



# The Natural History of Plants, Their Forms, Growth, Reproduction, and Distribution Volume 1, PT. 2

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This historic book may have numerous typos and missing text. Purchasers can download a free scanned copy of the original book (without typos) from the publisher. Not indexed. Not illustrated. 1895 Excerpt: ... dodecahedra, because each individual pea is in this way allowed the greatest possible room together with the utmost economy of space. We are again reminded of the fact that the structure of slate-like stones is dependent upon the pressure acting upon the mass so far at least that the planes of cleavage and stratification are always at right angles to the direction of the pressure. But however valuable these facts are in the explanation of the condition of the form of inorganic bodies, they are of little significance to the question in hand. No one will deny that spherical cells on which an equal pressure operates from all sides may assume the shape of dodecahedra, but this form is not transmitted to the descendants. In the next generation of these same plants it is a group of spherical and not of dodecahedral cells, which arises at the particular place. The latter will, indeed, only reappear if the aforesaid pressures be again exerted. How little, however, external influences define the form and grouping of permanent cells, is shown by the fact that from one and the same meristem, under the same pressure, the same temperature, and equal illumination, arise in the closest proximity the most different permanent cells and that, on the other hand, the formation and grouping of these cells is not essentially different when the development of the meristem takes place under wholly different external pressure, or different temperature. We always come back to this important thesis: --the forces operating on plants from outside are only stimuli to the formative processes these latter are accomplished independently of external influences in a manner established for each species, and founded in the specific construction of its living protoplasm. PLANT-FORMS AS COMPLE..

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