



An interim Report on the recovery of a woolly rhinoceros skull and other faunal remains from a small cave at Fairy Cave Quarry, Mendip Hills, Somerset, UK

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Abstract: This brief interim Report introduces one aspect of the history of excavations in *Quarter Way Up Hole*, a small cave in Fairy Cave Quarry, near Stoke St Michael, in Somerset, UK. During the excavations, mammalian remains, including those of woolly rhinoceros (*Coelodonta antiquitatis*), were encountered and recovered. Initial observations are described broadly and related comments are provided. Research is continuing.

Keywords: mammalian faunal assemblage; mammoth steppe; Middle Devensian; MIS 3.

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Quarter Way Up Hole (QWUH) is a small cave with its entrance in Fairy Cave Quarry, between Wells and Frome in the Mendip Hills, Somerset (British National Grid Reference ST 65529 47500). It is being dug actively by cavers, in an effort to extend its current open length.

During the course of the digging, early in 2025, various interesting and significant faunal remains were uncovered, at which stage the digging team sought immediate expert advice and assistance. On 09 February 2025, a targeted excavation at the cave led to the recovery of a woolly rhinoceros (*Coelodonta antiquitatis*) skull.

The skull (Photos 1 and 2) had been located within an unstable boulder ‘choke’ and, because it was lying in an especially vulnerable position, it was clearly evident that its immediate recovery was the only safe option. Several other partial skeletal elements, including femora and humeri, had previously been recovered and, together with the skull, these form a substantial assemblage.

Subsequently, the rhinoceros skull and other excavated faunal remains were cleaned carefully (e.g. Photos 3 and 4). After removal of fine-grained clastic sediment and granular material, the specimens were allowed to dry slowly, under controlled conditions.

Both the skull and the associated faunal assemblage (including remains of other species) have been deposited in the care of Professor Danielle Schreve at the University of Bristol. Interim details, provided by Danielle, based upon her initial examinations, are reproduced as a boxed text on page 34.

Photo 1:
Vince Simmonds admires the woolly rhinoceros skull following its excavation in the Quarter Way Up Hole cave. [Photograph by Martin Grass, 09/02/2025.]

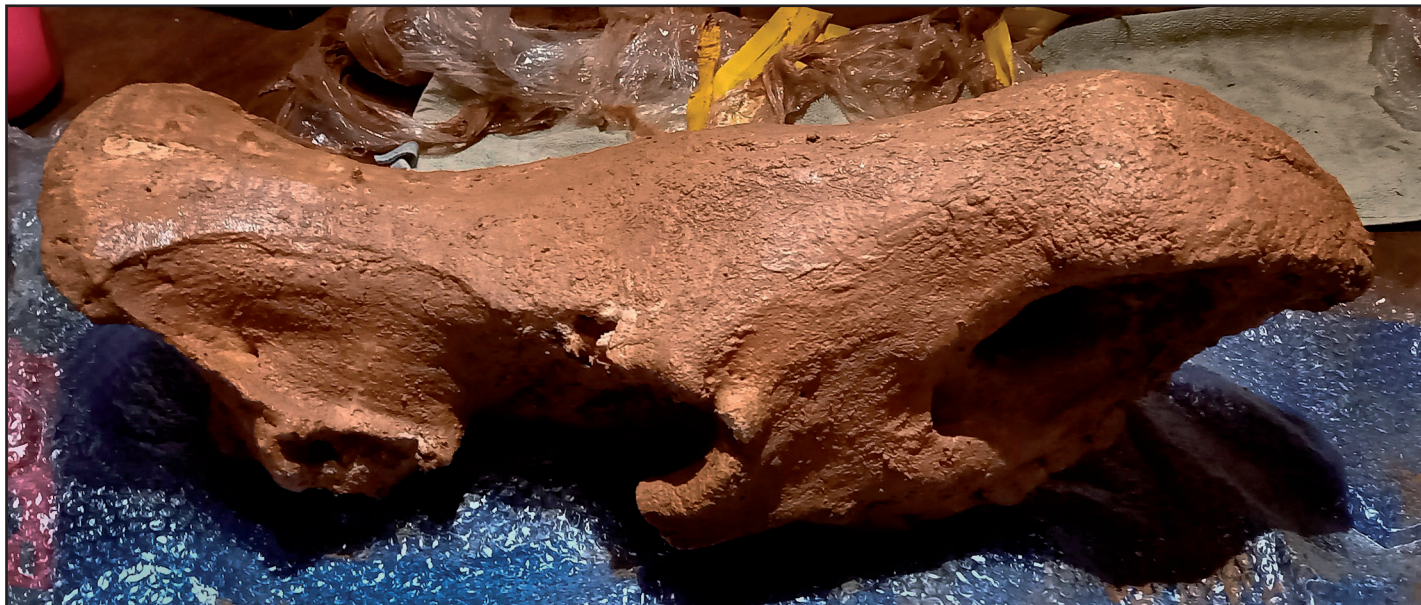


Photo 2: Woolly rhinoceros skull from the Quarter Way Up Hole cave, measuring c. 75cm in length. [Photo by Vince Simmonds, 09/02/2025.]



Photo 3: Occlusal surfaces of the woolly rhinoceros teeth (upper jaw) after removal of loose clastic sediment by 'soft brushing'. [Photo by Roz Simmonds, 14/02/2025.]



Photo 4: Distal end of a woolly rhinoceros humerus from Quarter Way Up Hole.
[Photograph by Roz Simmonds, 14/02/2025.]

Currently, the recovered faunal assemblage from QWUH is undergoing more detailed study and conservation work. As mentioned by Professor Schreve (see boxed text below), several fragmented bones that belong to the same elements might be refitted.

Other sites where woolly rhinoceros has been found on the Mendip Hills include Gully Cave (Ebbor Gorge), Hyæna Den (Wookey Hole), Picken's Hole (Compton Bishop), and Sandford Hill. Woolly rhinoceros (*Coelodonta antiquitatis*), has also been recorded from the Lower Cave Earth deposits at Pin Hole, Creswell Crags, Derbyshire and has therefore been 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 (*Mammuthus primigenius*), steppe bison (*Bison priscus*), wild horse (*Equus ferus*), and reindeer (*Rangifer tarandus*) (Currant and 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).

Sources consulted:

Currant, A and Jacobi, R, 2001. A formal mammalian biostratigraphy for the Late Pleistocene of Britain. *Quaternary Science Reviews*, Vol.20, 1707–1716.

Webster, C, 2008. The Archaeology of South West England, South West Archaeological Research Framework (SWARF). [Somerset County Council.]

Also:

Professor Danielle Schreve [University of Bristol] *personal communications*.

<https://www.mcra.org.uk/registry/> Mendip Cave Registry and Archive Online search; accessed 18 March 2025

"The skull is absolutely magnificent, and I can confirm it is that of a large, male woolly rhinoceros. It's also an old animal. Not only are its teeth very worn but it has a completely ossified nasal septum (the bony plate separating the two nostrils), which is a feature that gradually develops as the animal gets older, in order to strengthen the skull and support the very large nasal horn. Other features of the skull and shape of the nose also support this being an old individual and based upon comparison with the longevity of the extant white rhino, which has a similar morphology and grazing diet to the woolly rhinoceros, my provisional estimate is that the QWUH specimen was around 40 years old at time of death..."

I haven't looked in detail at the bones of the skeleton yet and there is work to be done refitting the fragments, but there are parts of the major limb bones (humerus and femur) present. I am sure this must have been a whole animal that fell into the cave. It is very rare to find a complete individual in the fossil record and I know of only two other complete or partially complete woolly rhino skeletons in Britain, both of which were also accidental deaths..."

The skull is beautifully preserved and covered with thin flowstone encrustation. It might be possible to get a Uranium-series date on the stal, but the best initial option would be a radiocarbon date on the bone. For the time being, in terms of the geological age of the specimen, it is probably 40–50,000 years old and dates to the middle part of the last Ice Age...They were extinct in Britain by about 35,000 years ago."

[Courtesy of Professor Danielle Schreve, University of Bristol, UK.]