

Before passing from this subject it may be well to note how deceptive is the resemblance of cleavage-planes to bedding, especially on weathered exposures of rock. Even experienced observers have been misled by this resemblance. At Llanberis, for example, the lower portion of a section consists of volcanic tuff and the upper of conglomerate. The tuff being compact and fine-grained, has undergone such decided cleavage that at first the flags into which it is divided by the cleavage-planes might be mistaken (as they have in fact been) for bedding, and the conglomerate would then be regarded as a much younger deposit lying unconformably on the tuff. In reality, however, the tuff coincides in its bedding with the conglomerate; they are parts of one continuous series, but the coarse-grained conglomerate has been only slightly affected by the pressure which induced the perfect cleavage in the tuff.

## PART VI. DISLOCATION

The movements which the crust of the earth has undergone have not only folded and corrugated the rocks, but have fractured them in all directions. The dislocations may be either simple Fissures, that is, rents without any vertical displacement of the mass on either side, or Faults, that is, rents where one side has been moved relatively to the other.<sup>1</sup> It is not always possible, in a

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cleavage, "Geological Observations in South America," 1846, p. 162. A. C. Ramsay, "Geology of North Wales," Mem. Geol. Survey, vol. iii. 2d edit. p. 233. F. M. Stappf, Neues Jahrb. 1882 (i.), p. 82.

<sup>1</sup> The student of this department of geology will find in the joint essay by M. E. de Marjerie and Prof. Heim, cited on p. 536, a valuable handbook of the terms used to describe the various structures arising from ruptures of the terrestrial crust.