

efflux of water which can be supposed to be fed from Gaping Gill than that which is seen near the Cave mouth. In floods, this opening, a broad depressed cavern, called in the country 'Little Beck head,' is not sufficiently large for the body of water, which rushes from the hills above through the fissures and hollow interior windings in the rock; and it then forces itself a passage through the larger (supposed to be the original) mouth.—(*Geol. Proceedings*, 1848.)

Probably not one but many threads of water unite Gaping Gill and Little Beck head; probably the lines of subterranean current vary from time to time; stalagmites choke the old channels, while others are formed in new directions. When Mr. Birkbeck descended the fearful gulf of Gaping Gill, he found at about 80 feet a rush of water from the side—a subterranean stream emptying itself into this great opening.

Through what periods of time, since first the rill issued in some part of Clapdale, the excavation of limestone and formation of stalactite have been continued, we cannot say. The time consumed in the formation of even one stalagmitical boss is not easily determined. One of these in Ingleborough Cave, of a remarkable form, called the Jockey Cap, is fed by one line of drops. It measures about 10 feet in circumference at the base. The height is about 2 feet. It appears to contain about 8 cubic feet, or 9,450,000 grains, of carbonate of lime. The drops were collected by Mr. Farrer on the 9th of October 1851, after a rather wet period, and it required $14\frac{1}{2}$ minutes to fill 1 pint, say 100 pints in a day. In this pint was found only 1 grain of calcareous earth, or 100 grains a day. If the water were supposed to yield up all its contained salt of lime, the number of pints of water consumed in producing this boss of stalagmite = 9,450,000; and the years which elapsed in its formation = $\frac{9,450,000}{100 \times 365} = 259$. In drier seasons the water is probably richer in carbonate of lime.

I am indebted to Mr. Farrer for the following notes, made in 1839 and 1845 :—