

the present volume. It makes no pretension to be a scientific enumeration, but it will be of the greatest service to those who occupy themselves with the numerous scientific questions that arise in connection with cultivated plants, such as heredity, adaptation to varying conditions, variation, selection, cross-breeding, the origin of species, &c.

The book has reference to the introductions made within a period of twenty-one years, and the total number of names registered is no fewer than 7600, of which the majority are orchids, an indication of the taste and fancies of the times.

It is of interest to note that whilst in the early part of the century New Holland and the Cape of Good Hope furnished a very large proportion of the introductions—now the majority of the actually new plants “have been derived from the United States of Colombia, the Malayan and Polynesian regions.”

The second volume referred to at the head of this notice is another of those very serviceable hand-lists which we owe to the director of Kew and his staff. The list includes the majority of what are called stove and greenhouse plants, omitting orchids and other monocotyledons elsewhere treated. This list is not a mere compilation of published names, but is an enumeration drawn up with as much scientific accuracy as the nature of the case permits.

It will thus, with the lists previously published, be invaluable to the botanist and to the cultivator who is interested in the plants he grows for reasons other than the mere attractiveness of their appearance or their economic use.

The director contributes a preface containing some very interesting information concerning the history of the Kew collections, and of the structures built to contain them. The Temperate House, now completed by the construction of two wings, is no less than 628 feet in length, and, what is of more importance, it is filled with well-cultivated plants of botanical or economic interest. The part that Kew has played in the collection and distribution of cinchona, india-rubber and other products, is appropriately referred to in the preface. It reminds us that whilst we are proud, as we have every reason to be, of our National Garden as such, we have also reason to rejoice in the great benefits it has been the means of conferring on humanity at large.

MAXWELL T. MASTERS.

OUR BOOK SHELF.

Les arbres à Gutta-Percha, leur culture. Mission relative à l'acclimatation de ces arbres aux Antilles et la Guyane.
Par Henri Lecomte. Pp. 95. (Paris: G. Carré et C. Naud, 1899.)

M. LECOMTE was charged by the French Minister of the Colonies to effect the plantation of gutta-yielding plants in the French colonies of the new world. For this purpose he took with him, in wardian cases, plants belonging chiefly to the genera *Palaquium* (*Dichopsis*) and *Sideroxylon*, and in the small brochure before us he embodies an account of his expedition in the form of a Report to the Minister of the Colonies, and also includes in it a statement respecting the indigenous trees, such as *Mimusops Balata*, which he found already growing wild in Guiana.

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The first portion of his book is devoted to a short sketch of the various plants which yield gutta-percha, and it appears to be largely drawn from the monograph on the Sapotaceæ by Burck. It cannot be said, however, that M. Lecomte has contributed much to the story of the discovery of these economically important trees, and indeed he seems now and then to have fallen into inaccuracies. Thus he states that gutta-percha was introduced by Montgomery (*sic*) into Europe in 1832, whereas it would seem that Montgomerie, although he first met with the substance in 1822, lost sight of it for twenty years, and it was not until 1843 that he sent home his first specimens from the East. M. Lecomte states that *Palaquium* (*Isonandra*) *Gutta* is extinct, but nevertheless there appear to be still a few trees known in Singapore besides those growing in the Buitenzorg garden.

The chief source of the best gutta at the present day is, as the author remarks, the closely allied species *P. oblongifolium*, which, previously distinguished as a variety of *P. gutta*, was raised to specific rank by Burck. The native name in Perak for *P. oblongifolium* is given by M. Lecomte as *Taban merah*, whilst it is stated by Obach that this name really belongs to *P. gutta*, the other plant being known as *Taban sutra*. In this M. Lecomte adopts the views of Burck (Rapport Gutta-Percha, 1884), who has expressed the opinion that *P. oblongifolium* is the real *Taban merah*, since *P. gutta* was not found by him to occur in the Malay peninsula, but only in Singapore.

It is of course possible that this may turn out to represent the true state of the case, since, although differing in habitat, the two species (?) closely resemble each other; but if so it is a pity that the matter was not more fully enquired into, as the native names are of some importance in a matter of this kind. If Burck should prove to be correct in his statements, its wide geographical range, extending from Malacca to Sumatra and Borneo, would perhaps indicate that *P. oblongifolium* ought to be regarded as the parent species, *P. gutta* representing a local off-shoot which has developed in, and is confined to, a very limited area. But in any case it is clear that several questions with regard to the mutual affinities of these plants still await definitive solution.

The book is an interesting record of an endeavour to extend the cultivation of a most important series of tropical economic plants, and it is sincerely to be hoped that the efforts made in this direction will be crowned with success.

J. B. F.

Determination of Radicles in Carbon Compounds. By Dr. H. Meyer. Authorised translation by Dr. J. B. Tingle. Pp. x + 133. (New York: J. Wiley and Sons; London: Chapman and Hall, Ltd., 1899.)

THERE is no doubt but that the original edition of Dr. Meyer's "Anleitung zur quantitativen Bestimmung der organischen Atomgruppen" supplied a want which had been felt for some time by all who had seriously taken up the study of organic chemistry, as well as by more advanced workers engaged in original investigations. The translation, which has now been provided, is thoroughly up-to-date, and, in the author's words, "has been further improved by certain changes in arrangement which Dr. Tingle has made."

It might, perhaps, be suggested that but little distinction is drawn between methods which are purely qualitative and those which also admit of quantitative treatment, in spite of the fact that, according to the translator, one of the main objects of the book is "the introduction of some quantitative work into the college courses of organic preparations"; generally speaking, however, the arrangement is excellent, and the numerous references to the original papers is a noticeably useful feature in a work of this kind.

The statement that "considerable care has been bestowed on the proof sheets" is hardly borne out by the results.

F. S. K.