GENERAL INTRODUCTION.

The science of Botany consists of two departments, Phytology and Physiology. This Encyclopedia is exclusively devoted to the former department, and it is limited to the plants in Britain, indigenous and exotic.

Phytology, or the History of Plants, comprehends the knowledge of the external parts of plants, the determination of their names, their classification, their uses, their individual history, and their geography. The object of this work is to convey, in the most convenient manner and in the least possible space, a knowledge of the various particulars which arrange themselves under these heads.

A knowledge of the external parts of plants will be readily and agreeably obtained by turning over the first 700 pages of this work at random, looking at the engravings, and comparing them with the names and descriptions to which they refer; the same process will enable the reader to recognise, at sight, the 10,000 species figured in the 700 pages. In this way, botanical figures supply the place of a botanical garden; and the beginner learns the natures, the technology, and the general appearances of plants, almost as easily and naturally in the one case as he does in the other.

To determine the name of an unknown plant, it is necessary to be furnished with a specimen of it in flower. The parts of the plant including those of the flower being already known by the process above mentioned, its class will be ascertained by the Table of the Linnean System (p. 2.), and its order, genus, species, &c., by turning to the page referred to at the end of the class. Thus, if you hold in your hand a specimen of Phillyrea angustifolia in flower, on counting the stamens and pistils you find it belongs to Class 11. Order 1., from which, in the Table in p. 2., you are referred to the details of the class in p. 8.; you there find, under Order 1., the characters of all the genera of that order, and that the flower which you hold in your hand best agrees with the definition given of the genus Phillyrea, No. 33. But you wish to know the species; and, Phillyrea being No. 33., you turn to that number in the details of the genera in the subsequent pages. After comparing its leaves with the specific character given of the different species, you find it best agrees with P. angustifolia; and, finding this species numbered 145., you look for that number in the two plates of engravings in the lower parts of the pages, and find a figure which confirms your decision. By reading the abridgements in the line which follows the word angustifolia, together with the note to the generic name Phillyrea at the bottom of the page, you find in an abridged form its English name, habit, habitation in the garden, popular character, the height to which it grows, its time of flowering, the colour of its flower, its native country, the year of its introduction into Britain, its propagation, the soil in which it grows, a reference to a work where it is figured and described at greater length, and its uses in the arts, or whatever else is remarkable in its history. You find, also, the natural order to which the genus belongs, the etymology of the name, the French or German name, if the plant has a vernacular name in these languages, and, both generic and specific names being accentuated, you have the pronunciation. On turning to the Table of Synonymous Names (p. 1108.), you will find its vernacular name in the languages of the countries where it is common. If it is not so common in any country as to have received a vernacular name, it will not be found in that list. Finally, if you should not understand any of the terms used in the definition of the specific characters or in the notes, on turning to the Glossary (p. 1094.) you will find them explained, and illustrated where necessary by engravings.
GENERAL INTRODUCTION.

When the beginner has a leaf or any part of a plant not in flower, he may ascertain, by turning to the Introduction to the Natural System (p. 1051.), to which of the three grand divisions of the vegetable kingdom it belongs; and may learn other particulars, according to circumstances which it is unnecessary to detail. Without the flower, he will not be able by the Natural System to determine the name of a plant; but, what is often much more important, with a very small portion of any part of a plant he will be able to discover something of its nature, an advantage which does not belong to the System of Linnaeus.

The classification or arrangement of plants is made by botanists with a view to two objects: the first, to facilitate the discovery of their names, and thus to know them individually; the second, to give general ideas respecting their natures, and thus to know them as belonging to large masses or groups. Hitherto, no system has been discovered which has attained both these objects in an equal degree of perfection; but the Linnean Arrangement has made the greatest advances in teaching how to discover the names of plants, and the Jussieuan in teaching us their natures, and how to recognise them as belonging to certain masses or groups. In order that the student may acquire both these kinds of knowledge, we have given both arrangements. We have begun with the Linnean, not only as being best adapted for beginners, but because it is necessary to know how to discover the name of a plant, as well as to be able practically to recognise a number of plants, before attempting to know their natures, or to combine them in masses or groups.

"The standing objection to botany," says White of Selbourne, "has always been, that it is a pursuit that amuses the fancy and exercises the memory without improving the mind or advancing any real knowledge; and where the science is carried no farther than a mere systematic classification, the charge is but too true. But the botanist, who is desirous of wiping off this aspersion, should be by no means content with a list of names; he should study plants philosophically,—should investigate the laws of vegetation,—should examine the powers and virtues of efficacious herbs,—should promote their cultivation, and graft the gardener, the planter, and the husbandman, on the phytologist: not that system is by any means to be thrown aside; without system the field of nature would be a pathless wilderness; but system should be subservient to, not the main object of, our pursuit."

"After all that has been effected, or is likely to be accomplished hereafter," Professor Lindley observes, "there will always be more difficulty in acquiring a knowledge of the Natural System of Botany than of the Linnean. The latter skims only the surface of things, and leaves the student in the fancied possession of a sort of information which it is easy enough to obtain, but which is of little value when acquired; the former requires a minute investigation of every part and every property known to exist in plants, but when understood has conveyed to the mind a store of information, of the utmost use to man, in every station of life. Whatever the difficulties may be of becoming acquainted with plants according to this method, they are inseparable from botany, which cannot be usefully studied without encountering them."*

The History of Plants comprehends every thing relating to their use in the arts, or in any way as connected with man, with animals, or with civilisation. The Geography of Plants relates to the countries in which they are indigenous or acclimated, and to the soils and situations in which they grow or may be grown. Every thing essential in relation to these points will, as we have already stated, be found after the name of each species in the text, after the name of the genus in the notes below, under the natural order to which the genus belongs in the Natural Arrangement (Part II. p. 1051.), in the Table of Synonyms (p. 1108.), or in the Glossary (p. 1094.).

*The General Index (p. 1143.) contains not only the names of the genera, and of the classes and orders of both systems, but those of all the remarkable species, and the more important systematic and British synonyms both of genera and species. The various names being included in the same alphabet, this Index may therefore be consulted as a Dictionary of Plants.

* Synopsis of the British Flora, arranged according to the Natural Orders, &c., pref p. xii