

and for different purposes. The fact that the organisation of the higher animals, which, for medical reasons, is more interesting, can be roughly divided into a variety of separate organs or systems of organs, each of which can be, to some extent, studied by itself as we study the parts and workings of a machine, and that for the physician greater interest attaches to the functions of these organs, placed anatomy for a long time under the influence of physiology, which is the science of the performance, not of the structure, of the parts of living creatures. Phytotomy, on the other side, was for a long time neglected, awaiting the greater perfection of the microscope. Thus it came about that down to nearly the middle of the century the morphological study of animals and that of plants were pursued without much mutual benefit or regard. The phytotomists of the seventeenth century had established the fact that plants are built up of minute parts called variously utricles, bladders, vesicles, but mostly cells, and which were compared with the structure of the foam of beer or the cells of a honeycomb.¹ Different forms were assigned to these cavities,

¹ Aug. Pyr. de Candolle begins his 'Organographie' (1827) with the words: "La nature intime des végétaux, vue aux plus forts microscopes, offre peu de diversités. Les plantes les plus disparates par leurs formes extérieures, se ressemblent à l'intérieur à un degré vraiment extraordinaire," &c.; and after going back to the observations of Malpighi and Grew, and referring to the recent ones of Mirbel, Link, Treviranus, Sprengel, Rudolphi Kieser, Dutrochet, and Amici, mentions Kieser's 'Mémoire sur l'Organ-

isation des Plantes' (Harlem, 1812) as the only French book which contains an account of the phytotomic researches carried on by the Germans, who, after the lapse of a century, were the first to take up these studies again. In the second chapter De Candolle says: "Le tissu cellulaire, considéré en masse, est un tissu membraneux formé par un grand nombre de cellules ou de cavités closes de toutes parts; l'écume de la bière ou un rayon de miel en donnant une idée grossière mais assez exacte" (p. 11).