

Other fascinating caves are known in Yorkshire, many of which have thrown light on the ever fresh question of the advent of man in these islands. That he lived and hunted and fought here in Pleistocene days there can now be no doubt, for the remains of his fires and feasts and weapons are found everywhere mixed up with the bones of those old cave mammals long since extinct in this country.

Cave Hunting in Somerset.

By Hon. Professor SIR WILLIAM BOYD DAWKINS, F.R.S.

Abstract of Address.

Sir William Boyd Dawkins had special pleasure in speaking on Cave Hunting in a county in which he had his first experience of caves, as an undergraduate from Oxford, and before a Society formed to carry on the investigation which he then began.

Caves have been explored in various parts of Britain from the first quarter of the 19th century by Widbey, Buckland, and others, but the first scientific exploration in Somerset was begun in the region of the Mendips and carried on by Beard and Williams in 1857 and the following years. In this year also the Wookey Hole hyena den was partly explored by Williamson, and the work was carried on by Boyd Dawkins and others, with the net result that the presence of man was established in the wonderful association of wild beasts living in the county during the concluding phase of the pleistocene age.

The hyena den was inhabited by the hyenas, who dragged in the remains of the beasts upon which they preyed, and from time to time it was occupied by man, consequently the remains of both occupations were intermingled in the debris filling the cave. Other caves in the Mendips—Bleadon, Banwell and Sandford Hill—were occupied by the hyenas, but presented no traces of man.

The animals found in these caves, and evidently living at the same period, consist of species now widely distributed over the world in warm and in cold regions. The hyenas, for example, are now only found in Africa, and the lions are restricted to the

warmer regions of Asia and to Africa. The red deer and the roe, the horses and the bisons, the wolves, foxes and brown bears inhabit the temperate regions, while the reindeer and the Arctic foxes and the Alpine hares occur only in cold climates. Among the extinct animals are the cave-bear and the woolly mammoth and rhinoceros, the last two animals being specially protected by a covering of hair and wool. These animals mark the place of this group of caves in the geological record. The clue to this strange grouping of animals is found in the geography of the period. Then Africa was joined to Europe by two land barriers affording passage northwards to the animals belonging to warm climates—one by way of Gibraltar, and the other linking Italy, by way of Sicily and Malta, with Tunis. The Mediterranean was then two land-locked seas like the Caspian, and the land extended over Europe as far to the north-west as the hundred fathom line in the Atlantic, so as to include the British Isles in one great continent. Under these conditions the animals could freely migrate from Africa northwards, and from Arctic and temperate Asia westwards, according to the season. The climate was continental, with hot summers and severe winters—and thus the strange association of animals in the Somerset Caves may be accounted for. In those days the Mendip was a high inland range, overlooking the broad valleys of Somerset and the Bristol Channel, and the River Severn found its outlet in the Atlantic to the south west of Ireland. The paleolithic hunter could follow the chase without hindrance, from France across the Channel into Somerset, and onwards through middle England to the borders of Yorkshire.

There are many caves in the Mendip Hills and in the limestone ranges round Bristol which await scientific exploration.

Britain became an island by the submergence of the Atlantic border of this continent at the close of the pleistocene age, and the barrier of the North Sea and the English Channel prevented further migration of the animals. Direct contact also of Africa with Europe had been cut off by a similar submergence in the area of the Mediterranean, and consequently the Asiatic and African animals could no longer find their way into Britain, and the characteristic pleistocene beasts became extinct. The climate also became insular in character and did not present those

extremes of temperature that would allow of the existence of animals adapted respectively for hot and cold climates. Hence the difference between the wild animals of the pleistocene and those of the succeeding pre-historic period which really consist of the survivors mostly now living in temperate climates.

These geographical changes did not, however, prevent the migration of man into Britain from the adjacent parts of France, in the Neolithic, Bronze and pre-historic Iron Ages, and the domestic animals which came with him,—the dog, short-horned ox, sheep, goat, and pig—were brought across in canoes, and spread from the Downs over the whole country. As yet there are no important discoveries in the Somerset caves with regard to the populations of Somersetshire in the Neolithic and Bronze Ages, although there is ample proof in the habitations and tombs that the population was continuous, and that the civilization was improved by successive invaders. The Iberic people came first, in the Neolithic Age. They were followed by the Goidelic (the Gael) in the Bronze Age, and lastly in the pre-historic Iron Age the Brythons were the masters of the western country, speaking Welsh and imposing their tongue on the subject Goidelic and Iberic tribes.

It is this portion of the story of man in Britain that has been lit up by the discoveries made by Balch in the great cave of Wookey Hole, where he has found proof that the same tribes who inhabited the Lake Villages of Glastonbury and Meare used the cave for habitation and for the shelter of their flocks and herds, as may be seen in his valuable work. They carried on practically the same arts as in the Lake Villages—spinning, weaving, metal work, pottery-making and the like. He further proved from the fact that these remains lie buried under strata containing Roman remains, that they were pre-Roman. In this manner the civilization of the Lake Villages is clearly proved to be previous to the Roman occupation of Britain. The lead mines of the Mendip Hills were worked by these inhabitants of the Lake Villages and caves.

Further cave exploration by the students of the University of Bristol will probably throw great light on the difficult period when pre-history was gradually passing into the history of the Roman Conquest.