

would if employed in common use, and this frequently leads the student into error. A chain of mountains does not necessarily mean a series of elevations situated in the same line; some chains have this arrangement, as the Cordilleras des Andes; but the term is applied to a number of mountains thrown off from a common centre in different directions, or to the inferior ranges which often branch in great numbers from an elevated central district.

We must now close our remarks upon mountains, with a short and general outline of the important discoveries made by M. Elie de Beaumont. In the last chapter an attempt was made to explain the manner in which geologists determine the age of rocks, and the periods when they suffered disturbance. M. Beaumont has adopted the same means to discover the periods when mountains were elevated; and from his observations he has deduced some principles which are worthy the closest examination of the geographer and geologist. It may require a considerable period of time to determine how far we may receive some of his deductions, but there are others which are now susceptible of a demonstration as rigid as many acknowledged geological principles. There are four statements upon which all M. de Beaumont's theoretical opinions are founded. The statements themselves may be considered theoretical by some writers; but, if they are so, they are supported by evidence much stronger than that upon which theories are usually built.

1. There have been, from the earliest geological era, long periods of comparative repose, during which rocks have been formed by aqueous causes, in the same manner as they are in the present day.

2. These periods have been disturbed by intervals of violent paroxysmal action, and at such times mountains have been elevated.

3. All the mountains formed during the same interval, in whatever part of the world they may be situated, have the same direction—that is to say, they are parallel to each other within a few degrees of the compass.

4. Chains produced at different times have different directions.

There are few if any geologists in the present day who will deny the first proposition, that the aqueous rocks of the earth's crust were produced by causes resembling those which are