

this interesting subject. In particular, they have made admirable use of the most recent discoveries in Animal and Vegetable Physiology; shewing, that, in every animal and plant, a system of serially repeated parts (Homotypes) can be traced; that we likewise meet, in each of the great leading divisions both of the animal and vegetable kingdoms, with a system of answering parts (Homologues); and that, moreover, when we compare the two organic kingdoms with one another, we can, to a certain extent, detect parallelisms in developement, (Homœophytes.) In the course of their discussion of these points, our authors advance a theory regarding the structure of plants, which distinguished botanists, though hesitating in the meantime positively to accept, appear to regard as by no means unworthy of consideration. It is now universally acknowledged that all the parts of a plant are formed on one or other of two types, the stem or the leaf—a discovery due (strange to think) to a poet, whose delight in nature and loving observation of its forms, enabled him to detect what the mere men of science not only had overlooked, but were long reluctant to admit, even after it was pointed out. The sepals, the petals, the stamens, the pistils, are—not indeed metamorphosed leaves, as Goethe rather loosely termed them—but parts formed on the model of the leaf. In like manner, the branches, in all their subdivisions, with the roots, must be classed typically with the stem. Buds and seeds are virtually repetitions of the entire plant. This is now (we say) an established doctrine; but Dr. McCosh—for the idea would seem to have originated with him—is of opinion that the generalization may be carried still further, and that the stem and leaf have themselves a common typical form; so that only a single primitive model must be recognised, after which all the parts of a plant, without exception, are constructed. We merely advert to this theory as a proof of the suggestive character of the work under review, and of the original and independent thinking which it contains. Among the minor illustrations given of the principle of order, we were much struck with the chapter on the colors of plants. To a careless observer, nothing in nature would seem to be more irregular than the distribution of color; yet even this is found to be guided by laws pretty well defined. Most interesting it is to notice, that, as a general rule, colors in nature are associated on the very principles which artists have pointed out as necessary, in order that an effect pleasing to the human eye may be produced. There are harmonies of color as truly as of musical sounds; and in the aspect of creation ungrateful discords never appear. Professor Dickie believes that he has established certain conclusions regarding the relation of form and color in the flower, of