

the red end; at the violet the light was so brilliant as to appear almost white. The only clouds at the time were bars of white cirri, and it was across some of these that the halo showed itself. This lasted for eight minutes, and then began to fade as the cirri moved away, but the colours again brightened, and were still visible, even when the sky was apparently clear, although, where the patch of colour remained, very faint cirri could still be perceived behind and through the brightness. At 9.51 the whole had disappeared. The wind at the time was nearly due north. I should like to know whether these solar halos are considered to be produced by ice-crystals in the higher regions. They appear to me quite as prevalent in summer as in winter.

Great Malvern, October 2

E. BROWN

#### A Remarkable Rainbow

THE phenomenon of supernumerary bows noticed by "L. C." on September 24, has been repeatedly observed and described. Various explanations have been suggested; and "L. C." will probably find what he wants in Archdeacon Pratt's paper in *Phil. Mag.*, 4th series, vol. v. pp. 78-86 (1853).

A. RAMSAY

#### Meteor

A SPLENDID meteor was seen yesterday (Saturday) evening at about nine o'clock. It passed from the north-east, beneath the Pole star, to the west, where it vanished instantaneously without bursting. The nucleus measured, I should say, at least 5' of arc in breadth, and was extremely brilliant.

A. TAUN

31, Mornington Road, N. W., October 7

#### A Palæolithic Flake

It may interest some of your readers to know that I found last week a Palæolithic flake in some gravel at Gray's Inn Lane, where they are now making excavations for sewers. It is a somewhat large, flattish, subtriangular flake of implement-like form, exhibiting a large cone on the plain side towards the butt, and the other side showing several facets; ochreous all over, and somewhat abraded. There is one in the British Museum from this spot, only it is an *implement*, black, lustrous, and spear-shaped, and seems to have come from a higher stratum than the flake before mentioned. Mr. W. G. Smith has an implement from Drury Lane—brought to him by an excavator instructed by him to look for implements at Shacklewell, and while at work at Drury Lane he found one, and, recognising it as an implement, brought it to Mr. Smith. It is subtriangular, worked all over on both sides, blackish indigo, lustrous, and very slightly abraded. These are as yet the only relics of Palæolithic man recorded as found in Central London.

49, Beech Street, E. C.

G. F. LAWRENCE

#### Hop "Condition"

I OBSERVE that it is asserted in a German technical journal that the golden microscopic dust on hops, which English growers call "condition," and in which the finest properties of the hop are supposed to reside, does *not* increase in quantity, as generally it is supposed to do, with the growth of the inflorescence. The quantity on the plants is declared to be as great when the buds are first developed as at maturity. Can any of your readers oblige me with observations or references in point?

H. M. C.

#### JOACHIM BARRANDE

THE announcement that Barrande has passed away will be received with sincere regret in every quarter of the globe where geology is cultivated. His death severs another of the few remaining links that connect the present generation of workers with the early pioneers of geological science. Born in 1800, he was eventually appointed tutor to the young Duc de Bordeaux. So attached did he become to the royal family of France, that when Charles X. abdicated he voluntarily went into exile, accompanying his young pupil to Prague, which remained

his domicile thenceforward to the end of his long life. It was during the early years of his exile that he gave himself to natural history pursuits. In a brief visit to Vienna he came upon a copy of Murchison's "Silurian System," then recently published, and finding some of the fossils therein figured to resemble others which he had himself picked up in Bohemia, he on his return began to look more attentively at the rocks of his neighbourhood. Getting more interested with every fresh excursion, he began to open quarries and employ workmen to search for fossils. In order the more easily to direct their work he laboriously acquired their language. Year after year he continued these researches, devoting to them his time, energy, and fortune. He became the prince of fossil collectors. But at the same time he applied himself with unwearied industry to the scientific study of the fossils and of the rocks containing them. By degrees his labours took shape, and there resulted from them his colossal work, the "Système Silurien de la Bohême," a noble monument of scientific enthusiasm. It was begun as far back as 1852. Since that time no fewer than twenty-two massive quarto volumes of text and plates have been published. Undeterred by the remonstrances of a publisher who would insist on counting the cost and the sale, Barrande was his own publisher, and prosecuted his labour of love down to the end of his life. His numerous separate papers on geological subjects began to appear in 1846, and have been continued to the present time. Living in exile for upwards of half a century, Barrande occasionally visited his native country, and took a keen interest in scientific progress there, but remained an unflinching royalist, refusing to do anything or accept any distinction which might seem to compromise his political principles. He even declined to be nominated a corresponding member of the French Academy. But honours were heaped upon him by the scientific societies of other countries. Due tribute will no doubt be paid to his scientific achievements; for the present we have time only to offer these few lines to the memory of one of the most unwearied and profound students of palæontology, and one of the most upright and honourable of men.

#### THE SANITARY CONGRESS ON HOUSE SANITATION

A CONSIDERABLE amount of attention was given at the recent Congress of the Sanitary Institute in Glasgow to the question of house construction, and to the evils which are attendant upon the present system under which human habitations are erected both in the metropolis and elsewhere. When it is remembered how large a portion of time the inhabitants of this country are compelled, by reason of climate and otherwise, to spend inside their dwelling houses, it is obvious that the health both of the present and of future generations must be largely dependent on the sanitary condition of those dwellings, and that very earnest consideration should be given, both by experts in matters of building and also by the public themselves, to the sanitary details of house accommodation. And yet it is notorious that houses, which are faulty in almost every particular relating to health, are week by week being run up by hundreds and thousands; that even where money does not enter into consideration the dwelling-rooms of mansions are left without any provision for ventilation whatever; and that both the wealthy and the poor are stricken with disease by reason of the foul air which has been conveyed from the sewers into their homes as the result of arrangements which are, in point of fact, almost always more costly than should have been the more simple appliances which would have prevented the possibility of such an occurrence.

As the law now stands there are certain evils which