possibly fish habituated to acid conditions may readily tolerate a degree of acidity which would be very deleterious, if not fatal, to others reared in, and accustomed to, neutral and alkaline water. The burns and lochs of the Scottish highlands are largely in peat and igneous rock; limestone exists only in small areas and in isolated districts. The water supply coming from peat is essentially acid in character, and in surface drains and pools the *p*H value may be no more than 3 or 4; clear springs coming through the 'pan' under the peat have been found to be *p*H 4·5, while in a peat surrounded loch of the same water value trout, averaging ¾ lb. in weight, flourished. Both trout and salmon will leave a burn having water of *p*H 6 for another and smaller of *p*H 5 in order to spawn. In similar peat districts with a limestone formation, however, the acidity is lessened or neutralised and the burns vary from *p*H 6 to *p*H 7·5.

Such acid conditions as prevail in the typical peat district may perhaps affect the nature of the flora and may possibly restrict the fauna, but both trout and salmon parr can, and undoubtedly do, thrive in water of *p*H 4·5 to *p*H 6. W. J. M. MENZIES.

Fishery Board for Scotland,
Edinburgh, Mar. 30.

A Useful Electric Cell.

TAKE a glass vessel, a porous cell, a zinc rod and a carbon plate, such as are used in the ordinary Leclanché cell (a circular glass vessel of the same capacity is better). Prepare a solution of 20·4 grams of potassium dichromate and 87·4 grams of sulphuric acid (sp. gr. 1·75) in 350 grams of water and pour it into the glass vessel. Place the carbon plate in this solution. Fill the porous cell with a solution of 14·5 gm. of ammonium chloride in 200 gm. of water and place it in the glass vessel containing the dichromate solution. The amalgamated zinc rod is placed in the porous cell. The E.M.F. of this cell is 2 volts. The internal resistance is about 0·6 to 0·8 ohm. When continuously used, it gives a constant current for more than 12 hours, and the E.M.F. remains unchanged. The rate of dissolution of zinc (when a rod of zinc is used) is only 2·5 gm. in 12 hours, while in the bichromate cell the rate is 12 gm. When used intermittently, the cell remains efficient for more than three weeks. S. L. JINDAL.

D.A.V. College Laboratory.
Cawnpore, Feb. 24.

Biological Fact and Theory.

PROF. WALKER in NATURE of Mar. 26, p. 456, introduces personalities into his reply to my letter. In the circumstances, I do not wish to continue a discussion intended to deal with the purely scientific issue of whether Prof. Nöel Paton's attack on accepted genetic theory was justified.

I would, however, like to repeat the statement with which I began, namely, that the progress of biology in Great Britain is being retarded by the failure of specialists in its various branches to appreciate the bearings of work done in other fields than their own. With regard to the specific point at issue, Prof. Walker writes that he has watched "often with amazement, sometimes with amusement," the attempts of geneticists "to make the 'neo-Mendelian' 'laws' agree with the results of breeding experiments." What must a physicist think of biology and biological theory when he reads this? In physics, at least, the prime aim of the man of science is to make his theories fit the facts of Nature. One's comfort is that, with few and negligible exceptions, the whole body of those engaged upon genetical research are actually employing the conceptions and theories which I enumerated, and which Profs. Paton and Walker repudiate, as a means to the discovery of new and fruitful facts. JULIAN S. HUXLEY.

King's College, Strand,
London, W.C.2.

The Development of Natural History Museums.

OPENING NATURE of April 16 at p. 551, I am astounded to read: "What has the Natural History Museum . . . done to make Darwin's . . . discoveries current amongst his own people? . . . Nothing! Except for a few isolated exhibits, shown almost in holes and corners. . . ."

When you favour this Museum with a visit you will doubtless observe the statue of Darwin in the place of honour, looking down on a Hall in which are conspicuous cases illustrating such subjects as variation under domestication and in Nature, protective coloration, mimicry, intergradations between species—cases which, I may remark, set an example to the world.

If you will then do me the honour to enter the Geological Department, the very first label (a large one, next the door) you will find explains evolution in Proboscidea, while the relevant specimens face you on entry. If you will kindly follow me into Gallery VIII you will speedily be brought up by an exhibit in a large central case elucidating evolution, convergence, and adaptation in some stalked echinoderms; farther on is one illustrating evolution in the sea-urchin Micraster. The cases devoted to Polyzoa illustrate growth and evolution in a colonial organism. Returning, you cannot miss the classical instances of the Steinheim Planorbis, the Viviparus of Slavonia, and the Melanopsis of Hungary.

You could see more examples in other galleries, but that is enough for one visit. Let me, however, remind you that similar exhibits prepared and arranged by the staff of the Museum have been shown at the White City and at Wembley in several years. Guides to the Geological Department have been praised for their connecting thread of evolutionary philosophy. Towards that philosophy of recent years one of the most important contributions has been the catalogue of fossil Polyzoa, notably the volumes by Dr. Lang.

With much that you say I am in hearty agreement. But if you wish for reforms you will not get them if you begin by antagonising those who are working all day and every day to put those reforms into actual practice. Let me assure you that the combination of accuracy and order with imagination and breadth of view is not impossible, even in a museum official: certainly it should not be impossible in a leading article of our chief scientific paper. F. A. BATHER.

Natural History Museum.

DR. BATHER'S comments surely support our plea for a more educative and effective arrangement of exhibits of fundamental biological importance. Under his skilled guidance several such exhibits may be discovered, but to the ordinary intelligent visitor, who may lack such guidance, they are for the most part lost in the systematic arrangements to which they are subordinated, and if discovered can make only an isolated and non-cumulative appeal. Our comments, however, were not meant as hostile criticism, for probably as much has been accomplished as the conditions allow; we endeavoured to indicate that, under present conditions, it is difficult or impossible to keep the exhibits abreast of the modern scientific and educational outlook, and that this, with other factors, pointed to the desirability of an inquiry into the position as a whole.

THE WRITER OF THE ARTICLE.