

phoric acid (after its first hydrogen has been neutralized by base), has the remarkable property of preserving a neutral reaction whenever it exists in solution with its salts, provided there be an excess of acid. All acids whose strength is even a little either greater or less than carbonic acid lack the property.¹

This characteristic of carbonic acid is of the utmost significance, first by regulating one of the most fundamental of physico-chemical conditions, and secondly by preserving throughout nature the characteristic chemical inactivity of water, which disappears whenever the reaction becomes either appreciably acid or appreciably alkaline. Almost the only case of important geological action due to acidity or alkalinity of water is the action of fresh water, containing carbonic acid itself, to weather the rocks. This process is, however, self-limited, for the dissolved material forms bicarbonates, and thus at once provides permanently inactive balanced solutions.

It is impossible to understand the efficiency with which neutrality is preserved by carbonic acid, without the actual discussion of a particular case. Let us therefore consider a solu-

¹ Henderson, "The Relation between the Strengths of Acids and their Capacity to Preserve Neutrality," *American Journal of Physiology*, XXI, 173, 1908.