SMELL, TASTE, AND ALLIED SENSES IN THE VERTEBRATES

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BY

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EDITORS' ANNOUNCEMENT

The rapid increase of specialization makes it impossible for one author to cover satisfactorily the whole field of modern Biology. This situation, which exists in all the sciences, has induced English authors to issue series of monographs in Biochemistry, Physiology, and Physics. A number of American biologists have decided to provide the same opportunity for the study of Experimental Biology.

Biology, which not long ago was purely descriptive and speculative, has begun to adopt the methods of the exact sciences, recognizing that for permanent progress not only experiments are required but quantitative experiments. It will be the purpose of this series of monographs to emphasize and further as much as possible this development of Biology.

Experimental Biology and General Physiology are one and the same science, in method as well as content, since both aim at explaining life from the physico-chemical constitution of living matter. The series of monographs on Experimental Biology will therefore include the field of traditional General Physiology.

Jacques Loeb,
T. H. Morgan,
W. J. V. Osterhout.

AUTHOR'S PREFACE

Sense organs have always excited general interest, for they are the means of approach to the human mind. Without them our intellectual life would be a blank. The deaf and the blind show how serious is the loss of even a single set of these organs.

Although the ear and the eye have commonly received most attention, the other sense organs, such as those of smell and of taste, are in reality equally worthy of consideration. These organs are of first significance in warning us of untoward conditions that may exist about us particularly in relation to our food. But they not only serve us in this protective way, they are also of the utmost importance in initiating that chain of events which culminates in successful nutrition. Through their action the secretion of the digestive juices and other like operations, so essential to the proper treatment of the food, are started and furthered in the alimentary canal. Thus their activities, though less associated with our mental states than are those of the ear and of the eye, are nevertheless so essential to our organic well-being that they are in reality quite as necessary to us as the so-called higher senses.

Smell and taste, together with certain other senses not so well known, form a more or less natural group in which there is a certain amount of functional interrelation and genetic connection, and it is from this standpoint that these senses will be considered in the following pages. They will thus illustrate in a way principles common to