lindow Man is one of the most complex examples of " overkill " in a bog body , and possibly has ritual meaning as it was " extravagant " for a straightforward murder . Archaeologists John Hodgson and Mark Brennand suggest that bog bodies may have been related to religious practice , although there is division in the academic community over this issue . In the case of Lindow Man , scholars debate whether the killing was murder or done as part of ritual . Anne Ross , an expert on Iron Age religion , proposed that the death was an example of human sacrifice and that the " triple death " ( throat cut , strangled , and hit on the head ) was an offering to several different gods . The wide date range for Lindow Man 's death ( 2 BC to 119 AD ) means he may have met his demise after the Romans conquered northern England in the 60s AD . As the Romans outlawed human sacrifice , such timing would open up other possibilities . This conclusion was emphasised by historian Ronald Hutton , who challenged the interpretation of sacrificial death . Connolly suggests that as Lindow Man was found naked , he could have been the victim of a violent

robbery .

Joy said , " The jury really is still out on these bodies , whether they were aristocrats , priests , criminals , outsiders , whether they went willingly to their deaths or whether they were executed ? but Lindow was a very remote place in those days , an unlikely place for an ambush or a murder " .

= = Conservation = =

Environment and situation are the crucial factors that determine how corpses decay . For instance , corpses will decay differently depending on the weather , the way they are buried , and the medium in which they are buried . Peat slows the decay of corpses . It was feared that , once Lindow Man was removed from that environment , which had preserved the body for nearly 2 @,@ 000 years , the remains would rapidly start to deteriorate , so steps were taken to insure preservation . After rejecting methods that had been used to maintain the integrity of other bog bodies , such as the " pit @-@ tanning " used on Grauballe Man , which took a year and a half , scientists settled on freeze @-@ drying . In preparation , the body was covered in a solution of 15 % polyethylene glycol 400 and 85 % water to prevent its becoming distorted . The body was then frozen solid and the ice vaporised to ensure Lindow Man did not shrink . Afterwards , Lindow Man was put in a specially constructed display case to control the environment , maintaining the temperature at 20 ° C ( 68 ° F ) and the humidity at 55 % .

Lindow Man is held in the British Museum . Before the remains were transferred there , people from North West England launched an unsuccessful campaign to keep the body in Manchester . The bog body has been on temporary display in other venues : at the Manchester Museum on three occasions , April to December 1987 , March to September 1991 , and April 2008 to April 2009 ; and at the Great North Museum in Newcastle from August to November 2009 . The 2008 ? 09 Manchester display , titled Lindow Man : A Bog Body Mystery Exhibition at the Manchester Museum , won the category " Best Archaeological Innovation " in the 2010 British Archaeological Awards , run by the Council for British Archaeology .

Critics have complained that , by museum display of the remains , the body of Lindow Man has been objectified rather than treated with the respect due the dead . Emma Restall Orr , a neo @-@ druid , has questioned whether the body should be displayed at all . This is part of a wider discussion about the scientific treatment of human remains and museum researchers and archaeologists using them as information sources .