exhibited and described before the Society November 17, 1903, and subsequently named rathite *a*, but of which no complete description has yet been published.—R. H. Solly: Two new minerals from the Binnenthal, Switzerland. Both are probably sulpharsenites of lead, being lead-grey in colour and giving a chocolate-coloured streak; one, which is rhombohedral-diplohedral, and has an angle 111 : 100 = 38° 18′, is probably isomorphous with trechmanite, while the other may be orthorhombic, the angle 100 : 110 being 58° 18′, but no measurable end faces were observed.—J. B. Scrivenor: Notes on Cassiterite in the Malay Peninsula. Cassiterite from a mine at Gopeng contains ilmenite and magnetite, and is attracted by the magnet; it also occurs mixed with tourmaline pseudomorphic after an hexagonal mineral, probably quartz. Arthur Russell: Notes on the occurrence of Dundasite in Derbyshire and Co. Galway, and of Bertrandite in Cornwall. Dundasite was discovered at Mill Close Mine, Wensley, Derbyshire, as snow-white spheres associated with greenockite, fluor, cerussite, calamine, etc., and at Clements lead mine, Carrowgarriff, near Maam, co. Galway, associated with allophane and cerussite, and bertrandite was found in platy crystals on old specimens of blende from Wheal Vor, Breage, Cornwall, and as trillings, measuring up to 4 mm. in length, on a specimen from Wheal Metal, Breage, Cornwall, which had been presented as albite to the British Museum in 1870; in the latter case the crystals were similar to those from Pisek, Bohemia, described by C. Vrba.—Dr. J. Drugman: On Quartz-twinning. The possible varieties of twinning of quartz were discussed, with special reference to the rhombohedron type, a specimen of which was exhibited.—T. V. Barker: Crystallographic Notes. Two new forms found on crystals of inosite confirm the hypohexagonal type of symmetry suggested by Fedorow. The rhombohedral modification of potassium nitrate, unlike sodium nitrate, does not arrange itself regularly when deposited on a cleavage piece of calcite; the crystals are very unstable, and rapidly pass into the ordinary orthorhombic form. A parallel growth of calcium chromate on the isomorphous mineral gypsum was obtained. New forms have been observed on urea nitrate which enabled the axial ratio $b : c$ for the first time to be calculated; the crystals have large birefringence, and, when grown in a drop, are nearly always twinned.

CORRESPONDENCE.

THE LAND-ICE HYPOTHESIS.

Sir,—In his letter in the last number of the Magazine (for April, p. 189), Mr. Deeley suggests that ice resting on frozen ground "would freeze to it and drag it along". I remember to have seen evidence of the rock on which *Boulder-clay* rests having been thus dragged along. The hill between Hastingfield and Barrington, near Cambridge, consists of Lower Chalk, or clunch, capped by Boulder-clay. Near the south crest of the hill, on the west side of the road, there is a large clunch pit, now little used, and when I last saw it the section was concealed. But a good many years ago the junction of the Boulder-clay and the

clunch was well exposed. The clay contained many glaciated pebbles of clunch, but the point of interest was that the clunch beneath the clay showed signs to the depth of several feet of having been dragged along, for it contained horizontal shearing planes, and was full of slickensides. The mechanics of this kind of action is not very obvious. It would not seem at first sight that this case was quite analogous to that supposed by Mr. Deeley, because it was not ice, but clay, which appeared in contact with the disturbed clunch.

Now though ice may be regarded as a highly viscous fluid, flowing, though slowly, like water, yet this condition cannot be predicated of Boulder-clay, much less so if the clay were frozen. But if it were not frozen, and was dragged along by a deep layer of ice that covered it, it can hardly be supposed that the ice communicated its own motion to the whole thickness of the plastic Boulder-clay, and through it to a considerable depth of solid clunch besides. Or was the clunch disturbed by the ice itself, in accordance with Mr. Deeley's suggestion, before any ground moraine had reached the locality?

The subject is worth investigation, and I would advise Cambridge geologists to keep a look out for the section being again exposed, or possibly to get it reopened for the purpose of examining it. A man with a pick and shovel could do it in an hour or so.

O. Fisher.

Graveley, Huntingdon.
April 19, 1911.

'FACETTED PEBBLES' AND 'DREIKANTER'.

Sir,—The reviewer of Messrs. Lake & Rastall's Text-Book of Geology (Geol. Mag., February, 1911, p. 85) states that the use of 'dreikanter' and 'zeugen' is pedantic and ill calculated to advance knowledge, and evidently considers that the expressions 'facetted pebbles' and 'tabular outliers' are equivalent, or "sufficient" as he calls it. Apart from the reviewer being wrong in both cases, the terms are recognized and used by geologists of many nationalities, and it is surely desirable in a textbook to employ standard words which the advancing student is likely to meet with elsewhere. If the suggestion of the reviewer were adopted and carried to its logical conclusion, the already considerable obstacle of language would be increased by each nation having its own set of scientific expressions.

A pebble may be facetted by glacial action, but there are characters which would often enable us to distinguish it from a dreikanter. The selective action of the wind-blast on softer parts of the rock may produce furrows, but these are not to be confused with glacial striæ.

A zeuge may take the form of a tabular outlier when it is formed of horizontal strata, and then only if there is a suitable arrangement of hard and soft beds. In country of massive, folded, or crystalline rocks the zeugen would not be tabular and 'outlier' a misnomer. I have just had the privilege of traversing some 800 miles of desert with no less an authority than Professor Walther, and in the course of