

Stalagmitic Deposits

IN a former number of NATURE (vol. viii. p. 462), Mr. A. R. Wallace, in reviewing Sir Charles Lyell's last edition of the "Antiquity of Man," makes use of the rate of deposits of stalagmite as data for ascertaining the age of animal remains which are found buried in caves. It is evident that the variations of rate will render unreliable data for arriving at correct conclusions; still, calculations based thereon may be of service.

Some thirty years ago I procured a piece of lime deposit from a lead mine at Boltsburn, in the county of Durham; it measured about 18 in. in length, 10 in. in breadth, and fully $\frac{3}{4}$ in. thick; it was compact and crystalline, and showed distinct facets of crystals on its surface, over which the water was running. I had indisputable evidence that the deposit had taken place in fifteen years. The water, from which it was produced, issued from an adit driven in the Little limestone, which is about 9 ft. thick. After leaving the adit, the water ran down the perpendicular side of a rise, for some fathoms, on to some rock *débris*, which was lying on the bottom of a hopper, whence it proceeded from the upper part of the hopper mouth, then perpendicularly down over two narrowish wood deals, which were set on edge, and put across the mouth of the hopper to retain the worked materials. It was from off these deals that I obtained the specimens above described. On its back side the forms of the deals

were well defined ; on the front one the crystals were best developed where the stream was most active.

In accordance with the above rate of increase of deposit, namely, $\frac{3}{4}$ in. in fifteen years, 5 in. would require 100 years, 4 ft. 2 in. 1,000, and 41 ft. 8 in. 10,000 years. The data given to arrive at these results may be relied on as being accurate. In the case now related, the rate of increase of deposit was likely to continue tolerably uniform ; as the surface water could have no appreciable influence in augmenting or lessening the flow from the adit.

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