

= Parc Cwm long cairn =

Parc Cwm long cairn (Welsh : carn hir Parc Cwm) , also known as Parc le Breos burial chamber (siambr gladdu Parc le Breos) , is a partly restored Neolithic chambered tomb , identified in 1937 as a Severn @-@ Cotswold type of chambered long barrow . The cromlech , a megalithic burial chamber , was built around 5850 years before present (BP) , during the early Neolithic . It is about seven 1 ? 2 miles (12 km) west south ? west of Swansea , Wales , in what is now known as Coed y Parc Cwm at Parc le Breos , on the Gower Peninsula .

A trapezoidal cairn of rubble ? the upper part of the cromlech and its earth covering now removed ? about 72 feet (22 m) long by 43 feet (13 m) (at its widest) , is revetted by a low dry @-@ stone wall . A bell @-@ shaped , south @-@ facing forecourt , formed by the wall , leads to a central passageway lined with limestone slabs set on end . Human remains had been placed in the two pairs of stone chambers that lead from the passageway . Corpses may have been placed in nearby caves until they decomposed , when the bones were moved to the tomb .

The cromlech was discovered in 1869 by workmen digging for road stone . An excavation later that year revealed human bones (now known to have belonged to at least 40 people) , animal remains , and Neolithic pottery . Samples from the site show the tomb to have been in use for between 300 and 800 years . North @-@ West European lifestyles changed around 6000 BP , from the nomadic lives of the hunter @-@ gatherer , to a settled life of agricultural farming : the Neolithic Revolution . However , analysis of the human remains found at Parc Cwm long cairn show the people interred in the cromlech continued to be either hunter @-@ gatherers or herders , rather than agricultural farmers .

Parc Cwm long cairn lies in a former medieval deer park , established in the 1220s CE by the Marcher Lord of Gower as Parc le Breos ? an enclosed area of about 2 @, @ 000 acres (810 ha) , now mainly farmland . The cromlech is on the floor of a dry narrow limestone gorge containing about 500 acres (2 @. @ 0 km2) of woodland . Free pedestrian access is via an asphalt track leading from the park 's entrance , which has free parking for 12 ? 15 cars about 250 yards (230 m) from the site . Parc Cwm long cairn is maintained by Cadw , the Welsh Government 's historic environment division .

= = History = =

From the end of the last ice age (between 12 @, @ 000 and 10 @, @ 000 BP) Mesolithic hunter @-@ gatherers began to migrate northwards from Central Europe ; the area that would become known as Wales was free of glaciers by about 10 @, @ 250 BP . At that time sea levels were much lower than today , and the shallower parts of what is now the North Sea were dry land . The east coast of present day England and the coasts of present day Denmark , Germany and the Netherlands were connected by the former landmass known as Doggerland , forming the British Peninsula on the European mainland . The post @-@ glacial rise in sea level separated Wales and Ireland , forming the Irish Sea . Doggerland was submerged by the North Sea and , by 8000 BP , the British Peninsula had become an island . By the beginning of the Neolithic (6 @, @ 000 BP) sea levels in the Bristol Channel were still about 33 feet (10 m) lower than today . Historian John Davies has theorised that the story of Cantre 'r Gwaelod 's drowning , and tales in the Mabinogion of the water between Wales and Ireland being narrower and shallower , may be distant folk memories of that time . The warmer climate caused major changes to the flora and fauna of Great Britain , and encouraged the growth of dense forest that covered 80 ? 90 % of the island .

Human lifestyles in North @-@ West Europe changed around 6000 BP ; from the Mesolithic (Middle Stone Age) nomadic lives of hunting and gathering , to the Neolithic (New Stone Age) agrarian life of agriculture and settlement . John Davies notes that such a transformation cannot have been developed by the people living in North @-@ West Europe independently , as neither the grain necessary for crops nor the animals suitable for domestication are indigenous to the area . Recent genetic studies conclude that these cultural changes were introduced to Britain by farmers migrating from the European mainland . They cleared the forests to establish pasture and to

cultivate the land , developed new technologies such as ceramics and textile production , and used a similar tradition of long barrow construction that began in continental Europe during the 7th millennium BP ? the free standing megalithic structures supporting a sloping capstone (known as dolmens) , common across Atlantic Europe that were , according to John Davies , " the first substantial , permanent constructions of man " . Such massive constructions would have needed a large labour force (up to 200 men) suggestive of large communities nearby . However , in his contribution to History of Wales , 25 @, @ 000 BC AD 2000 , archaeologist Joshua Pollard notes that not all Neolithic communities were part of the simultaneous " marked transformations in material culture , ideology and technical practices " known as the Neolithic Revolution .

= = Severn @-@ Cotswold tombs = =

The cromlech at Parc le Breos Cwm is one of 120 ? 30 sites identified as belonging to the category of long barrow tomb known as the Severn @-@ Cotswold or Cotswold @-@ Severn group . Excavations show these tombs to have been built on sites that had already " gained some significance " . Archaeologist Julian Thomas theorises that these sites may have been " very long @-@ lived woodland clearances " that had become landmarks and meeting @-@ places .

Constructed during the Neolithic , cairns in the Severn @-@ Cotswold tradition share several characteristics : an elongated trapezoidal (or wedge) shape up to 328 feet (100 m) long ; a cairn (a mound of deliberately placed stones or rocks erected as a memorial or marker) ; a revetment (retaining wall) of carefully constructed dry @-@ stone walling that also defines a horned forecourt at the widest end ; huge capstones supported by orthostats ; and a chamber (or chambers) in which human remains were placed , accessible after the cairn was completed by way of a gallery (passageway) . Diverse internal transept chamber plans exist within the group . The earlier tombs contained multiple chambers set laterally , or pairs of transept chambers leading from a central passageway ; the later , terminally chambered tombs , contained a single chamber .

As the name implies , Severn @-@ Cotswold cairns are concentrated mainly to the east of the River Severn , in and around the Cotswolds , in present @-@ day England . However , similar Severn @-@ Cotswold type structures have been identified in south east Wales ? between Brecon , Gower and Gwent ? and in Capel Garmon (near Betws @-@ y @-@ Coed , Conwy , north Wales) , Wayland 's Smithy (Oxfordshire , England) and Avebury (Wiltshire , England) . As well as monuments to house and to honour their departed ancestors , these cromlechs may have been communal and ceremonial sites where , according to archaeologist Francis Pryor , people met " to socialise , to meet new partners , to acquire fresh livestock and to exchange ceremonial gifts " .

Parc Cwm long cairn is one of six chambered tombs discovered on Gower and one of 17 in what is commonly known as Glamorgan . Severn @-@ Cotswold cairns are the oldest surviving examples of architecture in Great Britain ? Parc Cwm long cairn was built about 1 @, @ 500 to 1 @, @ 300 years before either Stonehenge or the Great Pyramid of Giza , Egypt was completed .

= = Features = =

The megalithic cromlech at Parc le Breos Cwm , known as Parc Cwm long cairn (carn hir Parc Cwm) , is a Severn @-@ Cotswold type chambered tomb , built around 5850 BP (during the early Neolithic) in what is now known as Gower ? about eight miles (13 km) west of Swansea , Wales , and about 1 1 ? 4 miles (2 km) north of the Bristol Channel . Alternative names include Parc le Breos burial chamber (siambr gladdu Parc le Breos) , the Long Cairn and the Giant 's Grave .

The cromlech consists of a north ? south aligned long mound of locally obtained rocks and cobbles , mainly of limestone , revetted by two coursed , dry @-@ stone kerbs of " a fine standard " . The inner wall was built using a heavier stone . Trapezoid @-@ shaped and about 72 feet (22 m) long , the cromlech tapers from 43 feet (13 m) wide at its southern entrance to about 20 feet (6 m) at its northern end . The wall at the front , right section , is missing or has collapsed , and the rubble has tumbled out leaving a previously covered orthostat exposed .

At the entrance to the tomb the kerbs sweep inwards to form a pair of deep protrusions , or horns ,

forming a narrow bell @-@ shaped forecourt . A straight central passageway (or gallery) , 21 feet (6 m) long by 3 feet (1 m) wide , orientated north ? south , leads from the forecourt into the cairn . Each side of the passageway is lined with thin limestone slabs known as orthostats , placed on end and up to 5 feet (1 @.@ 5 m) high with a coursed dry @-@ stone infill between the slabs . Two pairs of rectangular transept chambers lead from the passageway , averaging 5 1 ? 2 feet (1 @.@ 6 m) , east ? west , by 3 1 ? 4 feet (1 @.@ 0 m) ; or " 6 ft by 2 ft " , according to Archaeologia Cambrensis in 1886 . Each , except the south west chamber , has shallow limestone sillstones at its entrance .

Archaeologist R J C Atkinson believed that (unusually among cairns in the Severn @-@ Cotswold tradition) Parc Cwm long cairn had been built beside a stream that now flows underground . He noted that the stones on the eastern side had " marked signs of erosion and rounding by silt @-@ laden flood @-@ water " .

Originally , the transept chambers would have been covered with one large (or several smaller) capstones , enclosing the chambers containing human remains . The earth covering and the upper part of the cromlech have been removed , leaving the passageway and lateral chambers fully exposed . There is no record of a capstone having been discovered .

= = Excavation = =

Workmen digging for road stone discovered the site in 1869 . John Lubbock and Hussey Vivian excavated it that year , believing it to be a round barrow . The excavation revealed human bones that were " much broken and in no regular arrangement " , animal remains (" deer and swine 's teeth ") , and sherds of " plain Western Neolithic pottery " . The bones , initially thought to have been disturbed by repeated access or subsequent interments , were at first thought to be from 20 ? 24 individuals , all of whom except three were adults . Archaeologists Alasdair Whittle and Michael Wysocki note that such estimates were commonly based on the " numbers of skulls or mandibles " , and recent analysis has shown the bones to be from at least 40 individuals . Following the excavation , most of the human remains were reburied in clay pots beneath their original contexts , some are held in the Ashmolean Museum , University of Oxford , England ? with the animal and pottery remains ? and the whereabouts of the remainder are unrecorded .

An excavation led by Professor Glyn Daniel in 1937 identified the site as a chambered long barrow . However , more recently , long barrows have been defined as having long earthen mounds with wooden internal structures , whereas chambered tombs , while also being covered by a long mound , have internal chambers built of stone . No long barrows with wooden internal structures have been identified in southeast Wales , perhaps because long barrows were usually built where there was no suitable stone .

At Parc Cwm long cairn a variety of mortuary practices was evident and the deliberate ordering of skeletal parts noticeable . Whittle and Wysocki (1998) note cremated human remains were placed only in the front , right (south ? east) chamber , where females and males , and all age ranges were represented . The south ? east chamber was also unusual in that it contained nearly three times as many individuals as in each of the other chambers , which contained the remains of all representative groups except younger children and infants . At the forecourt entrance Atkinson recorded finds , deposited in groups , including : flint debitage , lithic cores and a bladelet (burnt and unburnt) ; a leaf @-@ shaped arrowhead (burnt) ; pieces of quartz ; pieces of stalactite (now missing) ; sherds of Neolithic pottery ; and cremated bone fragments . Atkinson speculated that the stalactite originated from Cat Hole cave , which (along with Tooth Hole cave) Whittle and Wysocki note as a possible source of the quartz too .

Following the excavation led by R J C Atkinson in 1960 , the cromlech was placed under the guardianship of the then Ministry of Public Building and Works and , in 1961 , was partly restored . Atkinson made " minimal " excavation records , and no report of it was published until Whittle and Wysocki 's detailed report in 1998 . In it , they suggest that corpses may have been placed in caves near the cromlech until they decomposed , when the bones were moved to the tomb ; a process known as exarnation .

= = Analysis = =

Few human remains survive in Great Britain from the early Neolithic (c . 6400 ? c . 5850 BP) , although they are comparatively well preserved in the Black Mountains (Mynydd Du) , Gower and the Vale of Glamorgan (Bro Morgannwg) where up to 50 individuals have been interred ? men , women and children ? in each cromlech .

The skeletal remains of over 40 individuals were recovered from the cromlech at Parc le Breos Cwm , some of which showed evidence of weathering and of biting and gnawing by animals . This suggests the corpses lay exposed to decompose and were interred in the burial chambers defleshed , as parcels of bone . Skeletal remains from the passageway were part ? articulated , showing no sign of animal scavenging , suggesting they were placed in the cromlech as fleshed corpses . Whittle and Wysocki note that among the human remains are the bones of " 8 dogs , a cat , a red deer , pig , sheep and cattle " . They speculate that the two caves near the cromlech were used as depositories for the corpses prior to decomposition , and that when the bones were collected from the caves for reinterment others already lying in the cave were unwittingly gathered too .

Radiocarbon dated samples from the cromlech show the tomb was accessed by many generations over a period of 300 ? 800 years , and that the human bones are the disarticulated remains (i.e. , not complete skeletons) of at least 40 individuals : male and female adults , adolescents , children , and infants . One of the red deer bones has been radiocarbon dated to between 2750 BP and 2150 BP , showing that at least some of the bones entered long after the site had been deserted .

= = Lifestyle indicators = =

Examination of the bones from which stature could be estimated , indicate that the male mortuary population were " big men " ? the 1869 report notes males of " gigantic proportions " ? whereas the females were " short and gracile " . Pollard notes that males analysed from Parc Cwm long cairn were " particularly robust " when compared to females .

Prior to the publication of Whittle and Wysocki 's 1998 report , bones and teeth of the mortuary population of Parc Cwm long cairn were re @-@ examined for indications of lifestyle and diet .

Musculoskeletal analysis showed significant gender lifestyle variation . Greater leg muscle development was found in males of the Parc Cwm cromlech , possibly the result of hunting or herding , confirming the sexual dimorphism found in previous analyses of the remains . In contrast , no such variation was noticeable in the remains found during excavations from other nearby sites , for example the Tinkinswood burial chamber , in the Vale of Glamorgan . The variation in musculoskeletal stress markers may indicate a mobile lifestyle for at least some of the males analysed .

Evidence obtained from stable isotope analysis shows plant foods , including cereals , formed only a small proportion of their dietary protein . The majority derived from animals ? i.e. , meat , and milk or blood ? and contained none from marine sources .

Remains of human teeth were analysed for evidence of arrested development and decay . Arrested development implies periods of nutritional shortage , which could indicate failed harvests . Decay implies either periods of food shortage , or a diet consisting of high proportions of carbohydrate or softer cooked meat , or both . Dental analyses showed no sign of periods of decay or arrested development , even where there was " considerable wear " , indicating a lifestyle that was not dependent on farming cereals . The 1887 bone report notes the " good condition of the teeth " . Whittle and Wysocki noted the " slight " presence of tartar , and that only one tooth had been lost before death , a mandibular incisor .

Whittle and Wysocki conclude , from the skeletal and dental analyses , that the lifestyles of the people who were to be interred in the cromlech either continued to be one of hunting and gathering or , more likely , a pastoral life of herding , rather than one of agrarian @-@ based farming .

= = Cathole Cave = =

The Cathole Cave , Cat Hole Cave or Cathole Rock Cave , is a steep limestone outcrop , about 200 yards (180 m) north of the cromlech along the Parc le Breos Cwm valley and near the top of the gorge , about 50 feet (15 m) from the valley floor . The cave is a deep triangular fissure penetrating the hillside and narrowing towards the top . It has two entrances , with a natural platform outside the larger of the two .

The cave was used as a shelter by bands of Mesolithic hunters and as a Neolithic ossuary . During the first excavation of the cave in 1864 , finds were made only from the Mesolithic to medieval periods . In his " The Proceedings of the Prehistoric Society vol.25 (1959) , pp. 260 ? 69 " , archaeologist Charles McBurney notes that " In the Post Glacial period the cave was much used by Mesolithic hunters " ; a conclusion confirmed by John Campbell 's excavation of 1977 .

A 1984 excavation by Aldhouse @-@ Green revealed the earliest finds from the cave , two tanged points that may date to c . 28 @,@ 000 BP , an interglacial period during the Late Pleistocene roughly contemporaneous with the Red Lady of Paviland . The " lady " was discovered in a cave between Port Eynon and Rhossili , about eight miles (13 km) west of Cathole Cave , and has been radiocarbon dated to c . 29 @,@ 000 BP , the oldest known human burial in Great Britain .

Rock art from the Upper Paleolithic , thought to represent a reindeer , was discovered on the back wall of Cathole Cave in September 2010 . The engraving , measuring approximately 15 x 11 cm , has been radiocarbon dated to 14 @,@ 505 ± 560 BP . According to George Nash , the archeologist who made the discovery , it is " the oldest rock art in the British Isles , if not north @-@ western Europe " .

Late glacial tool finds from the Upper Palaeolithic date to c . 12 @,@ 000 BP : flint blades known as Cheddar points ; smaller bladelets known as Cresswell points ; scrapers ; burins or lithic flakes ; flint and bone awls ; and a bone needle . Flint rarely occurs in Wales other than in drifts , or as small pebbles on beaches . Flint tools would therefore have to have been brought to Gower from other areas , such as those now known as southern or eastern England , or Antrim , either as finished tools or as incomplete , or unworked , nodules . Remains of red fox , Arctic fox , brown bear , tundra vole , and possibly reindeer , were found at the same level as the Upper Palaeolithic tools , providing evidence of the climate c . 12 @,@ 000 BP . Other animal remains excavated during the 19th century , which may predate the Late glacial finds , include mammoth , woolly rhinoceros , red deer and giant deer .

Several finds date to the Bronze Age , including a bronze socketed axe , two human skeletons , and sherds of pottery from burial urns and other vessels .

= = Llethryd Tooth Cave = =

An excavation of the Llethryd Tooth Cave , or Tooth Hole cave , a Bronze Age ossuary site at a cave about 1 @,@ 500 yards (1 @.@ 4 km) north , north west of the cromlech , was carried out by D. P. Webley and J. Harvey in 1962 . It revealed the disarticulated remains of six people , dated to the Early Bronze Age or Beaker culture . Other contemporary finds , now held at the Amgueddfa Cymru ? National Museum Wales , Cardiff , include collared urn pottery , flaked knives , a scraper , flint flakes , a bone spatula , a needle and bead , and animal bones ? the remains of domesticated animals , including cat and dog . Whittle and Wysocki note that this period of occupation may be " significant " , with respect to Parc Cwm long cairn , as it is " broadly contemporary with the secondary use of the tomb " .

= = Location = =

The Neolithic cromlech at Parc le Breos is about seven 1 ? 2 miles (12 km) west south ? west of Swansea , Wales , near the centre of Gower , midway between the villages of Llanrhidian and Bishopston . Its nearest village is Parkmill , a small rural settlement about one mile (1 @.@ 5 km) to the south ? east .

Parc Cwm long cairn lies on the floor of a dry , narrow , limestone gorge , at an elevation of about 50 feet (15 m) above sea level , less than 1 1 ? 4 miles (2 km) from the south coast of Gower . It is in about 500 acres (200 ha) of woodland called Coed y Parc , the remnants of a former medieval deer park (Parc le Breos) from which the cromlech derives its alternative name : Parc le Breos burial chamber . Established as an enclosed area of about 2 @, @ 000 acres (810 ha) by John de Braose , Marcher Lord of Gower , in about 1221 ? 32 CE , the park is now mainly farmland . A 19th @-@ century hunting lodge about 1 @, @ 200 yards (1 @. @ 1 km) north ? east of Parc Cwm long cairn has been converted into a hotel and pony trekking (horse riding) centre called Parc le Breos .

Coed y Parc is owned and managed by Forestry Commission Wales . The site is open to the public free of charge and has parking for 12 ? 15 cars about 750 feet (230 m) away . Facing the car park on the opposite side of the lane , a kissing gate allows wheelchair access to a level asphalt track running past the cromlech down the length of the gorge , passing within about 10 feet (3 @. @ 0 m) of the cairn . Parc Cwm long cairn is maintained by Cadw (English : to keep) , the Welsh Government 's historic environment division .