

Think of the immense revolutions in all our theoretical views which we owe to the general application of the microscope. Think of the cell theory, which explains the apparent unity of the human organism as the combined result of the union of a mass of elementary living units. Or consider the immense extension of our theoretical horizon which we owe to spectral analysis and to the mechanical theory of heat. But among all these wonderful theoretical advances, the theory wrought out by Darwin occupies by far the highest rank.

Every one of my readers has heard of the name of Darwin. But most persons have probably only an imperfect idea of the real value of his theory. For if all that has been written upon Darwin's memorable work since its appearance be equally trusted, the value of the theory must appear very doubtful to those who have not been engaged in the organic natural sciences, and have not penetrated into the inner secrets of zoology and botany. The criticisms of it are so full of contradictions, and for the most part so defective, that we ought not to be at all astonished that even now, after the lapse of thirty years since the appearance of Darwin's work, it has not gained half that importance which is justly due to it, and which sooner or later it certainly will attain.

Most of the innumerable writings which have been published during these years, both for and against Darwinism, are the productions of persons who are entirely wanting in the necessary amount of biological, and especially of zoological, knowledge. Although almost all of the more celebrated naturalists of the present day are now adherents of the theory, yet only a few of them have endeavoured to procure