

In the various excavations that have been made in the prosecution of this inquiry, many objects of art of historical interest have been discovered; but as these do not come within the province of the Royal Society, the author proposes to give an account of them in a memoir to be laid before another learned body.

The following communications were read :—

- II. "On the Computation of the Effect of the Attraction of Mountain-masses, as disturbing the apparent astronomical latitude of stations in Geodetic Surveys." By GEORGE B. AIRY, Esq., F.R.S., Astronomer Royal. Received January 25, 1855.

The author commences with remarking that his surprise had been excited by the result obtained by Archdeacon Pratt\*, namely, that the computed attraction of the elevated country north-east of India considerably exceeds the disturbance which it was sought to explain. But on consideration the author perceived that this result might have been anticipated, on the extensively received supposition that the interior of the earth is a dense fluid or semi-fluid (which for convenience he calls *lava*), and that the exterior crust floats upon it. For, he remarks, this crust cannot be supposed at any part to be very high upwards (as in mountains), at least to any great horizontal extent, unless there is a corresponding projection downwards into the lava. Upon making a numerical calculation, even with the crust 100 miles thick, it was shown that there would be such a tendency of the table-land to crack and sink in the middle as no cohesion of rocks can resist. He conceives that the state of the ground may be properly illustrated by a raft of timber floating on water: if one piece of timber projects higher into air than the others, we are certain that it also projects lower into water than the others. Assuming this as established, then it is evident that the horizontal attraction of a mountain-mass on a point at a considerable distance is nearly evanescent, because the increase of attraction of the part which is

\* Proceedings of the Royal Society, December 7, 1854.

above the general level is sensibly neutralized by the deficiency of attraction below it where the lighter crust displaces the heavier lava. In like manner, the horizontal attraction of a ship or other floating body is nothing. But the horizontal attraction upon a near point on the earth's surface will not vanish, because the mountain which produces the positive attraction is nearer than the lava-displacement which produces the negative attraction: even here, however, the efficient disturbing attraction will be much less than that computed by considering the dimensions of the mountain only.

III. Note to a paper entitled "Contributions to the Anatomy of the Brachiopoda," read June 15, 1854. By THOMAS H. HUXLEY, Esq., F.R.S. Received February 12, 1855.

My attention having been called within the last two or three days, to an error in my paper on the Anatomy of the Brachiopoda, published in No. 5 of the Royal Society's Proceedings, I beg to be allowed to take the earliest opportunity of correcting it. At p. 111 of that paper the following paragraph will be found:—

"In 1843, however, M. Vogt's elaborate Memoir on *Lingula* appeared, in which the true complex structure of the 'heart' in this genus was first explained and the plaited 'auricle' discriminated from the 'ventricle;' and in 1845, Professor Owen, having apparently been thus led to re-examine the circulatory organs of the Brachiopoda," &c. &c.

Now, in point of fact, though M. Vogt *does* describe and accurately figure the structures called 'auricle' and 'ventricle' in *Lingula*\*, yet he has not only entirely omitted to perceive their connexion, or to indicate the 'auricular' nature of the former, but he expressly states that the so-called 'hearts' are "simple, delicate, pyriform sacs" (p. 13).

I presume that my recollection of M. Vogt's figures was more vivid than that of his text; for having been unable, notwithstanding repeated endeavours, to re-obtain the memoir when writing my paper,

\* Neue Denkschriften der allgemeinen Schweizerischen Gesellschaft für die gesammten Naturwissenschaften. Band VII.