ville Bell, F.E.I.S., &c. Edinburgh, 1865. 12mo.—*From the Author.*

Abhandlungen der Koniglichen Akademie der Wissenschaften zu Berlin, 1863. Berlin, 1864. 4to.—*From the Academy.*

Verzeichniss der Abhandlungen Gelehrter Gesellschaften und der Wissenschaftlichen Königl. Preussischen Akademie der Wissenschaften zu Berlin. Berlin, 1864. 8vo.—*From the Academy.*

Lawson's Pinetum Britannicum. Part VIII. Elephant Folio.—*From the Right Hon. The Lord Provost.*

Monday, 17th April 1864.

LORD NEAVES, V.P., in the Chair.

The following Communications were read :—

1. On Confocal Conics. By H. Fox Talbot, Esq.
2. On the Celtic Topography of Scotland. By W. F. Skene, Esq.

The author commenced by distinguishing between an etymology of names of places founded upon mere resemblance of sounds, and one where the names are analysed according to fixed laws, based upon sound philological principles and a comprehensive observation of facts. The former is the ordinary process to which they are subjected, and has characterised all systematic attempts hitherto made to analyse the topography of Scotland. It can lead only to fanciful renderings, and is incapable of yielding any certain results, while the latter becomes an important element in fixing the ethnology of the inhabitants of a country. Names of places undergo a process of change and corruption. The language from which they were derived has likewise gone through a process of change and decay, and an interpretation based upon mere resemblance of sounds, in the present form of the names of places, to words in an existing language, ignores this fact and can only mislead. In order to obtain a sound etymology it is necessary to ascertain the old form of the name, and to analyse it in conformity with the phonetic laws of the language from which it sprung.

The author then showed the fallacy of the system of phonetic etymology, on which the conclusions of Pinkerton, Chalmers, and others were based, and that the attempts hitherto made to discriminate between that part of the population speaking a Kymric, from that speaking a Gaelic dialect, from the topography of the districts, was founded upon an inaccurate conception of the facts and a false view of the dialectic differences. In especial, he showed that the attempt to draw a line of demarcation between them from the respective prevalence of the terms *Aber* and *Inver*, was founded upon an incomplete and inaccurate apprehension of the real facts of the case, and was not borne out by the actual topography of the country.

The author then explained a table he had prepared, showing the geographical distribution of a complete list of the terms which enter into the Celtic topography of Scotland. This table showed the number of times that each term occurred in Ireland or in Wales, and likewise in every county of Scotland, and to a great extent disproved the assumed facts upon which the deductions usually made from the topography, are based.

This table likewise showed that there were four terms peculiar to the districts inhabited by the Picts, and these words belonged to the Gaelic and not to the Kymric branch of the Celtic.

The author then showed that some of the terms belonged to an older form of the language than others, and after giving examples of this, he concluded by stating the following as the results of his investigation :—

1. In order to draw a correct inference from the names of places as to the ethnologic character of the people who imposed them, it is necessary to obtain the old form of the name before it became corrupted, and to analyse it according to the phonetic laws of the language to which it belongs.

2. A comparison of the generic terms affords the best test for discriminating between the different dialects to which they belong, and for this comparison it is necessary to have a correct table of their geographical distribution.

3. Difference between the generic terms in different parts of the country may arise from their belonging to a different stage of the same language, or from a capricious selection of different

synonyms by different tribes, as well as from a real dialectic difference between the languages from which they were derived.

4. In order to afford a test for discriminating between dialects, the generic terms must contain within them those sounds which are differently affected by the phonetic laws of each dialect.

5. Applying this test, the generic terms in Scotch topography do not show the existence of a Kymric language north of the Firths of Forth and Clyde.

6. We find in the topography of the north-east of Scotland traces of an older and of a more recent form of Gaelic. The one preferring labials and dentals, and the other gutturals. The one hardening the consonants into *tenués*, the other softening them by aspiration. The one depositing Abers and Invers simultaneously, the other Invers alone. The one a low Gaelic dialect, the other a high Gaelic dialect, the one probably the language of the Picts, the other that of the Scots.

3. On the Bands produced by the Superposition of Paragenic Spectra formed by the Grooved Surfaces of Glass and Steel. Part II. By Sir David Brewster, K.H., F.R.S.

4. Remarks on the Flora of Otago, New Zealand. By W. Lauder Lindsay, M.D., F.L.S., Hon. Member of the Philosophical Institute of Canterbury, New Zealand.

The North Island flora has hitherto been regarded (in the absence of a knowledge of the South Island flora) as representing the general vegetation of our New Zealand possessions. But the New Zealand Islands extend through thirteen degrees of latitude, and the floras of their northern and southern extremes necessarily present various marked differences. The former flora is more sub-tropical, and the latter more antarctic in its affinities. The former, moreover, is richer in natural orders, genera, and species.

Until very recently, however, comparatively little or nothing was known of the Otago flora, all collections previous to 1861 having been made on its coast, and with a single limited exception on its