

and a barren, icy earth ; nothing would maintain its present form, the fibril of the most delicate flower, as well as the trunk of the oak, would be destroyed ; it, moreover, serves as a medium for the conveyance of moisture to plants, coming down in the shape of dew from heaven, and blessing the plant beneath ; moisture also exists in an insensible condition in the atmosphere, and in this state conduces to the health and growth of vegetation, even in the dryest weather a large quantity is always present and serves most important purposes. The importance of the dew and of the insensible moisture of the air may be estimated by the immense quantity of water which it represents. It has been calculated that only half of the rain that falls in the great St. Lawrence basin, passes of over Niagara Falls, the balance escapes in the form of vapor and is scattered by the winds all over the earth ; which being condensed would make a river as large as the Niagara. It also serves as a conductor of electricity, whose influence upon vegetable, as well as animal life, future researches will have to develop. It may be asked of what use is all this ?— Let us know the nature of the blessings which surround us ; let us search into all the ways by which Providence contributes to our happiness, and whilst that knowledge will improve our physical condition, it will ennoble our moral faculties by directing them to Him “ from whom all blessings flow.”

So far in relation to the physical benefits of the Atmosphere, but there are others which are æsthetic ; it transmits and it conveys sound. Without it no sweet music could strike upon the listening ear, no words of love could stir the still depths of the heart, there could be no voice for prayer, none for praise. The melody of bells, with all their changeful voices, could no longer speak to the human soul, and all the sweet associations that hover around accustomed sounds would be in bleak desolation. No organ tones could awake devotion, no choral voices could ascend for mercy to a throne of grace ; silenced alike the wailings of the *Miserere* and the exultant harmonies of the *Te Deum*.

I now proceed to give a short description of the different substances which are necessary to vegetable life.

ORGANIC AND INORGANIC MATTER.

Upon an examination of any or all of the organized products of the earth, there are invariably found two kinds of bodies sufficiently distinct in their general and special properties as to be arranged under two separate and distinct classes, the one of these classes includes Organic, the other Inorganic matter ; the former having its form easily and rapidly changed by heat, or by the slow