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An Experimental Inquiry into the Cause of the Ascent and Descent of the Sap, &c. By G. Rainey, M.R.C.S.E.

A.H.

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Broderip concludes his volume. How happy are we that we live in days when these monsters are doomed to lie petrified in oolitic rocks or extended, carved curiously "by art and man's device," out of the solid stone, and gazed at, in and through glass cases, in the National Museum! The work of Mr. Broderip is very readable, and it would prove instructive to many a scientific man, as well as amuse his leisure hour. We have no doubt that this work will "cherish," as well as "awaken, a love for natural history."—A.W.

An Experimental Inquiry into the Cause of the Ascent and Descent of the Sap, &c. By G. RAINEY, M.R.C.S.E.

Whatever may be the value of these inquiries, it is certain that they have led the author to some conclusions which will appear rather curious to most botanical anatomists. For instance, he endeavours to show that the crude sap ascends in the substance of the cell-walls and intercellular matter without passing through the cavities of the cells or vessels, and his reasons are founded upon the experiment of causing plants to imbibe certain solutions and then decomposing these in sections placed beneath the microscope, when the solid walls alone exhibit the coloured product (!). If we were to strain a solution of bichloride of mercury through a piece of gauze, and then to decompose this by hydrosulphate of ammonia and to examine the gauze by a magnifier, it is probable that we should find the *substance* alone coloured, but we should hardly deduce from this that no bichloride of mercury had passed through the interstices.

The author's way of accounting for the formation of vessels is equally original; he shows that "the wall of a vessel is formed by the union of the external thickened wall of the surrounding cells."

The various experiments and details respecting the movement of the sap and the growth of plants offer nothing of value which is not already well known.

In these days it is absolutely necessary that students of a science should make themselves *clearly* acquainted with the results of the labours of their predecessors: had the author of the present little volume done so, he would have saved much valuable time and application.—A. H.

MISCELLANEOUS.

Extracts from a Letter to THOMAS BELL, Esq., F.R.S., *from*
GEORGE CLARK, Esq., *of Mauritius.*

Port Louis, June 5th, 1847.

* * * "I venture to lay before you the following description of some bullocks, brought hither from the island of Lombach, near Java. One cargo only has been imported, and it does not appear likely that any more will be brought. Their characteristics are so novel to me that I determined to describe them to you.