

# BONE DEPOSITS FOUND IN MENDIP CAVES, PALAEONTOLOGICAL & ARCHAEOLOGICAL

Bone deposits, faunal and human, are frequently found in Mendip caves.

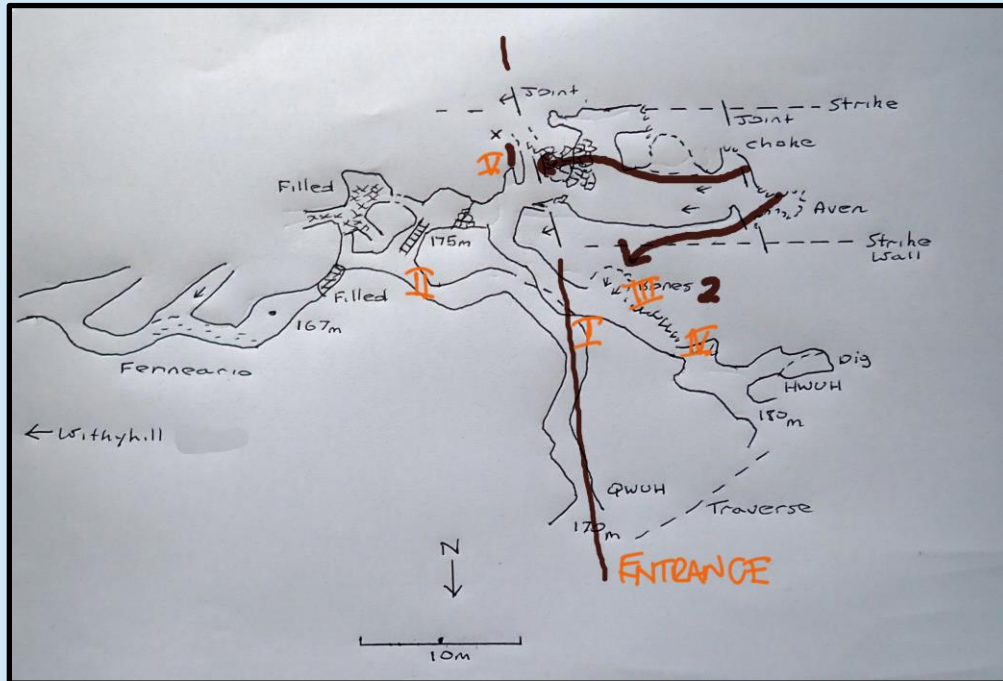
An Early Pleistocene faunal fossil record is provided from Westbury Cave, a hippopotamus tooth dated approximately 1.5 to 1.07 million years. This provides evidence of a warmer climate in Britain during this period.

Earliest human record from radiocarbon dates obtained on bone - Late Upper Palaeolithic, Gough's Cave dates ranging 12,570 bp to 11,700 bp, and Upper Palaeolithic, Sun Hole 12,620, both these caves located in the Cheddar Gorge area.

<https://caveburial.ubss.org.uk> accessed 01/10/2025

An earlier Neanderthal presence on Mendip c.50,000 years ago is only known from lithics found in caves; for example, Wookey Hole and Uphill Quarry.

# QUARTER WAY UP HOLE, FAIRY CAVE QUARRY



Survey (left) originally drawn by Nick Chipchase with additional later annotations. Roman numerals (orange) represent, approximately, the general areas where faunal remains have been located.

Quarter Way Up Hole (QWUH) is a small cave in Fairy Cave Quarry, Mendip Hills, Somerset (NGR ST 65529 47500). It is being actively dug by cavers in an effort to extend its current length, and it was during this process, early in 2025, that they uncovered some interesting and significant faunal remains, the digging team immediately sought advice and assistance.

On 9<sup>th</sup> February 2025, the excavation and recovery of a woolly rhinoceros (*Coelodonta antiquitatis*) skull took place within the cave. The skull located in an unstable boulder 'choke' was lying in an especially vulnerable position, and it was clearly evident that recovery was the only safe option. Several other partial skeletal elements, including femora and humeri, had previously been recovered, and these together with the skull form a substantial assemblage.





The skull was found amongst unstable boulders in a 'choke' was in an especially vulnerable position, and it was clear recovery of the remains was necessary.





Martin Grass



Vince Simmonds



Nick Chipchase

















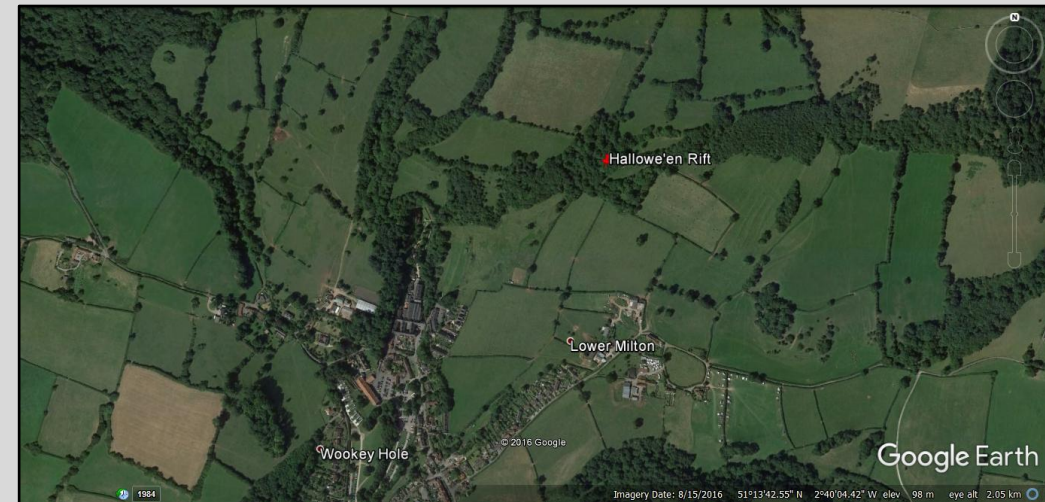
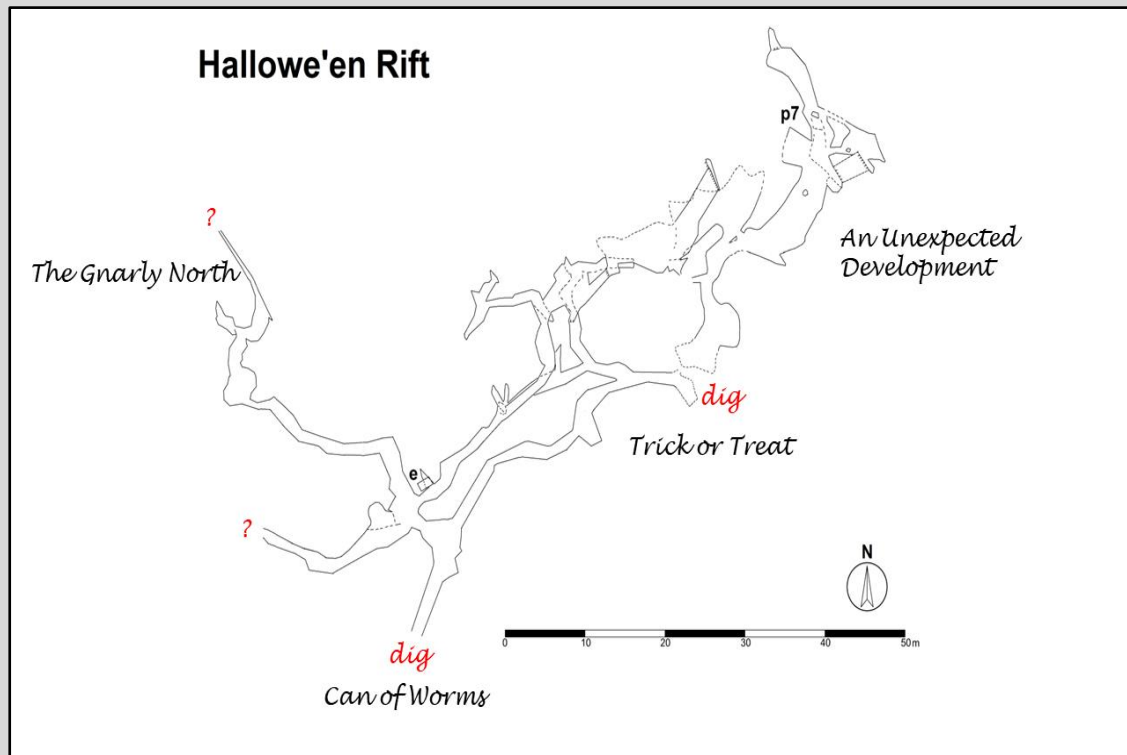
Other sites on the Mendip Hills where woolly rhinoceros have been found include Gully Cave (Ebbor Gorge), Hyaena Den (Wookey Hole), Picken's Hole (Compton Bishop), and Sandford Hill. Woolly rhinoceros, *Coelodonta antiquitatis*, has been recorded from the Lower Cave Earth deposits at Pin Hole, Creswell Crags, Derbyshire and, therefore, listed as part of the Pin Hole Mammal Assemblage Zone (MAZ), attributed to the Middle Devensian, MIS 3, c.59-24 ka. The Pin Hole MAZ also includes other large herbivores such as woolly mammoth, *Mammathus primigenius*, steppe bison, *Bison priscus*, wild horse, *Equus ferus*, and reindeer, *Rangifer tarandus* (Currant & Jacobi, 2001).

During the Middle Devensian conditions were generally cold and dry, although the period is characterized by sharply oscillating climates ranging between milder periods and short cooling episodes, in which dry grassland 'mammoth-steppe' environments were dominant (Webster, 2008).



# Hallowe'en Rift: Bears, Bison and wild horses!

A summary of a faunal assemblage so far recovered...



Survey by D. Price, R. Taviner, V. Simmonds 2024

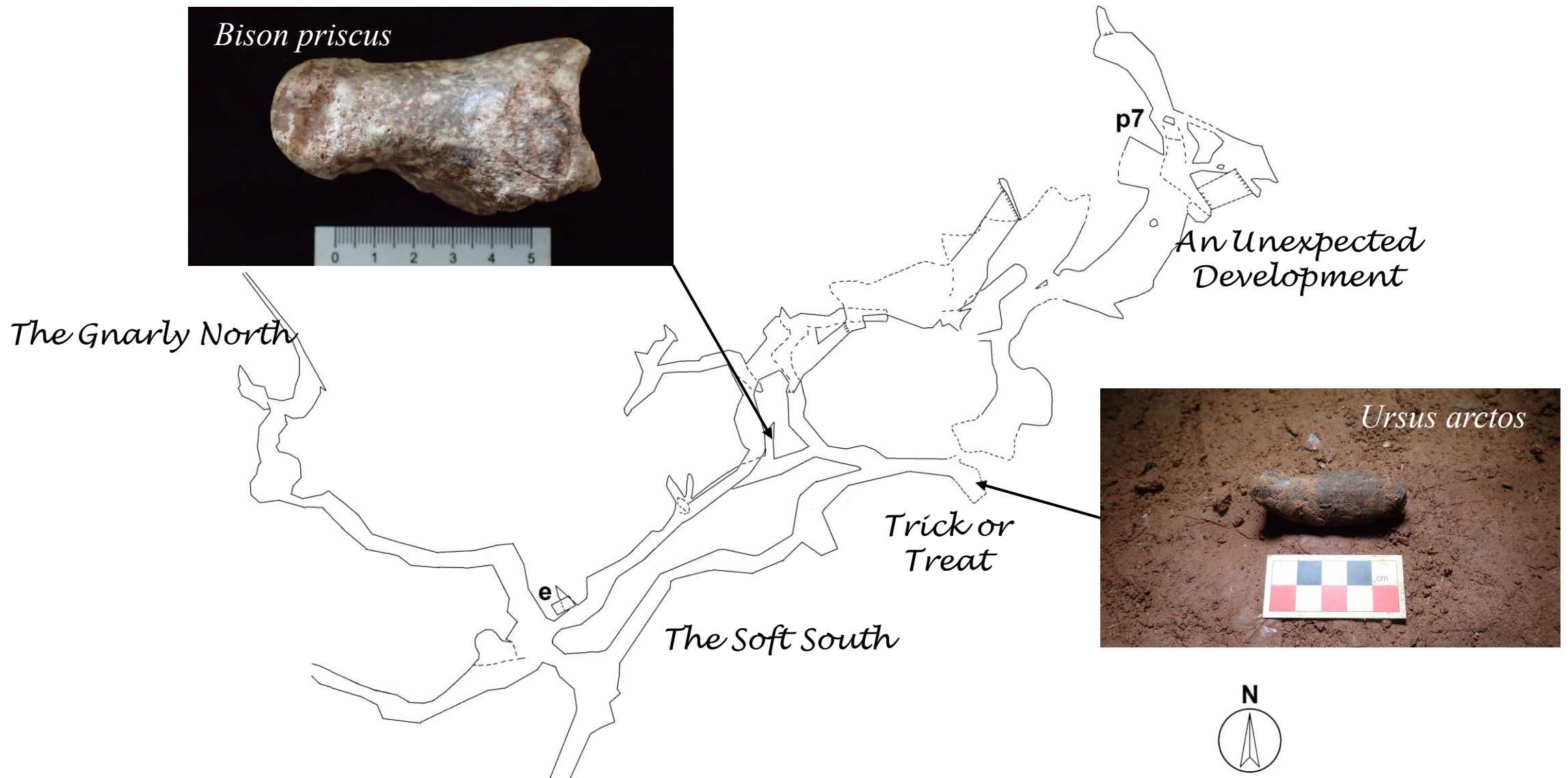


# Introduction

Hallowe'en Rift, NGR ST 5354 4811, altitude 148m aOD, has a current surveyed length, over 300m and a vertical range, about 20m. The cave is found on a wooded hillside northeast of Wookey Hole Cave.

The cave consists mostly of low bedding, partially filled with sandy silt with cobbles and boulders of dolomitic conglomerate and frequent fragmented calcite speleothems. The low bedding occasionally has intersected several rifts. Most of the low bedding passages have been excavated.





Faunal remains have been recovered, a Steppe bison *Bison priscus* phalanx was found 2011 in a side passage off *Toil and Trouble*, and more recently in 2024 a faunal assemblage that includes Brown bear *Ursus arctos* was found beyond *Trick or Treat*



## Faunal remains

A significant number of specimens have been identified and catalogued. Most of the faunal remains are of Brown bear, *Ursus arctos*, including an adult (?small) and a juvenile. There are many foot bones – tarsal bones, metatarsals and metapodials, phalanges, but also vertebra and several teeth. Other species identified also include bison, horse, and possibly deer. The excavation and recovery of further remains is ongoing.

Images (clockwise): All are *Ursus arctos*, vertebra, unfused epiphysis (juvenile), canine (adult), podials – proximal end (top), distal end (bottom), and several phalanges.

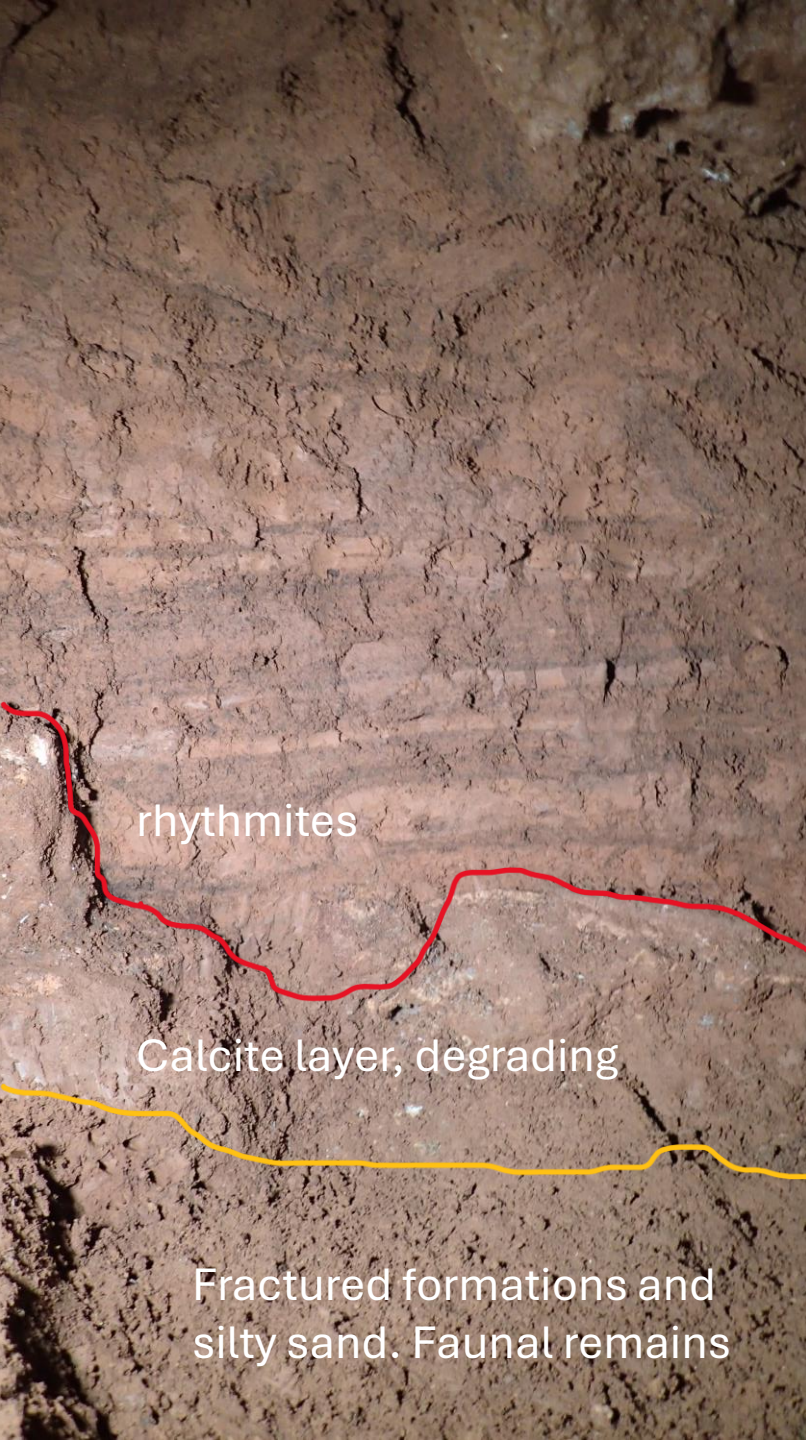




Deninger's bear *Ursus deningeri* known from early Middle Pleistocene deposits was replaced by the Cave bear *Ursus speleus* after the Anglian glaciation, c.480-423 ka. The brown bear *Ursus arctos* appears in Britain during MIS 9, c.339-303 ka, when it replaces *U. spelaeus*. Brown bear is relatively common in cave assemblages throughout the British Middle and Late Pleistocene during both warm and cold stages, and today, the brown bear occupies a wide variety of habitats from tundra to temperate forests. Its presence in Britain in association with herbivores of cold open landscapes (woolly mammoth, woolly rhinoceros, and horse), as well as with those of temperate conditions, shows it to have been adaptable to a range of environments. Brown bears have evolved a generalist omnivore strategy foraging for plants, tubers, berries, scavenging carrion, and preying on small mammals, and weak, older ungulates, and their calves. Temperature and snow conditions are reported to be the most important factors determining the composition of brown bear diet (Scott and Buckingham, 2021).

Brown bear (*Ursus arctos*) is recorded as part of the mammal fauna assigned to the Joint Mitnor Cave mammal assemblage-zone (MAZ), Marine Isotope Stage (MIS) 5e, c.128-116 ka, a faunal assemblage consistent with this MAZ was recovered from the nearby Milton Hill Quarry. Banwell Bone Cave MAZ, initially believed to correlate closely with the Early Devensian, c.71-59 ka, and formerly assigned to MIS 4, it has now reassigned to MIS 5a, c. 83-71 ka. However, the Banwell Bone Cave MAZ *Ursus arctos* remains represent a larger form of the species. Brown bear has also been recorded from the Lower Cave Earth deposits at Pin Hole, Creswell Crags, Derbyshire, and listed as part of the Pin Hole MAZ, Middle Devensian, MIS 3, c.59-24 ka. The Pin Hole MAZ also includes steppe bison (*Bison priscus*) and wild horse (*Equus ferus*). Mendip sites with faunal assemblages attributable to the Pin Hole MAZ include sites near to Hallowe'en Rift at Hyaena Den and Rhinoceros Hole at Wookey Hole, and further afield at Picken's Hole near Compton Bishop, and Uphill Quarry in North Somerset (Jacobi and Carrant, 2011). Brown bear also occurs in deposits attributable to the Gough's Cave MAZ, MIS 2, c. 12.9-9.9 ka (Carrant and Jacobi, 2001) in Cheddar, Somerset.





Faunal remains. Clockwise from top left: group containing distal and proximal podials, phalange, and tarsus fragments; lumbar vertebra; phalanx (all *Ursus arctos*); *Bison priscus* phalanx; fragment of diaphysis, ?Horse *Equus* sp. (horse fragment photographed by Jon Riley). At present conditions are not idea for recovery, and so a by-pass around the faunal remains is being pursued





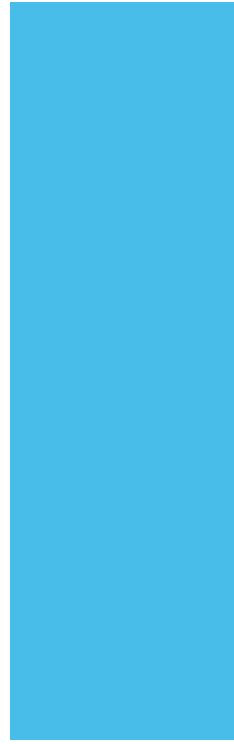
# RHYTHMITES

Rhythmites are finely laminated sediments in which two or three different lithologies are regularly repeated, they are common features of glacial lakes.



Permafrost conditions on Mendip during glacial periods throughout the Pleistocene Epoch might have reached depths of ~80–100m, resulting in the blocking of Hallowe'en Rift (and other caves) by ice plugs. During warmer interglacials and interstadials, thawing might occur to a lesser depth, perhaps ~50m. Effectively the cave would still be 'plugged' by deeper ice, causing meltwater outflow and 'ponding.' The ponded meltwater 'topped up' with the ingress of surface-derived water, probably reflecting seasonal changes. The rise and fall of water creating currents within the flooded cave allowing for agitation of particles and the precipitation of minerals coating particulates in the same process that creates ooids.





## 2025: MORE BROWN BEAR ELEMENTS...









**Acknowledgements:** With regard the faunal assemblages, special thanks to Professor Danielle Schreve, University of Bristol for providing ongoing advice and help with identification.

Our thanks are also extended to the tenant farmers, the Lunnon family, for allowing access to the cave from their farm and to Wookey Hole Caves, the landowners for permission to dig at Hallowe'en Rift.

Without the commitment, determination, and camaraderie of a dedicated group of diggers, including (in alphabetical order) Paul Brock, Nick Hawkes, Graham Johnson, Mike Moxon, Jonathon Riley, and Robin Taviner, the discoveries made in Hallowe'en Rift would not have happened.



# AN EARLY NEOLITHIC BURIAL SITE AT KEWSTOKE ROAD ROCK SHELTER, NORTH SOMERSET

## *Abstract*

Following the recovery of human remains from a site at Kewstoke Road, near Weston-super-Mare, several samples were sent for radiocarbon dating. A total of four radiocarbon dates have so far been obtained on a representative selection of samples from the Kewstoke Road rock shelter burial site, the obtained dates ranging between 3784-3651 BC and 3501-3351 BC. These radiocarbon dates place the burials at Kewstoke Road rock shelter within the Early Neolithic period. The findings from Kewstoke Road are compared with other discoveries of Early Neolithic remains in the caves of the Mendip Hills in Somerset, UK.







ENE

SSE







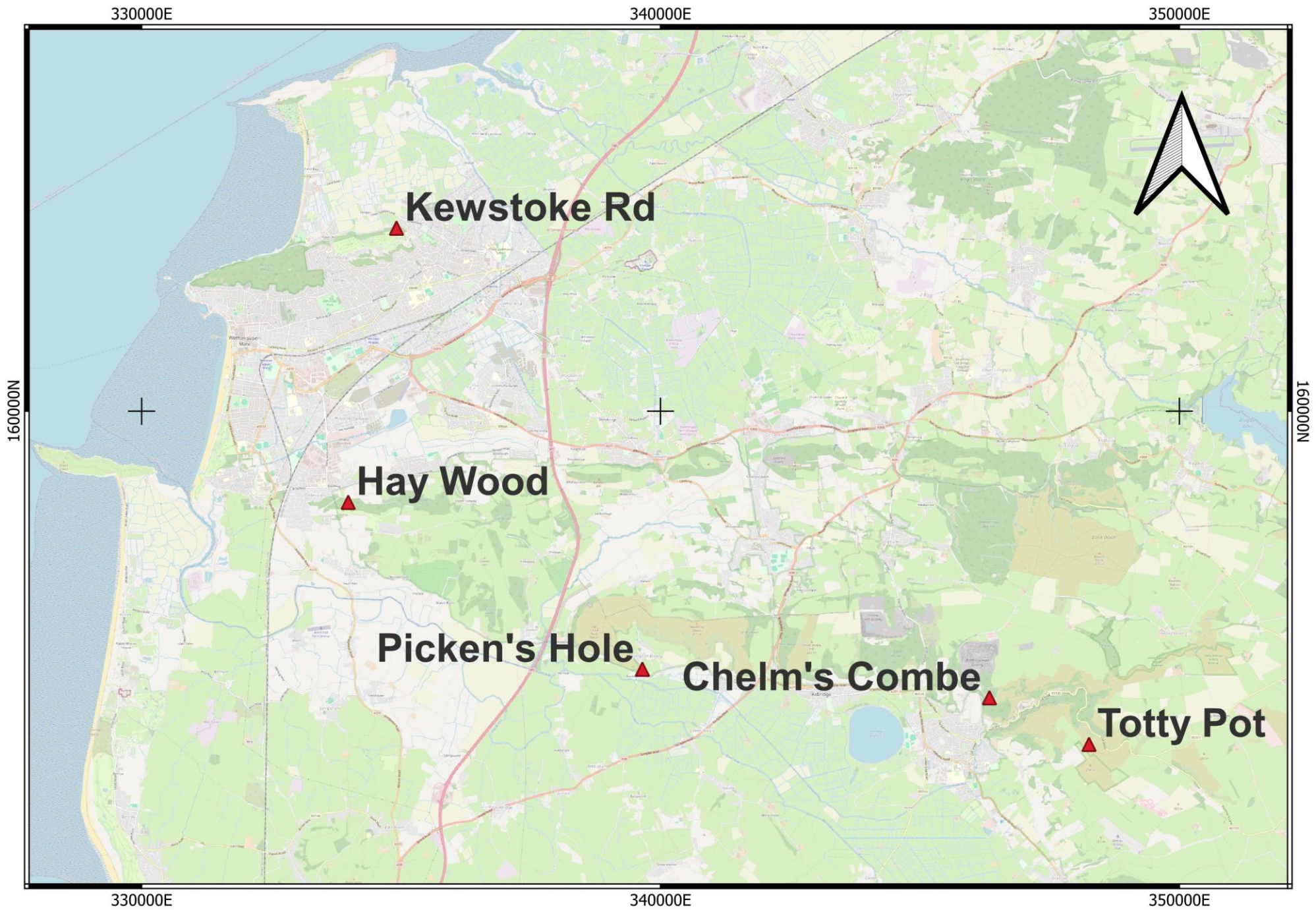
# Radiocarbon date ranges and stable isotope analyses for the human remains recovered from Kewstoke Road rock shelter

<i>Lab. No.</i>	<i>14C</i>	<i>±</i>	<i>Date BC</i>		<i>δ<sup>3</sup>C</i>	<i>δ<sup>5</sup>N</i>
SUERC-126136	-	-	3784	3651	-20.8	10.2
SUERC-128083	4967	21	3791	3653	-20.9	10.3
SK 104	4757	27	3635	3383	-21.0	10.9
SK 112	4616	23	3501	3351	-21.3	13.2

# Other Mendip caves with earlier Neolithic radiocarbon dates on human remains

<i>Location</i>	<i>NGR</i>	<i>14C</i>	<i>±</i>	<i>Date BC</i>	
Picken’s Hole, Compton Bishop	ST 3965, 5502	4800	55	3695	3500
Chelm’s Combe, Cheddar	ST 4634, 5447	4680	45	3630	3365
Totty Pot, Cheddar	ST 4826, 5357	4706	35	3630	3370
Hay Wood Cave ( <i>dates range</i> )	ST 3398, 5824	-	-	3946-3781	3622-3368







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Simmonds, Vince. 2021. A brief note on faunal remains from Hallowe'en Rift, Mendip Hills, Somerset, UK. *Caves & Karst Science*, Vol.48, No.3, (2021) 95-96 *Transactions of the British Cave Research Association*