

in 1874 have been experimented upon in various ways, and the result shows that they absorb through the tissue of the leaf by special organs the material required for their food, and the actual agent in the digestion of insects is a ferment of nature similar to pepsin, which is secreted only during the absorption of some digestible substance. Insects steeped in lithium have been placed on these carnivorous plants, and the roots, when boiled some 30 hours afterwards, afford the colouring matter of the lithium, showing that it has been absorbed and distributed throughout the whole plant tissue.

Up to the year 1837, the efforts of naturalists were chiefly directed towards the perception of differences and the creation of species. But in that year Schleiden told the world, after long research, that as the lowliest members of the vegetable kingdom are each in themselves an individual cell having life and activity, so the highest orders of plants were only congeries of such individuals moulded into a thousand shapes and adapted to different purposes. He enunciated the principle that the story of a plant is to be studied through the vital history of its composing cell elements, and proclaiming the microscopic vegetable cell as the unit of vegetable creation, he exalted it to a place of honor—the key to the cabinet of Vegetable Physiology.

His researches induced Schwaun to apply to the animal world, the same method of enquiry which Schleiden had inaugurated among plants, and he in his turn made known the sublime truth that the law of formation and reproduction which prevails in the vegetable, rules also over the animal creation—the scheme is the same, the cell the element of being. Bones, cartilages, muscles, nerves and every tissue were traced to their origin in cell growth, the universality of which binds all created beings in one sublime connection and proclaims a common law of growth. The vital processes of the body are carried on by cell action; secretion, absorption, exhalation, nutrition, chemical change and vital change, all indicate only phases in the history of cell life—that epitome of all organic life. But while Schleiden and Schwaun were working amidst the mysteries of structure, Professor Owen took up the question, and what the former had done for structural anatomy, Owen did for the anatomy of form. The man, the bird, the reptile, the fish, the saurian and the monsters of pre-adamite earth seemed to be sepa-