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EXHIBITING A VIEW OF THE

PROGRESSIVE DISCOVERIES AND IMPROVEMENTS

IN THE

SCIENCES AND THE ARTS.

CONDUCTED BY

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to the sea. He is of opinion, that, the greater part of the floating ice of the northern sea comes from these glaciers; he even thinks that there are no fields of ice in the ocean but when there is land in the neighbourhood, and that it may easily happen, for this reason, that there should be none at the pole itself. On returning from Lapland, M. Robert visited the copper mines of Kaafiord, situated in the Altenfiord, and found them very rich in produce, and also in minerals. One of them is in the norite of Esmarck, and the other in a calcareous breccia. The great plateau of Lapland was found to be entirely composed of gneiss, and covered with a deposit of magnetic sand, which he ascribes to its having been the site of a large lake. He has likewise ascertained that the sand of the great rivers of this country, such as the Alten and the Muonio, contain a great deal of oxidulated magnetic iron. He found this metal also in a vegetable earth, and thinks that, for this reason, the most scrupulous attention is demanded in making observations with the magnetic needle. Finally, M. Robert has directed his attention to the transported matters of the soil of Scandinavia, or, in other words, the erratic boulders; instead of considering them as such, or referring them to any violent agency, he is of opinion that, in most cases, they are not remote from their original site, and that their rounded form, and occurrence in collected masses, are owing to causes still operating on the globe, such as the continued washing of the sea, torrents, &c. Neither does he believe that the worn appearances *(rognures)*, sometimes noticed in the Scandinavian rocks, are owing to the alleged phenomenon, very gratuitously dignified, according to him, with the title of diluvium.

Notice of Greenockite, a new Mineral Species of the Order Blende.

Description.—Form, prismatic? Colour, between honey and orange yellow, rarely inclining to brown. Colour of the streak, reddish orange. Lustre, shining, resinous, somewhat

inclining to adamantine. Semi-transparent to semi-translucent. Hardness, about 3.5. Specific gravity, 4.8.

Chemical composition.—It is a proto-sulphuret of cadmium, and itsformula is Cd S.

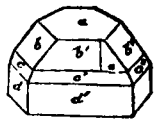
Geographical and Geognostical Situations.—It occurs near Bishopton in Renfrewshire, in a porphyritic and amygdaloidal trap rock, containing crystals of felspar and amygdaloidal portions of calcareous spar, green earth, &c. Cavities lined with prehnite are often met with; and the Greenockite is found either superimposed on the botryoidal surface of that mineral, or disseminated through its fibrous mass.

History.—This mineral was first noticed as an undescribed substance by Lord Greenock, in compliment to whom we have named it Greenockite. We are informed by Mr Brown of Lanfyne, that he has had specimens of it in his possession for many years, and that in his collection it was arranged among the zinc blendes. The Greenockite is a species of a new genus (the 6th in number) of the 5th order of the 2d class of the systematic arrangement, which we intend soon to lay before our readers, and of which a tabular view appears in our present number. It is to be regretted that the limited number, and the small dimensions, of the specimens hitherto obtained, do not admit of the characters of this beautiful and interesting substance being very fully determined. The crystals are short 6-sided prisms, with truncated 6-sided pyramidal terminations; and two pyramids of different degrees of acuteness have been noticed. These prisms have, at first sight, much the appearance of regular 6-sided prisms, but are probably compound forms. The faces of the more acute pyramid are transversely streaked.

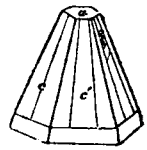
Mr Brooke of London, to whom we sent some of the crystals for examination, has kindly sent us the following sketches of two of the crystals, with the accompanying measurements and remarks. He says, "the form appears to be a regular 6-sided prism, but I suspect that it is derived, like sulphate of potash, from the intersection of three rhombic prisms. I have measured the broken crystal, and find the angles to be very nearly

"*ab* 136° 40′; *ac* 118°; *ad* 90°; *b′ e* about 176°, a salient angle resulting, I conclude, from the composition of two crystals.

No. 1.



No. 2.



"No. 2 is evidently a compound crystal, but I must have better means than the single crystal has afforded, to be enabled to discover the primary form. I do not observe any rings in looking perpendicularly through *a* and the parallel plane, which, although the crystal is only translucent, I think I should do if the primary form were a rhomboid, or rhombohedron as now called. The lines represented on the faces of No. 2. present bold salient and re-entering angles. The only appearance of cleavage, I have found in breaking the small crystal, is parallel to the lateral planes *d* of the hexagonal prism, but I am not certain that these are more than planes of composition of intersecting crystals."

Chemical Examination of Greenockite, or Sulphuret of Cadmium. By Arthur Connell, Esq., F.R.S.E. (Communicated by the Author).

A fragment of Greenockite, heated in a glass tube, decrepitated and acquired a fine carmine red colour, and, on cooling, recovered its yellow tint. At a red heat it did not fuse or volatilize. It gave off no moisture.

In powder, it was readily soluble in heated muriatic acid, with strong odour of sulphuretted hydrogen. Carbonate of soda caused a white precipitate soluble in ammonia. The muriatic solution, by evaporation, afforded a white prismatic crys-
ization, not deliquescing in an ordinary atmosphere. This
acter distinguished the mineral from zinc-blende, which
sembles, and suggested the idea that it might be sulphu-