

ancient University of Bologna. and President of the Congress ; and M. F. Giardano, chief Mining Engineer and head of the Geological Survey of Italy.

NOTICES OF MEMOIRS.

INTERNATIONAL GEOLOGICAL CONGRESS.

FINAL RECOMMENDATIONS OF THE ENGLISH COMMITTEE FOR REPORTING UPON THE COLOURS, SIGNS, ETC., EMPLOYED ON GEOLOGICAL MAPS. (Presented to the International Geological Congress at Bologna, September 26, 1881).¹

1. For general maps of large areas, and for small-scale maps of individual countries, it is desirable to frame some scale of colours which can be readily used and easily understood by all nations.

2. For sedimentary rocks a scale of colours, based on the order of colours of the solar spectrum, is desirable for such small or general maps ; subject to such modification as may appear necessary.

3. The scale of Colours recommended is :

Pleistocene	...	...	Burnt Sienna.
Pliocene	...	...	Buff.
Miocene	...	...	Orange.
Eocene	...	...	Pure Yellow.
Cretaceous	...	...	Green.
Jurassic	...	...	Blue.
(Lias	...	...	Indigo.)
Trias	...	...	Venetian Red.
Permian	...	...	Chalons Brown.
Carboniferous	...	...	Dark Grey, distinguishing limestone by a wash of blue.
Devonian	...	...	Indian Red.
Silurian	...	...	Violet.
Cambrian	...	...	Purplish Violet.
Pre-Cambrian	...	...	Purplish Carmine.

4. Sub-divisions of Formations.—Three or four shades of the body-colour to be used ; the darkest shade for the lowest or oldest subdivision. Dots, lines and white spaces to be used where necessary. Where lines or dots are used, they should, if possible, be the same as the body-colour but a darker shade. It was suggested that if possible such lines should run from N.W. to S.E. of the map.

4a. Freshwater formations should be distinguished by some method. Coloured lines or engraved signs were suggested.

5. Metamorphic rocks to be marked, as such, by dark bands of colour, the same as denoting the age, but a darker shade. When the age of the metamorphism is known, the fact may be denoted by additional bands of colour of the age of the metamorphism. Thus : Cambrian rocks altered in Cretaceous times would be purplish-violet, striped with alternate lines of dark purplish-violet and green.

¹ The resolutions passed by the Congress at Bologna differ from those adopted by the English Committee chiefly in the following particulars :—

3. The scale of colours for the Map of Europe is modified as stated above. The colours for Palæozoic rocks being left undecided for the present.

4a and 6 were not considered. 5 only so far as to define the colours to be used for crystalline schists of Pre-Cambrian or of unknown age.

6. Igneous Rocks.—Four colours would suffice. All colours to be bright, deep and glossy—

Basalt and Greenstone	... ..	Dark Carmine.
Trachyte, Felstone, etc.	... ..	Permanent Scarlet.
Granite	... ..	Vermilion.
Modern Volcanic Rock	... ..	Light Orange.

7. The letter-notation of the formations should be based upon the Roman alphabet for sedimentary rocks, and upon the Greek alphabet for eruptive rocks. The monogram of a formation should be formed, as a rule, by the Initial Capital of the name of that formation; the subdivisions to be distinguished in addition to this Initial Capital, by the initial small letter of the name of the subdivision, by a numerical exponent or by both. The figures of the numerical exponents to be always given in chronological order,—1 representing the first or oldest subdivision. Example:

J. Jurassic.
 JI Lias,
 JI² Middle Lias.

8. This Committee approves of the proposal to issue a Geological Atlas of Europe, under the authority of the Congress.

Signed, A. C. RAMSAY, President of the Committee.

W. TOPLEY, Secretary.

R E V I E W S.

I.—VOLCANOES: WHAT THEY ARE, AND WHAT THEY TEACH. By JOHN W. JUDD, F.R.S., Professor of Geology in the Royal School of Mines. 8vo. pp. 382. With 96 Illustrations. (London: C. Kegan Paul & Co., 1881.)

THE book before us possesses a twofold interest: firstly, as the work of an ardent and rising geologist who has been favoured with peculiar advantages, both of education and opportunity, for the study of volcanic phenomena; and, secondly, as having been written at the inspiration of the most accomplished exponent of Vulcanology in this country, the late Mr. G. Poulett-Scrope. If his venerated friend and master in Geology could have been spared to enjoy one additional pleasure before he passed away, nothing, we feel sure, could have enhanced his happiness more than to have lived to see the issue of the present volume by his friend and disciple Prof. Judd. Certainly, in Mr. Poulett-Scrope's case, the dictum of Mark Antony must be reversed, and we may indeed say of him, "The good he did lives after him."

It is only within the last hundred years that any rational or intelligible views with regard to volcanos are to be found. Previous to that time they were looked upon as "burning mountains," or as the abode of some deity, or as the place of torment of some special and heinous offender.

To the early Greeks and Romans the crater of *Ætna* marked the spot where Typhon, the hundred-headed monster, lies buried, and