

blood plasma, etc. The variety of compounds, both organic and inorganic, which contain carbon, hydrogen, or oxygen also causes enormous increase in the number of components of biological systems like protoplasm.

The effects of the properties of water above enumerated to regulate temperature are almost too numerous to mention. The specific heat of water, its latent heats of fusion and vaporization, and the high freezing point all contribute to the restriction of temperature range within the organism, in the waters, and over the whole surface of the earth. The vapor pressure of water has been shown to possess great and exceptional variability with change of temperature. This is the most important property of water meteorologically, and is the necessary condition for its ample circulation. The ratio between the gas pressure of carbonic acid and its concentration in water (absorption coefficient) has been shown to be the great factor in establishing the mobility of that substance. The total atmospheric pressure has not entered into our discussion, for it seems to have no important special relation to the properties of the three elements.

In short, the properties of water and of the carbon compounds provide for number, va-