

nomenon,<sup>1</sup> can escape into air which is charged with but little of the gas.<sup>2</sup> Were carbon dioxide not gaseous, its excretion would be the greatest of physiological tasks; were it not freely soluble, a host of the most universal existing physiological processes would be impossible.

## II

### ACIDITY

The only other property of this substance which calls for consideration at this point is its acid nature and strength. Very few minerals are freely soluble in pure water, and nearly all yield to the process of weathering far more readily because of the carbonic acid which all natural waters contain.<sup>3</sup> The latter

<sup>1</sup> The determination of the exact nature of the process by which carbonic acid is excreted across the lung membrane is one of the standing difficulties of physiology, but we need not here enter upon its consideration.

<sup>2</sup> Expired air contains on the average more than 4 per cent by volume of carbonic acid.

<sup>3</sup> "A few minerals (halite, for example) are readily soluble in water without chemical change, and without the aid of any intermediate element; hence the copious brine-springs of salt regions. In the great majority of cases, however, solution is effected through the medium of carbonic acid or other reagent. Limestone is soluble to the extent of about 1 part in 1000 of water saturated with carbonic acid. The solution and removal of lime from the mortar of a bridge or vault,