gestion was adopted and elaborated by Schwendener, and its correctness was further demonstrated by Bornet, Stahl, and others. In spite of the opposition of many eminent lichenologists, the "dual hypothesis" has now general recognition.

Chapter VI.

Physiology of Animals.

The Problem of Physiology—Ancient Physiology—Aristotle—Galen—Mediæval Physiology—Harvey—Physiology comes of Age as a Specialism: Haller—Physiology becomes Comparative—Advance of Comparative Physiology—Chemical Aspects—Physical Aspects—Du Bois-Reymond—Experimental Physiology—The Study of Internal Secretions—Analysis of Nervous Mechanism—Cellular Physiology—The Protoplasmic Movement—Pathology—Reproduction in Animals.

The Problem of Physiology.

The physiologist is pre-eminently an investigator of vital *activity*. Whether he studies the leaf of a plant or the lung of an animal, a single cell or an entire organism, his question always is, "*How does this live and work?*" He studies structure too, but only as a means to an end, that he may understand function better. In one of his lectures, Prof. Burdon Sanderson illustrated the physiologist's attitude by the characteristic question, which came to Clerk Maxwell's lips when, as a boy, he was shown some mechanism, "What is the *go* of this?", or, if put off by some verbalism, "But what is the *particular go* of it?"

Starting with *the organism as a whole*—an intact creature with habits and temperaments, the physiologists have proceeded, slowly but persistently, to investigate the functions of its *organs*, the properties of its *tissues*, and the phases observable in its *cells*, finally reaching to the full length of the biological tether in the distinctively modern study of *protoplasm*. It need hardly be said that there is still physiological work being done