

soon render the earth unfit for animal life; but that which animals throw off as unfit any longer for their use, is that without which vegetable life could not exist. That which is poison to the one is food to the other. All vegetables absorb through their leaves this Carbonic Acid, (to animals deadly poison,) and separate the carbon so as with it to build up their structure; while they exhale the other constituent, oxygen, to purify the air. There is thus ever kept up a healthy balance in the atmosphere; and a constant and necessary relation exists between vegetable and animal life. Where the one exists in the greatest abundance, the other will also ever be found in like ratio, and animals depend for their food on vegetable production no more than vegetables on animals for the materials for their structure. Every tree, plant and shrub that grows purifies the atmosphere, and furnishes air for the use of man and the inferior animals; every thing that breathes the air—from man, the lord of the creation, to the veriest reptile—is a purveyor of food for vegetable subsistence.

Wherever, therefore, animals abound, carbonic acid is largely formed, but this carbonic acid, in giving its carbon to vegetables, gives also its oxygen to purify the air, and furnishes the means of breathing to men and animals. Decomposition of animals, and the decay of vegetables also, afford both carbonic acid and ammonia, the very materials for the growth of a new series of life. The death of one generation thus becomes the source of life to another, and each living generation is the phoenix arising from the ashes of that which preceded it, a life whose very existence depends upon previous death.

This is a type of what revelation teaches, that we shall not "surely die;" but that death is but a means to and a necessary precursor of a glorious resurrection. There is taught, too, by this simple yet beautiful and perfect process, the mutual dependence which exists, not for pleasure only, but for life itself, between all the systems of animated nature—that nothing is in vain.

Each humble plant that grows may be nourished by the breath of the greatest of mankind, and in its turn purify the air for the life of a hero. The frailest flower, though, perchance, "born to blush unseen," does not "waste its fragrance on the desert air." The perfume of flowers is a compound of carbonic acid and ammonia, and may be taken up by corn, wheat, or any other plant used as food by man.

There is ever going on a transmutation from living to dead matter, and these are ever assuming new and variable forms: the truth can easily be believed by the chemist that

"Caesar dead and turn'd to clay,
May stop a hole to keep the wind away,"

and the fulfilment of the poetical prophecy:—