

**IX. A Letter from Mr. Halley of June the 7th.
97. concerning the Torricellian Experiment
tryed on the top of Snowdon-hill and the suc-
cess of it.**

LAST *Whitson-week* by the favour of Mr. *Davis*, a good Friend of Dr. *Trancred Robinson's*, I had the opportunity of seeing what I pleased in *North Wales*, and was on Wednesday *May 26*, on the top of *Snowdon*, where I tried the *Toricellian* Experiment with all the satisfaction I could wish for; the Air continued both before and after in the same state as I got it verified by Mr. *Davis's* standing Barometer at *Llanerch* in *Denby-shire*, about 25 Miles East from *Snowdon* where it was Observed as follows.

	h	'	Inch.	'
May 25	8	15	29	7
	10	8	29	8 $\frac{1}{2}$
26	8	16 Morn.	29	8
	11	00 Morn.	29	8
	3	00 Aft.	29	7 $\frac{3}{4}$
	6	00	29	7 $\frac{1}{2}$
	9	30	29	7 $\frac{1}{2}$
27	6	00 Morn.	29	7
	10	00	29	7
	3	30 Aft.	29	7 $\frac{1}{4}$
	6	15 Aft.	29	7 $\frac{1}{4}$
28	5	00 Aft.	29	8
	10	00	29	8

Llanerch is about a Mile and an half above the Town of *St. Asaph*, about 6 Mile from the Mouth of the River

River *Llyd*, which falls with a rapid Stream into the *Irish* Sea ; and consequently, is several Foot above the Surface thereof.

May 26. Between One and Two in the Afternoon, on the top of *Snowdon*, I thrice repeated the Experiment, and as often found the height of the *Mercury* 26 Inches 1. And being come down to *Llanberris*, at the Foot of the Hill, about Six that Evening, I as often found it 29 Inches 4. A little above this place, are the principal Fountains of the River, that falls into the Channel of *Anglesey*, at *Carnarvon*, call'd anciently *Segontium*, whither we went the next Day ; and about Eight at Even, found the *Mercury*, by a triple Experiment, to stand at 29 Inches 9^o, very near the Surface of the Sea : When, at the same time, at *Llanerch*, it was not above 29 7¹/₂ ; whence I conclude, that the Difference of the Airs Pressure on the Sea, and on the top of *Snowdon*, is rather more than 3 Inches, 8 Tenths. I could have wish'd for one of Mr. *Hunt*'s portable Barometers ; which will certainly be accurate enough for taking the Levels, for bringing of Water from distant places, and certainly much less subject to Error ; there being a Tenth of an Inch for each Thirty Yards, which may be divided into many parts evidently. *Snowdon* was measured by Mr. *Caswel*, with *Adams*'s Instruments, to be 1240 Yards high ; which abating the height of the *Mercury* 3 Inches, 8 Tenths, may serve for a Standard, 'till a better be obtained on a higher place. From hence the Sea dipt every-where above a Degree below us, the Visible Horizon being a lesser Circle, and we saw *Ireland* plainly, from the *W b S* to *SW b W*, and then appearing in the *NNW*, and the Mountains of *Cumberland* or *Westmoreland* very fairly, but evidently in the North ; and I think we saw as far as *St. David's Head* into the South ; *Carnarvonshire* and *Anglesey* lay under us, like

a Map, affording a very pleasant Prospect, were it not for the Horrors of the Neighbouring Precipices. Hence we counted fifteen or sixteen Lakes, great and small, where the Cavities of the Rocks are filled up with the Rills that gleet from the Hills; all these are said to abound with Trouts, some of which we found to be especial good Fish: And in one of these Lakes I was on board a floating Island, as it may be called; the Lake is scarce half a Mile about, environed with a boggy turfy Soil, a piece of which, about six Yards long and four broad, floats on the Water, being about five or six Inches raised above it, but it, I believe, about eighteen Inches deep within the Water, having broad spreading fungous Roots on its sides, the lightness of which Buoy it up. It was driven on the Lee shore, but I lanced it off and swam it, to be satisfied it floated: This I take the more notice of, because it is denied to be true, by the Author of the Additions to *Cambden*, lately Published: But I my self saw it as described, and was told it had formerly been bigger, there being a lesser spot, that they told us had been heretofore a part thereof, which floated likewise. I have not time nor Paper to describe this horrid spot of Hills, the like of which I never yet saw, but shall endeavour therewith to give the Society a further Entertainment.

Tours, &c.

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