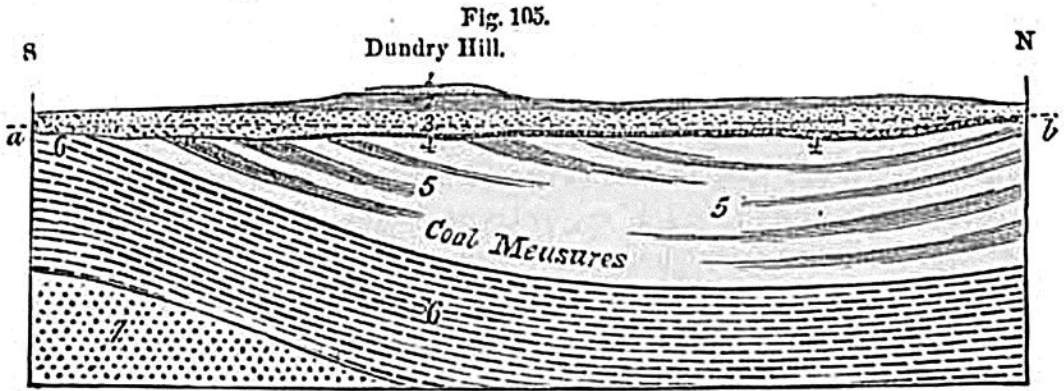


thinning out, No. 2 and No. 5 are absent at one extremity of the section, and No. 4 at the other.

In the annexed diagram, fig. 105, a real section of the geological formations in the neighborhood of Bristol and the Mendip Hills, is presented to the reader as laid down on a true scale by Professor Ramsay, where the newer groups 1, 2, 3, 4 rest unconformably on the formations



- Section South of Bristol. A. C. Ramsay.
- Length of section 4 miles. a, b. Level of the sea.
- | | |
|----------------------------|-----------------------------|
| 1. Inferior oolite. | 5. Coal measure. |
| 2. Lias. | 6. Carboniferous limestone. |
| 3. New red sandstone. | 7. Old red sandstone. |
| 4. Magnesian conglomerate. | |

5 and 6. Here at the southern end of the line of section we meet with the beds No. 3 (the New Red Sandstone) resting immediately on No. 6, while farther north, as at Dundry Hill, we behold six groups superimposed one upon the other, comprising all the strata from the inferior oolite to the coal and carboniferous limestone. The limited extension of the groups 1 and 2 is owing to denudation, as these formations end abruptly, and have left outlying patches to attest the fact of their having originally covered a much wider area.

In many instances, however, the entire absence of one or more formations of intervening periods between two groups, such as 3 and 5 in the same section, arises, not from the destruction of what once existed, but because no strata of an intermediate age were ever deposited on the inferior rock. They were not formed at that place, either because the region was dry land during the interval, or because it was part of a sea or lake to which no sediment was carried.

In order, therefore, to establish a chronological succession of fossiliferous groups, a geologist must begin with a single section, in which several sets of strata lie one upon the other. He must then trace these formations, by attention to their mineral character and fossils, continuously, as far as possible, from the starting point. As often as he meets with new groups, he must ascertain by superposition their age relatively to those first examined, and thus learn how to intercalate them in a tabular arrangement of the whole.

By this means the German, French, and English geologists have determined the succession of strata throughout a great part of Europe, and have adopted pretty generally the following groups, almost all of which have their representatives in the British Islands.