I. *Diandrae,* and II. *Monandrae. Cypripedium* is the only representative of the former, possessing two fertile stamens, and the three lobes of the stigma, being of about the same shape and constructed to receive the pollen. The other genera belong to *Monandrae,* characteristic of which is the suppression of all the stamens except the anterior of the outer whorl, and in which only the two lateral lobes of the stigma are developed, the mediane being rudimentary or transformed into the so-called *rostellum.* The *Monandrae* contain two distinct sections: *Basitonae and Acrotonae,* called so because in the former, the Basitonae, the anther is united at its base with the rostellum, while in the latter, the *Acrotonae,* it is connected at the apex. Comparatively few of our genera are basitonous, viz.: *Orchis, Platanthera* and *Perularia;* the remaining *Monandrae* are acrotonous.

The Orchids are all perennial herbs with diverse habits, and three types may be distinguished; Saprophytes, terrestrial, autophytes and epiphytes. *Corallorhiza* is the only saprophytic genus in Ontario, and the others are terrestrial autophytes with green leaves, even if sometimes rudimentary as in *Arethusa.* It is now interesting to see that, notwithstanding the very limited number of genera in Ontario, the monphological structure of the vegetative organs of these exhibit several very conspicuous features, which ought not to be omitted in the diagnoses. But, so far, in recently published manuals dealing with North American plants, the *Orchidaceae,* for instance, have been treated very poorly from this point of view, in spite of the fact that the literature contains several works on this subject, contributed by some of the ablest botanists: Irmisch, Lindley, Pfitzer, Reichenbach and others. In the so-called Gray's new manual[3]) the subterranean organs of *Orchidaceae* are described as: corms, tuberoids and solid bulbs; in N. L. Britton's manuals[4]) we learn of solid bulbs, corms, coralloid roots, and that *Corallorhiza* is a root-parasite with large masses of coralloid branching roots! Similar descriptions occur in Small's Flora of the Southern States[5]).

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3) Robinson and Fernald, 1908.

4) Manual of the Flora of the Northern United States, New York, 1901 and 1907.

5) New York, 1903.