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REPORT ON THE SOUTHERN GENERAL MEETING OF THE CAVE RESEARCH GROUP OF GREAT BRITAIN, Saturday 29th. June, 1963.

by

J.D. Wilcock, B.A., B.Sc.

The meeting was held at the Church House, Lion Street, Brecon, beginning at 5.00 p.m. Three papers were read, and a fourth reserved for publication in the transactions. W.R. Little was in the chair. The papers read were as follows:

1. Intermittent Springs, by G. Stevens, of Oxford University.

Mr. Stevens presented a paper compiled mainly from literature on intermittent springs available in the Bodleian Library, Oxford. The most famous intermittent spring is the Ebbing and Flowing Well, Giggleswick [10] Scar; others occur at Torbay, Masson Mine, Speedwell Mine, and in Dan-yr-Ogof.

Some publications contain diagrams similar to that given in the chapter on Cave Physics by J.O. Myers in British Caving (C.R.G.), but, as Myers says, any discussion of the working of springs such as the Ebbing and Flowing Well is purely surmise.

2. The Development of Swildon's Hole, Priddy, Mendip, by D.C. Ford, Esq.,

The paper forms part of the D.Phil. thesis of Mr. Ford, and is the result of several years' study underground.

The Old Red Sandstone of the Mendips forms the reservoir rock, from which streams flow across shale and sink at the limestone outcrop. The cave follows the dip of the limestone at 200 to 300 until it ends in a series of sumps and chokes.

The cave may be divided into three sections:

i) the inlets, including the entrance passages and Swildon's I to the first sump, ii) the master cave, of very low gradient, containing several sumps; this is of mainly phreatic development, and contains several bell chambers, but also some stream potholes; iii) the fossil cave, which contains no active streams; the rocks are smashed in the neighbourhood of the Priddy fault, resulting from the Hercynian orogenesis; cave development is thought to have been in the Pleistocene.

The sequence of development was explained as follows:

I. The Fossil Cave develops in the fault zone, and includes a large fault chamber, tubes, and 'chipolata passages', of great importance in the later development of the cave.

II. The water table falls, and the fossil cave passages develop by successive captures.

III. Shatter Passage and the two inlet systems are developed via the chipolata passages. Both inlets are joined to the old system, almost symmetrically.

IV. The fossil cave is abandoned as the water table falls again. The master cave, a low-gradient drain, starts its development at the lowest point of the former passage, and the discharge from this passage is diverted. The master cave then develops in a northerly direction by additions to its head; finally the two inlet systems are captured by the master cave.

V. In modern times there have been three fill-and-cut cycles. The most northerly of the two inlet streams has now been captured on the surface by the other stream, which sinks at the present entrance to the cave.

2. Cold as a cause of death in caves, by Dr. Oliver Lloyd.

Dr. Lloyd related the circumstances of the two fatal accidents to cavers in the Mendip area caused by cold. The cause of death in both cases was acute heart failure, preceded by a fall of body temperature, loss of heat and torpor.

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The best remedy in such cases is a hot bath without delay: in one case death occurred only one hour after the first symptoms were noticed. Rubbing the skin with towels is not sufficient, and dry clothes and hot water bottles produce slow warming only. It has been demonstrated that the body temperature continues to fall after removal of the external coolant, an effect called the 'afterdrop' and this may cause death if the subject is not quickly re-heated.

Dr. Lloyd compared the results of the post-mortems on the unfortunate cavers with experiments carried out at Dachau during the Nazi regime, and with figures on shipwrecked mariners. His conclusions were that loss of heat from the body while caving depends on the clothing worn, the general state of health, and the thickness of the subcutaneous fat layer. Psychological factors may also have an effect. Methods of reheating the bodies of cavers suffering from cold in cases where a hot bath is not available within the short time (i.e. one hour) indicated by the above observations were left to the further ingenuity of members. Neoprene wet suits are perhaps the complete answer for the prevention of this form of accident.

The meeting then adjourned to the Castle Hotel, where a very enjoyable dinner took place.

On the following day the usual caving trips took place; the number of cavers who turned up was surprising considering the depressed state of the audience after Dr. Lloyd's paper! As a consolation, visitors to Ogof Ffynnon Ddu were under his observation and personal diagnosis

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