



pools, which become ponds in dry weather. This northern country opposite to Greenland has been "carved" in this fashion by ice on the large scale, and afterwards by water-streams, and by the frequent falling of rain drops. It has also risen from the sea. The ice-cover has been taken off Scandinavia and Finland, and there it is possible to test theories about the work which an ice-cover is now doing on the present chief gathering grounds of snow throughout the world. But that Scandinavian work is the same kind of work which is found with small glacial marks elsewhere. Hollows have rounded sections , or when deep they are like U. Hills between hollows commonly are hog-backs , and generally the land is rounded, except where peaks rise, and cliffs have broken. But this kind of rounded sculpture exists only in some regions of the world, and it marks the site of local glacial periods, as I believe. Elsewhere the section of valleys is angular like V, or in cañon countries like Y. These angular grooves are known to be the work of streams, because every stream of water carves on the same plan. Rounded hills and dales are at first sight evidence of powerful ice erosion, but some kinds of rock weather in bosses. If it be admitted that a drop wears a stone, that a stream makes a deep cañon in a long time, and that a glacier "abrades" or makes any mark at all, it seems to follow that an ice-engine as large as India or Scandinavia has in fact done the large work which it might be expected to do by perseverance in working, as it is known to work, wherever snow now gathers in large masses. Given the hardly perceptible wearing of water and time, a cañon a mile deep and many hundreds of miles long has resulted from the flowing of a stream. Given glacial "abrasion" and time enough, than valleys of rounded section, and furths and lake-basins of a particular kind probably resulted from the flowing of ice.

There are plenty of hollows in the earth's surface which are not the result of erosion but of other causes with which I am not now concerned. Where a stream flows from source to mouth on a gradual slope, there has been no great disturbance of level since the stream began to work. Where ice fills the dales there are no cañons. Where ice has filled dales and has left fresh marks, cañons are short and small. In mountain regions where ice-marks are rare or absent, cañons are of great depth and length, apparently because their streams have flowed in the same channels ever since the mountains were raised. But where cañons are marked features, these lakes, firths, and dales of rounded section are very rare, or do not exist. It seems therefore that hollows which have, in fact, been carved out of the earth's surface may be known for water-work, or for ice-work by their shape, and that firths, dales, and lakes may mark the sites of local glacial periods; and cañons the sites of climates that have not been glacial since the streams began to flow. Perseverance may accomplish great results insensibly like ice in dales, water in water-courses, and drops on stone.

Let me counsel those who wish to study the works of ice on a large scale to abandon the retiring glaciers of Switzerland and study Nature in Norway. This is the best season for travelling there.

J. C.

June 23

The Loan Scientific Collection at South Kensington

As a science teacher, privileged to attend the special demonstrations upon the extraordinary assemblage of apparatus now filling the galleries of the exhibition buildings, a list of some of which appeared in last week's NATURE, would you allow me to call attention to the provision of the department by which the general public may be admitted, if room, at a nominal charge.

Within the past few days my note-book shows that the original instruments of Sir Isaac Newton, Faraday, Fizeau, Wheatstone, Watt, Savery, Black, Cavendish, Guericke, and others employed in their classic researches, have been shown and explained (and used, so far as experimentalists would presume to touch such now almost venerated relics).

The spacious and well-appointed lecture-theatre has not been always crowded; but I have the impression that if the above regulation were widely understood there would be such a gathering, not of the merely curious, who would attend as at an entertainment in natural magic, but of those deeply interested in the topics discussed, as would prove too large for the accommodation at present provided; and, whilst scientific enrichment of the public would be more largely secured, a compliment would at the same time be paid to the directors for their great efforts to promote the success of this important undertaking.

The School of Science, July 6

WILLIAM GEE

Evolution of Oxygen by "Vallisneria Spiralis"

HAVE any of your readers noticed the rapid evolution of oxygen by a blade of *Vallisneria spiralis*? If a blade is cut or broken and held under water, the bubbles of gas are rapidly noticed issuing from the broken end, and by a simple arrangement of placing the broken blade or several blades into a test tube filled with water the water is displaced and the gas collected. After forty-eight hours the pores of the broken end of the blade close up and a fresh fracture is necessary to restore the evolution of gas, which also ceases at night only to recommence when the sunlight reappears. I have collected about a cubic inch of gas in eight hours from one blade of the plant. A confirmation of my experiment would please me.

Stroud, July 3

WALTER J. STANTON

Stamens of Kalmia

If the beautiful spring trap formed by the stamens of the *Kalmia*, by which insect fertilisation is secured, has not yet been noticed, I may perhaps be allowed to call attention to it.

Cahirmoyle, Ardagh, Co. Limerick

C. G. O'BRIEN

Optical Phenomenon

FOR more than half an hour after sunset this evening there was a broad band of light rising vertically through a clear sky immediately above where the sun had set. It moved as the sun moved northward below the horizon, retaining its vertical position. It must have been formed at a very great height in the atmosphere, for it outlasted all the other sunset tints, which were very beautiful. It would be interesting to know whether this was seen from many places far apart.

JOSEPH JOHN MURPHY

Old Forge, Dunmurry, Co. Antrim, June 27

The Cuckoo

WITH regard to the letter of Mr. Adair, in last week's NATURE, p. 210, on the cuckoo, I have only to observe that if it does not sing in Somersetshire after Midsummer it does *here*, in Middlesex; I heard it, to my astonishment, early in the morning of the 6th inst., in the woods and hills to the north. I never recollect its note so late, not after the 3rd.

Harrow, July 10

HENRY ST. JOHN JOYNER

OUR ASTRONOMICAL COLUMN

SHORT'S OBSERVATION OF A SUPPOSED SATELLITE OF VENUS.—This observation which, as it appears in the *Philosophical Transactions*, vol. xli. (NATURE, vol. xiv., p. 194), is mystified by a typographical error, is also found in "Histoire de l'Académie des Sciences, 1741," p. 125, where the micrometrically-measured distance of the suspicious object from Venus is given in what seems to be a more correct form, and as it was used by Lambert in his calculations. After referring to the observations of the elder Cassini in 1672 and 1686, the writer—probably Cassini II., author of "Elemens d'Astronomie"—states that Mr. Short had again seen the satellite, real or apparent, in the preceding year (1740), under similar circumstances, and with the same phase as Cassini had described; he had been informed of this in January, 1741, by M. Coste, "auteur de la Traduction du livre de l'Entendement Humain de Locke, et de plusieurs autres ouvrages;" and having communicated the observation to the Academy of Sciences, had been charged by that body to inquire more particularly concerning it, and report the result. But as Short had not seen the satellite again up to June, 1741, nothing further was ascertained than had been notified in the letter addressed to M. Coste, which was from "Mr. Turner, written from London, June 8."

Short's observation was "made in London, November 3, 1740, in the morning, with a reflecting telescope of 16½ English inches, and which magnified the diameter of the object from fifty to sixty times. He perceived at first what appeared to be a small star very near to Venus, upon which, having applied to his telescope a stronger eyepiece and a micrometer, he found the distance of the