of the Geological Society. The abstract read by His Grace on this occasion was illustrated by a number of drawings and specimens.

The order of beds shewn in the drawings, from above downwards, was as follows :—

1. A bed of basalt, rudely columnar.
2. A bed containing impressions of leaves of dicotyledonous trees.
3. A bed of tuff, or trap conglomerate, having the aspect of volcanic ashes.
4. A bed of leaves similar to No. 2.
5. A bed of tuff similar to No. 3.
6. A third bed of leaves similar to the two former.
7. A bed of amorphous basalt ending in basalt highly columnar.

2. Analysis of the Mineral Waters of Baden Baden. By Dr Sheridan Muspratt.

The author, after mentioning that no analysis of this water is to be found in any English work, and the great multitudes who resort to it, described briefly the situation of the Ursprung or original spring, the chief one at Baden, which was known to, and esteemed by, the Romans.

It has a temperature of $153\cdot5^{\circ}$ F., and contains, in the imperial gallon, $181\cdot120$ grains of solid matter. The predominating ingredient is chloride of sodium or common salt, which amounts to $132\cdot6$ grains in the gallon. Next to this comes carbonate of lime, dissolved no doubt as bicarbonate, which is deposited as carbonate on boiling. The other ingredients, which are in trifling quantity, are detailed in the first table given below as obtained in the analysis. In the second, they are arranged in the order of their probable occurrence in the water.

TABLE I.

	Grains per Imperial Gallon.	
Sulphuric acid,	3·487	3·495
Chlorine,	94·064	95·991
Silicic acid,	2·947	
Carbonic acid in combination with lime, .	6·240	
Do. in combination with protoxide of iron,	·514	
Sodium,	52·152	
Potassium,	7·182	
Calcium,	4·000	
Lime (insoluble),	7·943	
Magnesia,	1·749	
Protoxide of iron,	·842	
Alumina,	}	mere traces.
Phosphate of lime,		
Organic matter,		
	<hr/> 181·120 <hr/>	

TABLE II.

Statement of the constituents as existing in the water :—

	Grains per Imp. Gallon.
Chloride of sodium,	132·644
Chloride of potassium,	13·720
Chloride of calcium,	11·040
Carbonate of lime,	14·184
Silicic acid,	2·947
Proto-carbonate of iron,	1·556
Alumina,	} mere traces.
Phosphate of lime,	
Organic matter,	
	<hr/> 181·127 <hr/>