

Theology.

AT the regular meeting of the Queen's Theological Society, on Friday, January 13th, Prof. McClement gave an address upon the subject:—"Conditions Affecting Organic Progress."

Progress was defined in the strictly scientific sense, as the advance from simplicity to complexity of parts. Every student of life should be interested in the nature and activity of protoplasm. In the evolution of the material world in which we live, protoplasm is the climax of a long series of chemical changes. Man has not yet solved the chemical problem of the constituents of protoplasm, which is the only kind of matter in which life makes itself manifest. One of the most important powers with which this life-force endows protoplasm is that of assimilating other matter—and thereby increasing itself—and that of dividing itself into two or more parts each of which is of the same nature as the first.

One of the most interesting and perplexing problems facing the student of Science is to discover the origin and the nature of this life-force which so wonderfully endows matter. Three or four definitions have been suggested by scientists. These are—(1) Life is the resultant of all the chemical changes going on in protoplasm. (2) Life is the result of certain chemical changes of which we know nothing. (3) Life has been breathed into protoplasm by some source, outside of protoplasm. Prof. McClement pointed out that no one of these definitions was satisfactory, that we really know very little of the nature or origin of many forms of energy, electricity, light or life and that the theories regarding these are constantly changing.

In order that life may continue active in protoplasm, there are required the conditions of light, heat and moisture. There are two methods by which protoplasm reproduces itself. One method is illustrated in bacteria which reproduce simply by cleavage. The parent cell divides into two or more which are precisely similar to the parent. This is really a form of immortality—for each bacteria renews unchanged the characteristics of the parent. By this method there is absolute fixity of type—no differentiation being possible.

The other method, that of sexual reproduction is characteristic of all those forms which can stand the light. One of the main reasons why all the higher orders have adopted this method of reproduction is,—that they receive a variety of qualities and abilities to adapt themselves to varying conditions of life because of the variety of their ancestors. The offspring are more adaptable and plastic—and by developing these varying powers protoplasm can live under all conditions.

Prof. McClement went on to show how some forms of protoplasm developed the ability to live in the light by forming a green color, which absorbs the energy of the light. He also showed how in various plants the principle of "Division of Labor" is worked out. Somewhere in the advance from simplicity to complexity there enters the phenomenon of death.