

book, corresponding as it does to the first of the two German volumes, omits the ancient religions of Persia, Greece, Rome, and Germany, as well as Mohammedanism. Without these we have nothing that can fairly be called by the name borne on the title of the translation; and the omission of Persia in particular makes the book most tantalizingly imperfect as regards a single connected group of faiths. It is not fair either to the author or to his readers to give a part of the work as if it were a whole, and to set it forth to the world without even putting "vol. i." on the title-page.

The work of translation has been performed with care, and generally, so far as we have been able to test it, with accuracy. But the book is rather heavy reading, as translations from the German are apt to be, when the translator has not realized that the difference between the idioms of England and Germany is so great that a successful version must recast whole sentences instead of aiming at a literal reproduction of words and clauses.

As regards the substance of the book, the reception which it has obtained, in its German form, is a sufficient proof that Prof. de la Saussaye has met a felt want in the literature of his subject. A book that covers so wide a field cannot be without errors in detail. No man can know at first hand all the ancient literatures that are dealt with; nor can it be supposed that, on matters where specialists are often at variance, one who is not a specialist can always hit the mark. The general principles of the science of religion are not yet worked out with sufficient clearness to give the student of religions in general sure points of view for the criticism of the divergent results that have been reached by students of special religious literatures. Perhaps to say this is to say by implication that a general manual of the subject is an undertaking for which the time is not yet ripe; and certainly the science of religion (as distinct from the scientific study of individual religions in their historical development) is still in a very elementary stage. But Prof. de la Saussaye is no dogmatist; he frankly admits the obscurity in which many fundamental problems are still involved, and he writes throughout with great impartiality and moderation, as well as with extensive knowledge of recent researches. His book will be very useful to all who wish to know the present state of inquiry, and do not forget that many things in his exposition are to be taken as still doubtful, even where the author himself does not expressly accompany them with notes of uncertainty.

W. R. S.

Euclid's Elements of Geometry. Book XI. By A. E. Layng, M.A. (London: Blackie and Son, Limited, 1891.)

Of all Euclid's books, the eleventh is one that forms a stumbling-block to the beginner in solid geometry. Not that the proofs in themselves are of a difficult nature, but simply that the figures have to be drawn perspective to illustrate the various planes, and the student finds it hard to bring himself to believe the equality of angles and lines which appear to him to be unequal.

The author of this book, like one or two others before him, by varying the thickness of the lines used in construction, simplifies matters very considerably, for by this means the eye can distinguish directly the different planes. Of the propositions themselves, little need be said, unless we mention the use throughout of all the well-known symbols: the occasional interpolated worked-out examples, and the notes and exercises, although not in any great quantity, will be found very useful. In the collection of miscellaneous examples, theorems relating to tetrahedrons, pyramids, spheres, &c., are included. Preceding the series of examination-papers, which are here arranged in a progressive order of difficulty, and taken from papers set lately, are two appendices, the first deal-

ing with transversals, harmonic section, and pole and polars, the second with a few alternate proofs of propositions. The manner in which most of the proofs are worked out is both neat and brief, and the definitions are all clearly stated and illustrated. We may add that, although the work is not the best of its kind we have seen, yet it has many good points which recommend it to the student of geometry.

W.

Illustrations of the Flora of Japan, to serve as an Atlas to the Nippon-Shokubutsushi. By Tomitarō Makino. (Tōkyō, Japan: Keigyōsha 1, Urazimbōchō, 1891.)

THIS is a monthly publication, containing excellent uncoloured figures of plants, with analyses of their floral structure, fruit, and seed, and descriptions in English as well as in Japanese. The drawing and lithography, by Mr. Makino himself, are quite equal to the average work in this country—indeed, one might say above the average; the lithography being light and effective, with few lines in it. Moreover, the English descriptions are intelligible, correct, and idiomatic, and not too long, nor superfluous. Botanically and horticulturally this production of the Far East will be welcome, and even indispensable, in the West, as many new species are described. Already nine parts have appeared, with illustrations of fifty-seven species belonging to various natural orders. No system of classification is followed; whatever is of interest or novel being taken as it presents itself.

W. B. H.

About Ceylon and Borneo. By Walter J. Clutterbuck, F.R.G.S. (London: Longmans, Green, and Co., 1891.)

IN this volume Mr. Clutterbuck gives some account of Ceylon as he saw it during a recent visit, and as it was fourteen years ago, when he resided for a short time in the island. He then describes what he saw in the course of a visit to Brunei and British North Borneo. Readers who like books of travel will find a good deal to interest them in the author's impressions, which are recorded in a lively style.

LETTERS TO THE EDITOR.

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Wind Direction.

A SHORT time ago there was some correspondence in your columns on the relations of north-east and south-west winds in recent years; Mr. Prince, of Crowborough, having observed at that place that while, as a rule, the south-west winds were in excess of the north-east, the reverse had occurred in each of the five years 1885 to 1889. The Greenwich records were examined by Mr. Ellis with regard to this point, but he found them at variance with those of Crowborough, the south-west winds having continued in excess of the north-east throughout those five years.

By combining several directions, the Greenwich figures, as tabulated by Mr. Ellis in his paper to the Royal Meteorological Society (Quart. Journ., October 1890, p. 222), will be found to reveal some curious relations, which seem to invite attention. I have added together the figures (numbers of days) for north-east, east, and south-east winds on the one hand, and those for north-west, west, and south-west on the other; then smoothed each set of sums by means of five-year averages. The results are shown in the two curves of the accompanying diagram. The continuous curve (a) represents north-east, east, and south-east winds (and its vertical scale is at the left). The dotted line curve (b) represents north-west, west, and south-west winds (and

its vertical scale is at the right). It will be understood that each year-point of those curves represents an average of five years.

It would appear that easterly winds (north-east, east, and south-east) at Greenwich have been increasing in prevalence, on the whole, since about 1865; the five years' average for that year is 83.8, and this grows to 111.4 in 1886 (about one-third). On the other hand, westerly winds (north-west, west, and south-west) have diminished, on the whole, since 1861; the five years' average for that year is 210.8, and this diminishes to 159.0 in 1887 (about one-fourth).

Judging by the past, we might perhaps consider that we must be near a decided turn of the curves; possibly past it in the case of easterly winds; in which case we should look for more westerly and less easterly wind in the near future.

(a) 1865 *min.*

1863	1864	1865	1866	1867	Average.
77	104	76	72	90	83.8

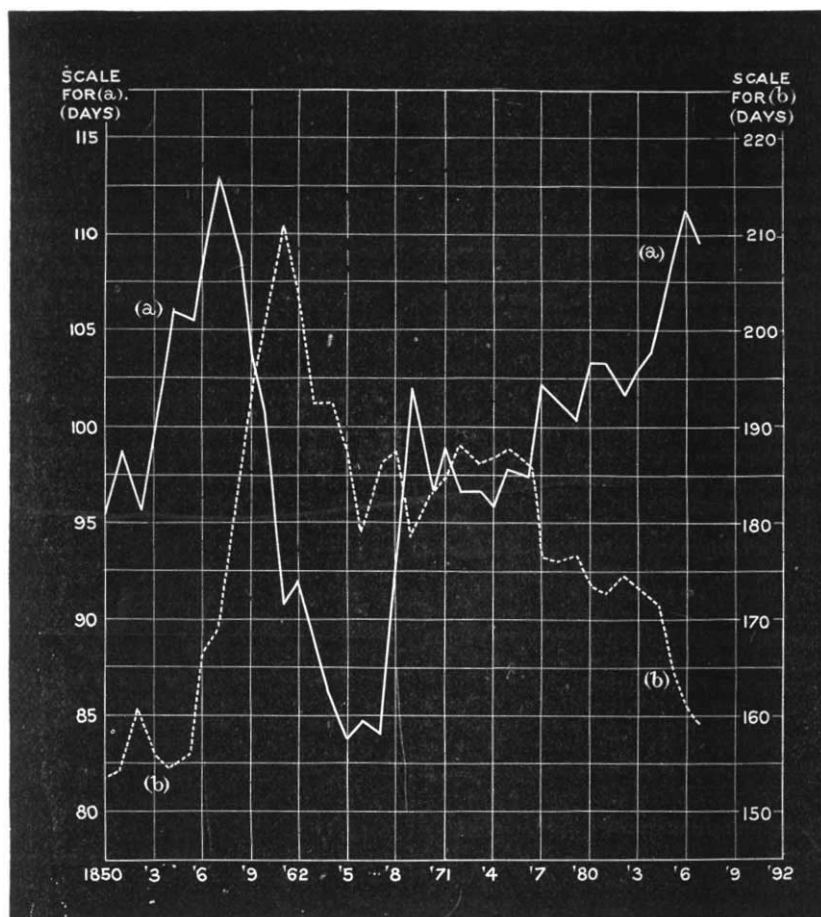
(b) 1861 *max.*

1859	1860	1861	1862	1863	Average.
199	215	203	211	226	210.8

(b) 1887 *low point.*

1885	1886	1887	1888	1889	Average.
157	158	155	164	161	159.0

A. B. M



(a) = North-east, east, and south-east wind (Greenwich). (b) = North-west, west, and south-west wind (Greenwich).
Actual figures smoothed by means of five-year averages.

From the "crest" of (a) in 1857 to the last point is thirty years. Are those long variations possibly a manifestation of the thirty-five years' period of Brueckner?

These curves might have begun at an earlier date, for the figures commence in 1841. But in the earlier years, and apparently to about 1855, a larger proportion of days seem to have been reckoned as "calms" than afterwards (owing to a difference of rule), so that the curves to about 1855 are not exactly comparable with the remaining portions.

I append a few figures, showing the derivation of maximum and minimum (or low point) averages:—

(a) 1857 *max.*

1855	1856	1857	1858	1859	Average.
114	111	113	126	99	112.6

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The Migration of the Lemming.

MY attention having recently been drawn to the question of the migration of that little Norwegian rodent the lemming, as a serious obstacle to the theory of natural selection, and hence to evolution generally, I write to call attention to what appears to me to be a possible factor in the *starting* of the migration.

It is that when the lemmings become too numerous for the means of subsistence upon the inland plateaux, which may be described as their home, the "fittest" lemmings, by battle, turn out from the district all those of their weaker brethren who are unable to withstand the contest.

The unfittest being thus driven out from their home, are forced to migrate somewhere. Why they move incessantly to the westward seems a problem yet to be satisfactorily solved.