

science, — specific heat, coefficient of expansion, solubility, heat of reaction, etc., — and thereby we shall gain all the advantages of the most exact sciences. No qualifications, no doubtful or contentious matter, no imperfect descriptions need enter.

In this manner it will be easy to estimate the absolute biological fitness in certain respects of water and carbonic acid, and at once a host of automatic results of their properties will become evident. Many of these results, such as the nearly constant temperature of the ocean, the ample rainfall, the freezing of water upon the surface, the great variety of carbon compounds, are familiar subjects of speculation, though since Darwin little interest has been manifested in them; others, only recently brought to light by the growth of physical science, are nearly or quite unknown in this connection. All deserve to receive more serious attention from biologists than is at present vouchsafed them, for they constitute a part of the very foundation of general biology, and they cause many of the phenomena with which man is concerned in his struggle for mastery of the environment.

Yet the mere exposition of such facts and relationships cannot suffice in a discussion of the fitness of the environment. In the first