

covering the lower part of the tibial muscles. This adhesion of the yolk-sac to the leg had apparently taken place after the full development of the limb; and the yolk-sac, in the course of its withdrawal into the cavity of the abdomen, had apparently drawn the foot in with it. The withdrawal of the yolk-sac is generally held to be brought about by the absorption of its contents; if the above explanation of the existing condition be correct, a considerable force must be exerted by this act of absorption if it is capable of dragging the foot, from its normal position, into the cavity of the abdomen.

E. WAYMOUTH REID.

St. Mary's Hospital, W., May 6.

Atmospheric Electricity.

I SEND you the following account of a curious, and, I believe, rare electrical phenomenon witnessed last week by a friend of mine and myself.

We had, in the course of a long mountain ramble, reached the summit of Elidyr Fawr (3033 feet), a mountain lying to the north-east of Llanberis, and about four miles north of Snowdon. Being a short distance in front of my friend, I sat down and rested with my back to the cairn, sheltering myself from a cold south wind which was blowing with considerable velocity. In about two minutes I heard a curious buzzing sound commence, apparently proceeding from the top of the post set up not long ago by the Ordnance surveyors. I had heard the same noise about three years ago while descending the *arête* of the Weisshorn, and on that occasion, as on this, there was a south wind blowing, accompanied by snow—on the Weisshorn in large flakes, on Elidyr Fawr in fine powdery flakes. On the Weisshorn, for above an hour every rock seemed to emit the peculiar buzzing noise, and our ice-axes did the same. We were in too great a hurry, however, to pay much attention to the phenomenon. A day or two after, I related my experience to a gentleman, Mr. Powell—who, I trust, will forgive me for mentioning his name—and learned from him that he had had a similar experience on the Unter-Gabelhorn, near Zermatt. The day was on that occasion, if I remember right, clear, when the noise was heard, followed in a short time by a flash, and a shout from two of the party that they were struck. No harm was done by the shock, but the sensation was described as being like that which would be felt if every hair of the head were caught hold of and violently twisted. Having heard the sound before, I readily recognized it on Elidyr Fawr, and resolved if possible to study the phenomenon more closely. I first climbed on to the cairn, and found that the sound proceeded from the whole surface of the wood for about two feet from the top of the post. I then raised my stick, which had an iron point, and found that the sound began to proceed from it directly a height of about six feet from the ground was reached. I then put my hand on the part emitting the sound, but could feel nothing. On putting my stick down, and keeping my hand up, the sound proceeded from my hand—from more or less of it according as I raised it higher or lower—and I imagined that on the back of my hand the sensation of being very slightly pricked in many places was perceptible. My friend was much impressed by the peculiarity and intensity of the sound, and agreed with me that it would not be wise to stay long. As we proceeded along the ridge, after a slight drop, we rose again, and while standing on some rocks, the noise began in our caps, accompanied by such an agitation of the hair that it quite seemed as if we had literally a “bee in the bonnet.” There was no sound of thunder, and in the course of about half an hour the snow-storm passed away, not however before we had descended far below the enchanted summit.

C. A. C. BOWLKER.

Halo of the Moon and Formation of Peculiarly Shaped Clouds at Oxford.

I NOTICED the following very beautiful phenomenon on the night following May 8, and it seems to me worth recording. At 9.45 p.m. the moon was surrounded by a very large halo, the sky being quite clear in the immediate vicinity of the same, with the exception of a small accumulation of clouds at the lower part of the halo (to the left of the spectator).

At 10.45 the halo had completely disappeared, and a large cloud was obscuring it and the moon. The margin of the cloud was split up into tongue-like protuberances. At 11.20

the halo had again appeared, but it was not so bright; the moon was hidden from the spectator by some clouds.

At 11.30 the clouds had disappeared, and the moon was shining out brightly, but the halo was only very slightly visible, and that only at its highest point. Just before it began to disappear gradually, some of the clouds with the peculiar tongue-like protuberances already mentioned were formed, but they disappeared again after a few minutes. As was to be expected, we had rain on the following day, and some already during the same night.

I need only just mention that the halo is supposed to be produced by the refraction of light by crystals of ice. Brewster proved this by viewing the sun through some plate-glass on which he had allowed some alum to crystallize out in a thin sheet, when he saw a number of rings closely resembling halos.

OTTO V. DARBISHIRE.

Balliol College, Oxford.

Spherical Eggs.

THE problem of packing the greatest number of equal spheres into a given space, to which Prof. Aldis has drawn attention in your columns, is the simplest case of a more general problem which I have employed in my theory of crystallization (Cam. Phil. Trans., vol. xiv. part 3)—that is, the packing of the greatest number of equal and similar ellipsoids into a given space. The solution is that the ellipsoids should be arranged in a manner similar to that described for spheres by Profs. Aldis and Greenhill, so that every ellipsoid be touched by twelve others, and, further, that all the ellipsoids be similarly situated. The curious result comes out that so long as the ellipsoids are all similarly situated the orientation of the axes makes no difference in the number of them per unit volume. They may be turned about, provided they are all similarly turned, without affecting the ratio between the space filled by them and the unfilled space between them.

In the case of spheres, if tangent planes be drawn through all the points where the spheres touch one another, they will cut up space into regular rhombic dodecahedrons, every sphere being circumscribed by such a dodecahedron. Now, of plane-faced figures which can be described about a sphere and which will exactly fill space, the smallest in volume is the rhombic dodecahedron; hence the spheres arranged in the way described occupy the minimum volume. In like manner if tangent planes be drawn through all the points where the ellipsoids touch one another, they will divide space into dodecahedrons with quadrilateral faces, which will be unsymmetrical, but will be all similar and equal. If the ellipsoids be all turned in a similar manner the dodecahedrons will alter in form but not in volume. These dodecahedrons are the smallest which can be described about the ellipsoids consistently with the condition that they shall exactly fill space. The condition of similarity in the situation of the ellipsoids involves the consequence that, if we consider one ellipsoid and the twelve others which touch it, four planes can be drawn each passing through the centres of seven ellipsoids. The points of contact of the ellipsoids will lie in those planes, and the tangent planes through these points will be parallel to the diameters conjugate to those planes. Other geometrical properties follow which do not concern the present problem.

Cambridge, May 10.

G. D. LIVEING.

Columnar Structure in Ice.

THERE are several notices in existence on the subject of the columnar structure of ice, to which attention has been called by Mr. La Touche (NATURE, May 9, p. 35). For instance, a letter by myself in the first volume of NATURE (p. 481), which contains references to sundry cases of the occurrence of the structure in Britain and in other parts of Europe, and offers a suggestion as to the cause. The structure may often be seen, if looked for, and is best exhibited when a very gradual thaw follows a hard frost.

T. G. BONNEY.

SCARLET FEVER AND COW DISEASE.

FEW questions have within recent years more engrossed the attention of the veterinary and medical professions of this country, and have been the subject of greater or more acute controversy, than the relation of