

# SCIENCE

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FOR THE ADVANCEMENT OF SCIENCE.

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## THE YORK MEETING OF THE BRITISH ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE.

THE meeting of the British Association at York from the first to the eighth of August has a peculiar historical interest in that this interesting and beautiful town was the seat of the foundation of the association seventy-five years go and was the meeting place twenty-five years ago. This time the York Philosophical Society, under whose auspices the first meeting of the association was planned in 1831, was again the host.

The many points of interest in the surrounding country and in the city itself, the numerous halls and meeting places, the beautiful garden and interesting collection of the museum and the great assembly hall, all combine to make York a most attractive and suitable place for this great gathering of the best in English science. The delightful hospitality of the people of York added much to the pleasure of this particular meeting. Perhaps the most attractive of the social gatherings were garden parties given by the Archbishop of York and Mrs. Maclagan at the picturesque and historical palace at Bishopthorpe; by the Sheriff of York and Mrs. Bentley at their beautiful home at Fulford Grange, and by the Messrs. Rowntree and Company at the celebrated cocoa works, while the museum and grounds of St. Mary's Abbey were lighted up by thousands of candles on two occasions for conversazioni. At the great cathedral an organ recital and a special

One may even abandon hope of and desire for the equalization of intellect and still keep the essence of Professor Ward's optimism. For every one of the desirable consequences of the equalization of intellect may be gained as well, if not better, by the same amount of effort and wisdom directed toward its *increase*. Space is lacking for me to defend this somewhat rash amendment, which the author would probably repudiate.

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*Geometrische Kristallographie.* By ERNST SOMMERFELD, Privatdocent an der Universität. Tübingen. Pp. vi + 139, 31 plates and 69 text figures. Leipzig, W. Engelmann. 1906.

This is a book intended for advanced students of crystallography, written from the standpoint of the mathematician. Specifically limiting himself to the purely geometrical properties of crystal solids, the author develops his theme from the definitions of symmetry and in the first chapters defines the thirty-two recognized classes of crystals distinguished by varying grades of symmetry. These groups are variously classified and admirably illustrated by the plates which give for each of the classes the possible crystal forms and show very graphically the relations between them. In the following chapters the mathematical relations existing between the faces of the crystal are deduced and the fundamental crystallographic laws are stated. The mathematical processes, particularly vector analysis and the properties of determinants, which are chiefly involved are made the subject of a special chapter and their treatment is stated by the author to be original and to have an interest quite aside from the application to the problems of this work.

To the student actually engaged in the measurement and study of crystals the book offers little of practical interest except in the presentation of formulæ for the transformation of indices and axes which are here developed in very general form.

CHARLES PALACHE.

#### SCIENTIFIC JOURNALS AND ARTICLES.

THE contents of the *American Journal of Science* for September are as follows:

R. A. DALY: 'Abyssal Igneous Injection as a Causal Condition and as an Effect of Mountain-building.'

W. E. FORD: 'Some Interesting Beryl Crystals and their Associations.'

F. E. WRIGHT: 'Schistosity by Crystallization: A Qualitative Proof.'

M. R. CAMPBELL: 'Fractured Boulders in Conglomerate.'

E. L. FURLONG: 'Exploration of Samwel Cave.'

T. L. WATSON: 'Occurrences of Unakite in a New Locality in Virginia.'

E. H. SELLARDS: 'Types of Permian Insects.'

R. H. ASHLEY: 'Analysis of Dithionic Acid and the Dithionates.'

*The American Journal of Anatomy*, Vol. V., No. 4, September 1, 1906, contains the following articles:

R. B. BEAN: 'Some Racial Peculiarities of the Negro Brain.' (With 8 tables, 16 figures and 12 charts.)

F. P. MALL: 'On Ossification Centers in Human Embryos.' (With 6 tables and 6 figures.)

J. L. BREMER: 'Description of a 4 mm. Human Embryo.' (With 16 figures.)

CHARLES R. STOCKARD: 'The Development of the Mouth and Gills in *Bdellostoma*.' (With 36 figures.)

THE July number of the *Journal of Mathematics* contains the following articles:

EDWARD KASNER: 'The Geometry of Differential Elements of the Second Order with respect to the Group of all Point Transformations.'

F. J. B. CORDEIRO: 'Gyroscopes and Cyclones.'

W. A. MANNING: 'On the Primitive Groups of Class Ten.'

VIRGIL SNYDER: 'On Certain Unicursal Twisted Curves.'

HENRY LIVINGSTON COAR: 'Functions of Three Real Independent Variables.'

#### DISCUSSION AND CORRESPONDENCE.

THE NATURE AND ORIGIN OF VOLCANIC HEAT.

IN *SCIENCE* for August 10 Dr. Elihu Thomson gives a theory of volcanic energy which he correctly describes as an extension of the ideas of Mallet. Having been recently much occupied with the theory of volcanoes in con-