

valleys run in these directions, but belongs, it is believed, to at least all the middle and northern latitudes of the continent. It is seen west of the Alleghanies, throughout the regions of the Ohio and Mississippi, as well as extensively over the Atlantic slope and the tertiary Atlantic plain. Bigsby, and the travellers to the north, have already shown it to prevail in the latitudes north of the United States.*

These and many other cases demonstrate —

1. That the course of the blocks from their original site has been influenced by the present configuration of the country; because they are accumulated in greatest abundance in the lower regions of the earth, and have often gone by the line (though not limited to the level) of the great drainage hollows of the surface.

2. The mechanical forces which transported these boulders must have operated under totally different conditions from those which determine the course of the actual streams; because the boulders have crossed great vales and seas, and ascended ridges, quite contrary to the course of existing drainage.

3. It is impossible to comprehend the phenomenon as one capable of being produced by the watery agencies now at work in nature, except under different dynamical conditions; such as a disturbance of the oceanic level to an enormous degree, hardly conceivable except as the result of a general change of the figure of the globe, produced by a displacement of its axis of movement; an incredible and irregular alteration of dimensions; or a series of elevatory and depressing movements operating in certain directions. Ignorant as we are of the extent and character of diluvial phenomena in all the southern zones of the world, it is desirable to avoid a decision on the much controverted origin of the erratic blocks, especially as some of the proposed solutions are mechanically absurd. One of the most ingenious, and perhaps least hypothetical, of the modern notions on the subject, is,

* Rogers, in Reports of Brit. Assoc. vol. iii. Dr. Bigsby's Observations on the travelled Boulders about Lake Huron and Lake Erie (Geol. Trans. vol. vi. pt. 2.).