INTRODUCTION TO BOTANY.

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The Style is the small pillar supporting the stigma; and the base of the style is called the Germ, which afterwards becomes the Pericarp or seed-vessel, which will be noticed in its proper place. An acquaintance with the above parts is all that is necessary as an introduction to the know-ledge of the first division, i. e.

THE CLASSES.

CLASS I.-MONANDRIA.

Plants whose flowers have only one stamen, of which we have but few examples. *Hippuris*, Mare's-Tail; *Canna Indica*, Indian Shot.

CLASS II.-DIANDRIA.

Plants whose flowers have two stamens in this system belong to the second class; as is seen in *Veronica*, Speedwell; *Salvia*, Sage; *An-thoxanthum*, Sweet-scented Vernal Grass.

CLASS III.-TRIANDRIA.

Those plants whose flowers have three stamens are of the third class as for example, *Valeriana*, Valerian; Poa, and most other Grasses; Crocus, Iris, &c.

CLASS IV .- TETRANDRIA.

Four stamens of equal length occasion the plant to belong to the fourth class.—It is here necessary to caution the pupil against confounding this with the fourteenth class (*Didynamia*), in which the number of stamens is the same; but they are of unequal length; and as from their situation two appear to be above the others, hence the name, which in the original Greek signifies two superiors. The flowers of this class are *Scabiosa*, Scabious, &c.; *Dipsacus*, Teasel; *Cornus*, Dog-Wood; *Ilex*, Holly.

CLASS V.-PENTANDRIA.

Plants whose flowers contain five stamens belong to the fifth class; as may be seen in *Atropa*, Deadly Nightshade; *Borago*, Borage; *Convolvulus*, Bindweed; *Campanula*, Bell-flower; and *Conium*, Hemlock.

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CLASS VI.-HEXANDRIA.

Plants whose flowers contain six stamens, as may be seen in the *Lilium*, Lily, and many other such-like beautiful flowers, constitute his class.

It may be noticed that the fifteenth class is composed of plants whose flowers have the same number of stamens, but of different lengths; therefore a reference should be made to the characters of it, in which are laid down such rules as, with a little attention, will enable every person to distinguish the one from the other *.

CLASS VII.-HEPTANDRIA.

The seventh class is composed of such plants as have in their flowers seven stamens. The Horse Chesnut (\mathcal{E} sculus) and the Winter Green (*Trientalis*) are of this class. And it may be remarked that it contains fewer plants than any other; indeed, the latter is the only one indigenous to this country.

CLASS VIII.-OCTANDRIA.

Plants whose flowers contain eight stamens constitute this class; examples of which are to be seen in the *Epilobium*, Willow Herb.

CLASS IX .- ENNEANDRIA.

The ninth class is distinguished by its flowers bearing nine stamens. These cannot be easily mistaken. The Flowering Rush (*Butomus*) is the only instance afforded in the British Flora. The Rhubarb (*Rheum*) affords a good example of this Class.

CLASS X,-DECANDRIA.

The tenth class contains plants with ten stamens, which are mostly distinguished by the regularly formed corolla. They are easily distinguished. The Pink (*Dianthus*) is one.

CLASS XI.-DODECANDRIA.

The eleventh class consists of plants having flowers with from twelve to nineteen stamens: for example, *Euphorbia*, Spurge.

* See the character more fully under the second subdivision, ORDERS, in a future page.

ON THE CLASSIFICATION OF PLANTS.

CLASSES XII. AND XIII.-ICOSANDRIA AND POLYANDRIA.

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The twelfth and thirteenth classes are composed of flowers furnished with upwards of twenty stamens. Linnæus divided these classes; but late botanists have thrown them both into one, and certainly with propriety; the difference being only on the insertion of the stamens. The twelfth class (*Icosandria*) has them inserted into the leaves of the calyx; but in the other (*Polyandria*) they are situated on the receptacle. It may be also remarked, that most of our fruits are of the class *Icosandria*: the small part we call the eye of an apple is nothing but the calyx fixed, and remaining on the top of the germ till it comes to maturity.

CLASS XIV.-DIDYNAMIA.

The fourteenth class is composed of plants having flowers bearing four stamens, two long and two short.—We have mentioned the character of this class in speaking of the fourth, where the stamens are of equal length. In the present class the flowers are of a particular structure, as the corolla is of that form which is called "gaping" (ringens). This is seen in the Mint (Mentha).

CLASS XV.-TETRADYNAMIA.

The plants of this have flowers with six stamens, four of which are longer than the other two: and it thus differs from the plants of the sixth class, in which the stamens of the flowers are all of equal length: from this circumstance the class derives its name, signifying four superiors. In addition to this essential character, the plants are easily recognised by their peculiar form. The flower is succeeded by a pod more or less long. For a further description of this, see it in the ORDERS, where it is more fully described.

CLASS XVI. - MONADELPHIA.

The sixteenth class is composed of plants the stamens of whose flowers are all united so as to form one single set. These are in general placed on the pistil, which forms a kind of pyramid in the centre, The Mallow and Hollyhock are instances of this,

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CLASS XVII .- DIADELPHIA.

The flowers of the plauts of this class are all of the same form, from the common Pea to the smallest species of Trefoil.

The stamens are in two sets, in general nine in one set, and one only in the other, which in most flowers is easily distinguished: indeed, the form of the flower is sufficient to show the class. The common Garden Pea (*Pisum*) is a good example of this class.

CLASS XVIII.-POLYDELPHIA.

The eighteenth class is distinguished by the plants belonging to it having flowers with stamens in distinct sets. This class does not contain many plants; and this is, on the whole, a fortunate circumstance, as the division of the stamens into several sets, which is the essential character, is not always to be distinguished. The *Hypericum* (St. John's Wort) is an example of this class.

CLASS XIX .- SYNGENESIA.

The nineteenth class contains plants bearing flowers which are termed compound, and which have many distinct florets on one common receptacle. This is the most difficult class for the student at first to understand, as the parts are for the most part small, and there is a singular coalescence of the stamens, which, with the circumstance of some florets being imperfect, renders it necessary that he should make himself acquainted with the other classes first, which will doubtless lead to a more perfect knowledge of this.

CLASS XX.-GYNANDRIA.

The twentieth is also difficult in some flowers, as the character is formed from the stamens growing on a part of the style.

CLASS XXI .- MONOECIA.

The twenty-first class is composed of plants having flowers that bear stamens and pistils in distinct flowers but on the same root, as is seen in the Cucumber, Hazel, Willow, &c.

CLASS XXII.-DIOECIA.

The twenty-second class has the flowers producing stamens on one

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root and pistils on the other. The Yew-tree is an instance of this, and will be found to possess the best flowers to illustrate this class.

CLASS XXIII.-POLYGAMIA.

The twenty-third class contains plants having some flowers with stamens alone, others with pistils alone, and some complete, *i.e.* with stamens, pistils, and other parts perfect, either on one or more roots, as will be seen in the explanation of the Orders. Example—Atriplex, Orach.

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CLASS XXIV.-CRYPTOGAMIA.

This class comprises plants whose parts of fructification in general are very minute and difficult to delineate or describe, and from which circumstance they are called imperfect plants; and as the genera in it are very minute out, it almost forms a series of botany distinct from the perfect plants.

The FERNS: as Polypodium, Polypody. The Mosses: as Sphagnum, Bog Moss. FUNGI: as Agaricus, Mushroom. FUCI: as Fucus, Laver and Sea-Wrack, are of this class.

It may not be amiss in this place to caution the reader against consulting flowers which are double, as these will not afford him the opportunity of observing the parts of fructification, and are only to be considered as vegetable monsters formed by luxuriance; in which cases the petals are multiplied in number, by the stamens and pistils putting on the shape of the corolla.

He may also take into consideration three other parts present in the flower not mentioned before: *i.e.* the Receptacle, or base bearing the calyx; the Pericarp, or seed-vessel; and the Seeds. These are considered as forming part of the fruit, and will be of consequence hereafter in the discussing of the following subdivisions; at present it is only to be noticed that such exist.

ON THE ORDERS,

OR SECOND SUBDIVISION IN THE LINNEAN SYSTEM OF BOTANY.

From the foregoing pages we learn that the Classes are formed generally on the number and situation of the Stamens; and in a similar manner are the Orders also formed from the Pistils.