Probably all living histologists would agree that the veteran of their craft, of whom they are proudest, is Professor Albrecht von Kölliker. The magnitude of his work, alike in quantity and quality, is a lasting example to the spirit of research. He helped in establishing the cell-theory; he traced the origin of tissues from the segmenting ovum through the developing embryo, he demonstrated the continuity between nerve-fibres and nerve-cells of vertebrates (1845), he isolated the elements of smooth muscle (1848), he did lasting work in connection with the development of the skull and the backbone (1849-1850), and much more, all in the early years of his scientific activity. Since 1850 hardly a year has passed without some important histological, embryological, or anatomical work from Von Kölliker, as may be readily verified by turning up the famous Zeitschrift für wissenschaftliche Zoologie, which was founded by him and Von Siebold in 1848.

On the physiological side it was necessary to show in greater detail that the life of the body was to some extent expressible in terms of the internal changes in the constituent cells. Epoch-making in this connection was the work of Goodsir (1845), and Virchow (1858), who demonstrated that both in normal and pathological processes cells arise from pre-existing cells, and that the life of the whole may be spelt out in the life of the parts.

While most naturalists believe strongly in the struc-Criticism tural, functional, and developmental imof the Cell- portance of cells, there have been frequent protests against regarding the cellular standpoint as ultimate.

(a) Morphological Criticism. That development proceeds by cell-formation is a cardinal part of the celldoctrine. But it has been pointed out, by Sedgwick (1894) in particular, that in some cases, e.g. the development of a species of *Peripatus*, the nuclei divide without corresponding cell-divisions, and the result is a "syncytium" or protoplasmic mass with many nuclei, but with undefined cell-boundaries.

(b) Physiological Criticism. That the organism lives