responding absorption by the roots is also suspended. This was confirmed by the result of some experiments he made on the same plants by placing them, during day time, in the dark; under which circumstances the excretion from the roots was found to be immediately much augmented: but, even when exposed to the light, there is always some exudation, though in small quantity, going on from the roots.

That plants are able to free themselves, by means of this excretory process, from noxious materials, which they may happen to have imbibed through the roots, was also proved by another set of experiments on the *Mercurialis annua*, the *Senecio vulgaris*, and *Brassica campestris*, or common cabbage. The roots of each specimen, after being thoroughly washed and cleaned, were separated into two bunches, one of which was put into a diluted solution of acetate of lead, and the other into pure water, contained in a separate vessel. After some days, during which the plants continued to vegetate tolerably well, the water in the latter vessel being examined, was found to contain a very perceptible quantity of the acetate of lead. The experiment was varied by first allowing the plant to remain with its roots immersed in a similar solution, and then removing it, (after carefully washing, in order to free the roots from any portion of the salt that might have adhered to their surface,) into a vessel with rain water; after two days, distinct traces of the acetate of lead were afforded by the water. Similar experiments were made with lime-water and with a solution of common salt, instead of the acetate of lead, and were attended with the like results. De Candolle has ascertained, that certain maritime plants which yields soda, and which flourish in situations very distant from the coast, provided they occasionally receive breezes from the sea, communicate a saline impregnation to the soil in their immediate vicinity, derived from the salt which they doubtless had imbibed by the leaves.

Although the materials which are thus excreted by the roots are noxious to the plant which rejects them, and would consequently be injurious to other individuals of the same