

the object of this treatise. At the same time, it is necessary that the reader should have some insight into these departments of knowledge; in order that he may be enabled to understand the collateral researches, which it is our duty to illustrate.

“ If we reflect upon the phenomena of vegetation,” says Professor Lindley, “ our minds can scarcely fail to be deeply impressed with admiration at the perfect simplicity, and, at the same time, faultless skill, with which all the machinery is contrived, upon which vegetable life depends. A few forms of tissue interwoven horizontally and perpendicularly constitute a *stem*; the developement, by the first shoot that the seed produces, of buds which grow upon the same plan as the first shoot itself, and a constant succession of the same phenomenon, causes an increase in the length and breadth of the plant; an expansion of the bark into a *leaf*, within which ramify veins proceeding from the seat of nutritive matter in the new shoot, the provision of air passages in its substance, and of evaporating pores on its surface, enables the crude fluid sent from the roots to be elaborated and digested until it becomes the *peculiar secretion* of the species: the contraction of the branch and its leaves forms a *flower*; the disintegration of the internal tissue of a *petal* forms an *anther*; the folding inwards of a leaf is sufficient to con-