

magnesia, as one ten-thousandth of a grain of magnesium can be recognized in one-half a grain of liquid. Baryta and alumina do not absorb iodine in the same way as magnesia.

3. "On Allotropic forms of certain Zinc and Cobalt Salt," by W. Skey. (*Transactions*, p. 387.)

This paper recorded further additions to the list of dimorphic substances.

4. "On the Relation between Pitch Stones and Quartz Porphyries of the Mount Sumner's District, Canterbury," by S. H. Cox, F.G.S.

#### ABSTRACT.

This paper gave the results of the microscopic examination of a large series of these rocks, and was beautifully illustrated by means of thin slices of the rocks being thrown on the screen by the oxyhydrogen microscope. The argument of the paper was to show that the primary form of the rock is that of Pitch-stone, and that a gradual passage can be traced from the vitreous Pitch-stones with laminated structure to the massive and crystalline Quartz-porphyrines, by a process of devitrification, and further, that it is therefore not necessary to assign these rocks to different periods of eruption.

Dr. Hector stated that this was the first of a series of investigations that would be extended to all the other igneous rocks of the colony, the result of which, when fully published with illustrations, would be of great importance, not only in assisting in geological classification, but also in throwing light on the circumstances under which valuable minerals and metalliferous lodes occur. In giving a general description of the probable causes which have led to the formation of the volcanic rocks, he exhibited Prof. Marcou's recent geological chart of the world, as showing that we are acquainted with the structure of only a very small portion of the land surface, while of the two-thirds of the globe covered by sea we are necessarily ignorant, unless we except recent inferences made as the result of the "Challenger" expedition, which are considered to prove that the great ocean-beds are probably of higher antiquity than most of the geological formations.

At the close of the meeting the chemical tests referred to in Mr. Skey's paper were shown, and the sections of rock alluded to by Mr. Cox were demonstrated by polarising microscopes. Dr. Hector also exhibited a series of lantern views of the scenery of Te Anau Lake and Stewart Island, which he had recently obtained.

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#### ANNUAL MEETING. 12th February, 1881.

Mr. MARTIN CHAPMAN, President, in the Chair.

*New Members*—H. Hill, Napier, R. S. Hawkins, Masterton.

#### ABSTRACT OF ANNUAL REPORT.

There have been seven general meetings of the Society held during the past year.

The papers read are as follows: 7 on Geology; 7 on Zoology; 8 on Botany; 3 on Chemistry, and 5 on Miscellaneous subjects, making a total of thirty communications.

Thirteen additional members have been added to the roll, five have either withdrawn or been transferred to other Societies owing to removal, and two have been lost to the Society by death. The total number now on the books being 287, namely 6 in addition to last year's list.

One hundred and one volumes have been added to the Library during the past year.