

coniferous wood there just like that at Stocklands, but no Ammonites. I would suggest to local geologists the advisability of a persistent search for the latter.

A. M. DAVIES.

25, Mortimer Street, W.

NAMES FOR BRITISH ICE - SHEETS.

SIR,—To discuss fully the wide questions raised by Mr. Lamplugh's reply to my letter of last April would require far too much space, so I content myself with repeating that to propose a name for that which has not been proved to exist is, to say the least, premature. It is also objectionable, because so many persons cannot become familiar with a name without assuming that it implies the existence of a reality. As man is naturally prone to idolatry, which in the present age commonly takes the form of phrase-worship, I am sure that if the North Sea Ice-sheet passed without protest it would quickly materialize into a geological fact. I had no objection to using the term 'Scandinavian Ice-sheet,' because something of the kind must have existed in that country, yet I was careful to speak only of 'Caledonian ice.' So I cannot allow Mr. Lamplugh to smuggle in an East British Ice-sheet under the cover of any phrase in my letter. As for the late Glacial age of the Dogger Bank, that of course is possible; but I think whoever makes use of it as an argument should indicate under what circumstances such a long shoal-like mass of morainic matter was deposited in that position. Also, I should like to have an explanation of the causes which would lead to an exceptional precipitation of snow on any particular part of a comparatively level plain which had considerable land masses on three sides. My complaint against the school of glacialists to which Mr. Lamplugh belongs is, that they insist on those facts which seem to favour their ideas and ignore all which have the contrary effect. Thus, like the defenders of the Ptolemaic system of Astronomy, they support hypothesis by hypothesis, and invent epicycles to escape from difficulties. It is, however, a gain to have it admitted that boulders did not take an inside or outside passage on an ice-sheet the whole way from Scandinavia to Eastern England. This encourages me to hope that a course of sea-bathing early in the Glacial Epoch may embolden some geologists to repeat the process later in the same, and to extend southward the submergence which must have occurred then (*GEOL. MAG.*, 1877, p. 72, and 1900, p. 289) in a more northern region.

T. G. BONNEY.

CURIOUS BRECCIAS IN THE HIGHLANDS.

SIR,—There are in the Scottish Highlands between Loch Katrine and the upper part of Loch Lomond several bosses of diorite surrounded by brecciated schist. These are very curious, for each boss of diorite is surrounded by a narrow fringe of breccia consisting entirely of schist without any admixture of igneous matter. It seems to me that the diorite must have been forced up in a solid state through the schist, which in consequence got broken up; for had the diorite been in a molten state when it came up, some of it would surely have flowed among the fragments of schist.

Further north, in Glenfalloch, there is a more extensive area of similar brecciated schist, where, however, as far as I remember, no igneous rocks are to be seen.

The researches of Lapworth, Peach, and Horne in the Highlands, of Lamplugh in the Isle of Man, and of others elsewhere, have taught us that solid rocks have been broken up or ground into powder by mechanical violence on a far larger and more extended scale than had been previously dreamed of.

If I am right in my conjecture as to the origin of the breccias mentioned above, they are instances of the same sort of thing.

June 4, 1901.

J. R. DAKYNS.

P.S.—I am reminded by my friend, Mr. C. T. Clough, that the breccias may be due to explosions. They are mentioned by Sir Archibald Geikie in his work on "Ancient British Volcanoes," but I have not the book at hand to refer to.—J. R. D.

OBITUARY.

GUSTAF LINDSTRÖM.

(WITH A PORTRAIT, PLATE XIII.)

BORN AT WISBY, AUG. 27, 1829.

DIED AT STOCKHOLM, MAY 16, 1901.

How vividly comes to one's mind that little room looking into the courtyard of the Riksmuseum at Stockholm, with its plain deal floor, deal tables and writing-desk, and the rough deal shelves for books covering three of its walls, the only decoration a few portraits (as of Angelin and Darwin), the only sign of comfort an old horse-hair sofa. Here for twenty-five years, day after day, Gustaf Lindström pursued his quiet labours on that wonderful collection stored in the adjoining room, a collection rich chiefly in the fossils of Silurian Gotland amassed by the successive exertions of Hisinger, Angelin, and Lindström himself. At one of the windows in that room, overmuch darkened though it was by the tall houses opposite, one would see G. Liljevall developing some rare fossil or making those exquisite drawings that illustrated Lindström's papers; at another window the attendant boy, usually a Gustaf too, made cardboard trays or sorted out new accessions; while a third window was generally occupied by some foreign palæontologist who had journeyed far to study the famous collection. Many are there of these who to-day mourn Lindström, not merely as a leader gone from among them, but as an ever attentive host, and as a dear friend.

Born among the mediæval ruins of Wisby, in whose cliffs and on whose strand fossils are to be had for the mere taking, the meditative and retiring youth could not fail to have his interest aroused by the relics of the past. He might have been a great archæologist, in fact his academic thesis was on the history of his native island in Queen Christina's reign, and in after years he published two thick volumes on the Middle Ages in Gotland; but the direct incentive to palæontological studies was early furnished. "In 1845," he once wrote, "when I was quite a boy, much wondering at the marvellous things I saw enclosed in the limestone rocks of my native island of Gotland,