

Mr. Darwin's Latest Scientific Work.

A German Introspective Novel—Professor Le Conte Writes a Book—Periodicals—Notabilia.

THE POWER OF MOVEMENT IN PLANTS. By Charles Darwin, LL. D., F. R. S.; assisted by Francis Darwin. With illustrations. New York: D. Appleton & Co.

Mr. Darwin's latest volume in his remarkable series of scientific works deals with "The Power of Movement in Plants." It is another masterly performance in his task of showing the general unity of terrestrial life, the specific aim of which is to describe and connect together several large classes of movement, common to almost all plants. Mr. Darwin illustrates the most widely prevalent movement by describing it as essentially of the same nature as the movement of a climbing plant's stem, which so bends successively to all points of the compass that the tip revolves. This movement he calls circumnutation. "If we observe," he says, "a circumnutating stem, which happens at the time to be bent, we will say toward the north, it will be found to gradually bend more and more easterly, until it faces the east; and so onward to the south, then to the west, and back again to the north. If the movement had been quite regular, the apex would have described a circle, or rather, as the stem is always growing upwards, a circular spiral. But it generally describes irregular elliptical or oval figures; for the apex, after pointing in one direction, commonly moves back to the opposite side, not, however, returning along the same line. Afterwards other irregular ellipses or ovals are successively described, with their longer axis directed to different parts of the compass. Whilst describing such figures, the apex often travels in a zigzag line, or makes small subordinate loops or triangles. In the cases of leaves, the ellipses are generally narrow." Mr. Darwin applies this principle to almost the whole of the vegetable kingdom. He shows that apparently every growing part of every plant is continually circumnutating. Stems of seedlings even, before they have appeared above the ground, circumnutate. In this circumnutation is the basis for the acquirement of the most diversified movements, such as the great sweeps made by the stems and tendrils of twining plants and climbers; the position which young leaves and other organs ultimately assume; the sleeping of the leaves of some plants at night; the movements of various organs to the light, from the light, or transversely with respect to it; the movements of stems, etc., toward the zenith, and of roots toward the center of the earth, etc. This is only a hint of the scope of Mr. Darwin's work, which is written with that scientist's usual ability, thoroughness and minuteness and verification of detail. No attempt has been made to popularize the style, but those having a knowledge of botany will have no serious difficulty in reading it.