

the woody tissue is all collected so as to form a layer between a central cellular part, the pith, and an outer cellular part, the bark, the increase in diameter being by the addition of new layers of wood beneath the bark. The former class of plants, which includes our grasses, sedges and lilies, is called endogenous or "inside-growing;" while the latter, which includes all our northern trees and shrubs and most of our herbs, is known as exogenous or "outside-growing." In Canada, the endogens are all herbs with the single exception of *Smilax*, but in warm climates they are largely represented by the palms. It is not, however, only the manner of growth that separates these two great divisions of flowering plants; marked distinctions exist in the seeds, flowers and leaves. But I shall not weary you with these distinctions, nor by describing the principles upon which the exogens are again subdivided into polypetalæ, gamopetalæ, and apetalæ; neither will I inflict upon you the method of applying the system of classification to the naming of plants. All these you will find laid down in your structural botany under the heading "How to study plants." This I will say, however, that the analysis or naming of plants, tedious and difficult as it may at first seem, soon becomes very easy. After a few analyses the primary steps can be rapidly passed over, and I will guarantee that any one who will conscientiously study out twenty to twenty-five good examples will afterwards experience little difficulty in naming most of our flowering plants. Be not discouraged at the slow progress you will at first make; each successful analysis will facilitate the next, and very soon it will become so that when you have worked out one species of a genus you will be likely to know others when you see them, and even when plants of a different genus of the same family are met with, you will, ere long, generally be able to recognize their order at a glance from the family likeness. A capital practice for the beginner is to work out a few plants with whose names he is already familiar. Success in these attempts will naturally inspire confidence in the determination of plants previously unknown.

By his initial reading over of his text book the student has got some knowledge of plants and plant-life, as well as an insight into the manner in which their names are determined. He is like the race-horse to