

NEW AGE INFORMATION ON THE YEALM BRIDGE CAVERN FAUNA

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The Box, Plymouth (formerly known as Plymouth City Museum and Art Gallery) hosts a large collection of cave faunas from the Plymouth area as well as some material from other caves in South-West England. Recently a large collection of material has come from the Kitley Estate – in 2012 – including specimens of the woolly rhinoceros (*Coelodonta antiquitatis* Blumenbach, 1799) from Yealm Bridge Caverns near Yealmpton. A tooth fragment (K.R.C. 948) has been radiocarbon dated as $44,344 \pm 210$ years BP, a date which is comparable to other occurrences of this taxon in England.

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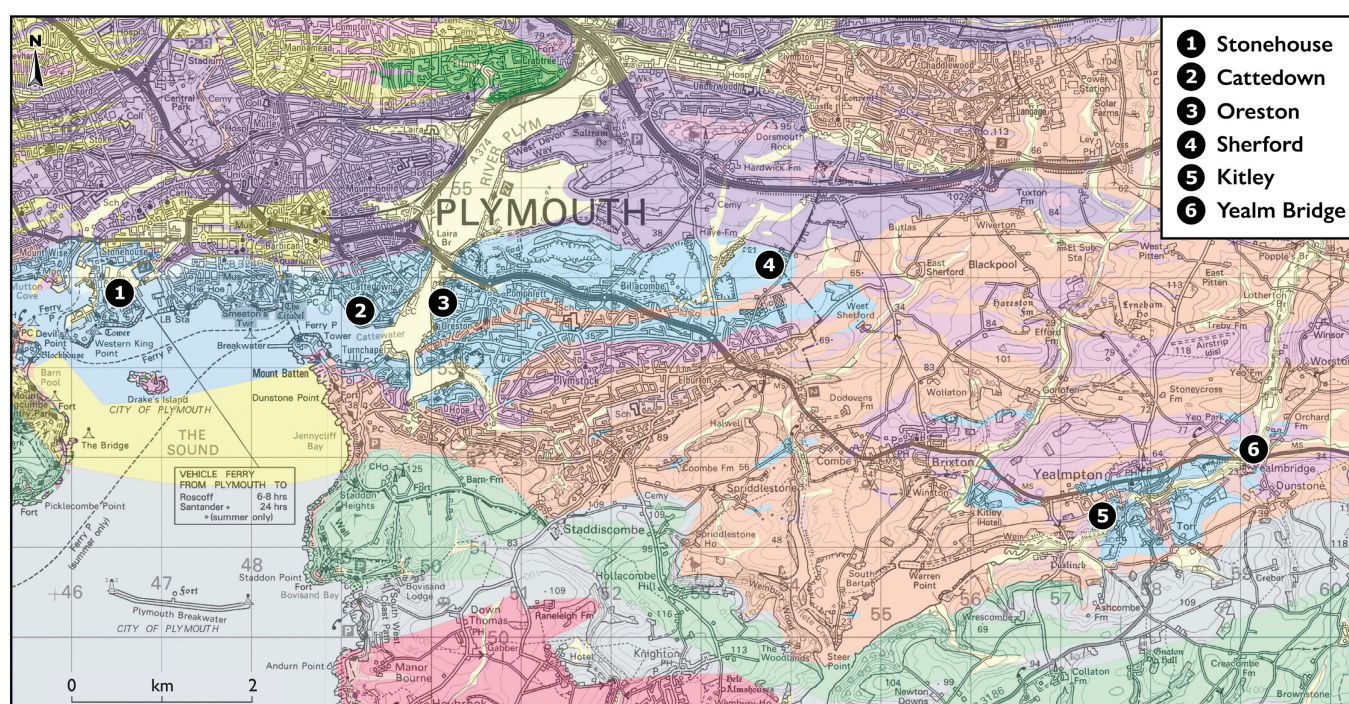
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INTRODUCTION

The Box, Plymouth (formerly known as Plymouth City Museum and Art Gallery) hosts a large collection of cave fossils from the Plymouth area, including the recently acquired Kitley Collection (Freedman, 2015). Cave exploration in the Plymouth area began over 200 years ago with the discovery of Hoe Beach in 1808 (Worth, 1886) and Oreston in 1817 (Buckland, 1823; Cottle, 1829). Later in the nineteenth century caves were also discovered in Stonehouse and Cattedown (Fig. 1). Sadly, much of the material was lost in the Plymouth Blitz and Plymouth material in other locations was also lost in World War 2 (Chamberlain and Ray, 1994).

In October 2012, a substantial collection of material and

the associated archive data) was donated by the Kitley Estate. This collection is particularly important as some of it may have been studied by William Buckland and his wife, Mary Buckland. Freedman (2015) describes the link to Buckland and the possible importance of his determinations. The Kitley Cave Collection comprises more than 4000 specimens from a number of sites within the Kitley Estate, which is located to the east of Plymouth, near Yealmpton. The material collected dates to the 1980s and 1990s and comes from a series of caves (Bobs Cave, Roberts Cave, Kitley No Name Cave, Hen's Hole Cave and Wish Cave): see Freedman (2015, p. 148) and Figures 2 and 3. This material extends from MIS 5e (125,000 years BP) to ~5,035 years BP. Within the collection are 184 teeth and bones that were reportedly seen by William Buckland, with



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Figure 1. The mid-Devonian limestone outcrop between Plymouth and the Yealm Bridge Caverns showing the locations of the caves described in the text. Geological Map Data BGS ©UKRI 2025. ©Crown Copyright and Database Right 2025. Ordnance Survey (AC0000851941). The mid-Devonian Plymouth Limestone Formation is indicated in the light blue colour extending from the River Tamar in the west to Yealmpton in the east. The 'new town' of Sherford is indicated (4).



Figure 2. Part of the Kitley Collection in The Box (formerly known as Plymouth City Museum & Art Gallery)

the identifications being checked by Jacobi (1992) and Wright (1992). Within this assemblage of teeth is K.R.C. 948 (Fig. 4), which has now been radiocarbon dated.

DATE FOR THE YEALM BRIDGE CAVERN FAUNA

Tooth fragment K.R.C. 948 comes from the woolly rhinoceros *Coelodonta antiquitatis* Blumenbach 1799 (Fig. 4) and has been radiocarbon dated by the Scottish Universities Environmental Research Centre (SUERC, Ref. GU72421) at East Kilbride. The new date for this taxon in South Devon is $44,344 \pm 210$ BP which places it within Marine Isotope Stage (MIS) 3 of the mid-Devensian. This date has been calibrated (as is normal practice) as 47,420–45,988 cal BP using the latest calibration curve IntCal208 (Reimer *et al.*, 2020). This result is significant as it mirrors radiocarbon dates for the same taxon in other parts of England (Schreve *et al.*, 2013, fig. 12) including Pin Hole and Robin Hood Cave (Creswell Crags, Derbyshire) and Whitmoor Haye (Staffordshire). At the latter location, the age given in Schreve *et al.* (2013) is 41–43k cal BP while the 5 records for Kent's Cavern (Devon) are also 41–43k cal BP. Important records of this taxon in the various cave faunas are given in Pengelly (1884), Jacobi *et al.* (1998) and Schreve *et al.* (2013). All the records appear to fall in MIS 3 of the mid-Devensian, with the Yealm Bridge Cavern specimen being slightly older than the Kents Cavern records but a very close comparison to Pin Hole, Creswell Crags (Derbyshire); records OxA-13881, OxA-15521 and OxA-13592.

SUMMARY

A tooth fragment of the woolly rhinoceros *Coelodonta antiquitatis* Blumenbach 1799 from the Yealm Bridge Caverns fauna housed in 'The Box' (K.R.C. 948) has been dated as



Figure 3. Tray of woolly rhinoceros teeth from Yealm Bridge Caverns (Yealmpton).

47,420–45,988 cal BP and favourably compared to other records of the same taxon elsewhere in England. This is the first radiocarbon date for this South Devon material.

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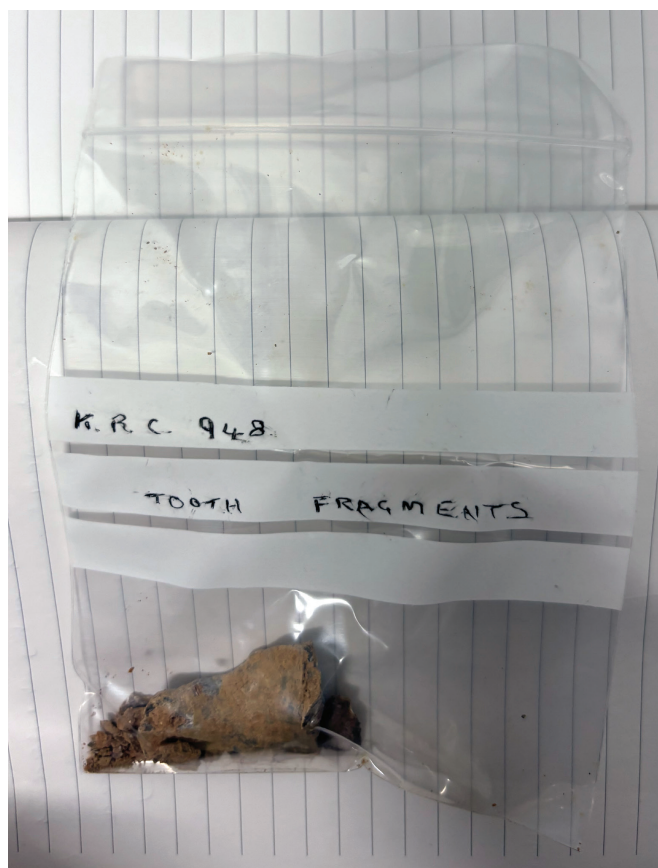


Figure 4. Specimen K.R.C. 948 before submission to SUERC for radiocarbon dating.