

## OUR LIFE

that he always began with the simplest life phenomena of the lowest animals, and followed them step by step in their gradual development up to the very highest, to man. In this his method of *critical comparison* proved its value both from the physiological and from the anatomical point of view. Johannes Müller is, moreover, the only great scientist who has equally cultivated these two branches of research, and combined them with equal brilliancy. Immediately after his death his vast scientific kingdom fell into four distinct provinces, which are now nearly always represented by four or more chairs—human and comparative anatomy, pathological anatomy, physiology, and the history of evolution. This sudden division of Müller's immense realm of learning in 1858 has been compared to the dissolution of the empire which Alexander the Great had consolidated and ruled.

Among the many pupils of Johannes Müller who, either during his lifetime or after his death, labored hard for the advancement of the various branches of biology, one of the most fortunate—if not the most important—was Theodor Schwann. When the able botanist Schleiden, in 1838, indicated the cell as the common elementary organ of all plants, and proved that all the different tissues of the plant are merely combinations of cells, Johannes Müller recognized at once the extraordinary possibilities of this important discovery. He himself sought to point out the same composition in various tissues of the animal body—for instance, in the spinal cord of vertebrates—and thus led his pupil, Schwann, to extend the discovery to all the animal tissues. This difficult task was accomplished by Schwann in his *Microscopic Researches into the Accordance in the Structure and Growth of Plants and Animals* (1839).