

ascertained.”\* These statements have been established by the severest tests. For a single tooth or bone of an unknown animal has been put into the hands of the anatomist, and from it he has constructed the entire skeleton and a description of the whole animal. Afterwards a complete skeleton has been discovered, and found to correspond with the one described by analogy. Truly, there is mathematics in bones, as well as in lines, angles, and numbers.

It is an interesting process to take a particular organ of the human frame and compare it with the analogous organ in the lower classes of animals, and to see how its functions and structure gradually change ; but always in such a manner as will adapt it more perfectly to the condition and wants of the animal. So manifold and striking, for example, are these adaptations in that most remarkable organ, the hand, that a distinguished anatomist has made it the entire subject of one of the famous Bridgewater Treatises. Or take the organs of motion, and compare the movements of the sloth with those of the deer, the antelope, the hare, the grasshopper, or the flea. The sloth consumes several days in getting from one tree to another — which he never does till nearly starved. But such a change is rarely necessary, and therefore the muscles are not adapted to it. Yet the *cicada spumaria*, a species of locust, can leap two hundred and fifty times its length. If a man could leap the same distance in proportion to his size, he would be carried a quarter of a mile ; and an ox or an elephant still farther — far enough, indeed, to dash him in pieces. A flea weighs less than a grain, and can leap an inch and a half. A man, at the same rate, would pass over 12,800 miles, or half round the globe ! The legs of one

\* Buckland's Bridgewater Treatise, Vol. I. p. 109.