

A Science Service Feature

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? WHY THE WEATHER ?

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ATMOSPHERIC CARBON DIOXIDE

One of the strange facts about the air is that its percentage of carbon dioxide remains, under normal outdoor conditions, almost constant, despite the fact that this gas is being continually added to the air and abstracted from it by numerous agencies that have no dependence upon one another. The gas is a little more abundant in the air of towns than in the open country, or over the ocean, and undergoes slight periodic variations, but the proportion departs very little from 3 parts in 10,000.

Carbon dioxide is supplied to the air by volcanoes, mineral springs, the combustion of fuel, the respiration of animals and plants, and the decay of organic matter. On the other hand, all green plants, in the presence of sunlight, withdraw this substance from the air, abstract the carbon from it for the use of the plant, and return the oxygen to the atmosphere. Thus it is estimated that an acre of beech forest takes a ton of carbon out of the air annually. A vast amount of atmospheric carbon dioxide enters into chemical combination with certain rocks at the earth's surface. Lastly, a large quota of this atmospheric gas is absorbed by sea water, and certain authorities have seen in this process a regulator of the total amount in the atmosphere, the hypothesis being that the ocean gives back some of the carbon dioxide whenever this substance becomes deficient in the air.

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