

Once perhaps the atmosphere of the earth consisted chiefly of water and carbon dioxide; but cooling has caused the condensation of most of the water, and geological processes, more recently aided by the action of vegetation with coal and peat formation, have removed nearly all of the carbon dioxide. The latter transformations have resulted in the substitution of oxygen in the atmosphere. However, the interior of the earth continues to deliver through volcanoes large amounts of carbon dioxide, and thus the original source of atmospheric carbon dioxide persists as a diminishing supply.

To-day carbon dioxide makes up only a little more than 0.03 per cent by volume of the whole atmosphere, approximately 4.6 kilograms per square meter of the earth's surface, or about 2,300,000,000,000 metric

Water is, therefore, three fourths, carbon dioxide one fifth, of the total, and all other substances amount to but 2 to 3 per cent.

In like manner the materials ingested by an ordinary green plant are proportioned, water making up more than nine tenths, and carbon dioxide amounting to fully five times the sum of all other substances combined.

Needless to say, a large part of the water which enters and leaves plants and animals has had no real share in their organization. It is merely the bearer of dissolved substances or the means, through evaporation, of lowering the temperature of their bodies.