

banks of the Ganges, moves its leaves without any assignable cause: the mimosa or sensitive plant folds its leaflets when shaken or touched, as if it feared some harm: while the sun-dew and certain species of the pitcher-plant are provided with an apparatus for killing insects, from which they are supposed to derive some nourishment. Irritability is unquestionably a property of plants. Poisons kill them, and they possess an excretory power. Plants can imbibe nothing unless in a state of solution. The wheat plant, for example, requires a great amount of sand in the construction of its incomparable stem. It can imbibe not a particle unless in a soluble state, and it has no power of its own to dissolve siliceous matter. Should a particle of potash be placed in the soil, it will dissolve any sand in its vicinity. Both may then be taken up by the plant: the sand being deposited in its place in the stem or leaves in its solid condition, the potash that held it in solution is liberated, being no longer necessary, and is thereupon returned to the soil, again to dissolve more sand, be carried up by the ascending current of sap and again returned to the soil in endless succession. Many contend that plants are endowed with instinct, lower in kind perhaps than that of animals, but not less instructive. Plants send their roots in the direction of good soil. The bean will find a pole placed at a short distance from it, though it be shifted daily: if, after it has twined some distance up the prop, it be unwound and twined in the opposite direction, it will return to its original position or die in the attempt. If two plants grow near each other, neither of them being supported, one of them will alter the direction of its spiral and they will twine round each other: if a pan of water be placed near the stem of a young pumpkin, it will approach it and place one of its leaves on the water: if good soil be placed above the roots, though their natural tendency is downward, they will ascend to reach it. Other instances might be given, but these are sufficient to induce the enquiring mind to pursue this interesting department of study.

The geographical distribution of plants is a subject of great importance. They are supposed to have had their origin in distinct localities or districts, and afterwards to have spread in every direction, winds, birds, waves, and tides being laid under tribute to facilitate their dissemination throughout the climatic zones congenial to each species. It is impossible to say where life is most abundant—whether on the continents or in the unfathomed depths of the ocean. The black glacier flea (*Desoria glacialis*) and