

great alike as student and teacher, investigator and writer, and he has left an indelible mark on many departments of botany, on vegetable physiology in particular.

His interest in nature was instinctive, for as a boy he made his herbarium and collection of skulls, and it seems to have developed rather in spite of, than in virtue of, his early education. As far as scientific discipline was concerned, he was little influenced by any of his teachers. In face of great difficulties, for he was "a self-made man", he graduated at Prague in 1856. In the following year he established himself as a *privat-docent* in plant physiology, at a time when, as he has himself said, there was practically no such department of botany, and when it was possible for a critic to remark without great exaggeration, "Two lectures are ample for all there is to say upon that subject".

After holding various posts, Sachs was called to the chair of botany at Würzburg, where he remained for the rest of his life, notwithstanding many tempting offers from elsewhere. In spite of severe ill-health and close devotion to his work as a teacher, he succeeded by his original researches in founding the modern physiology of plants, and wrote four great books.

If ever a man made for progress by writing textbooks, it was Sachs. His *Experimental Physiology* (1866) is a fundamental classic, which was afterwards brought up to date by his very different (dictated) *Lectures on the Physiology of Plants*; his *Text-book of Botany* (1868) took the place of Schleiden's *Outlines*, and "did for botany what Gegenbaur achieved for zoology, in presenting the morphological facts of the vegetable kingdom for the first time as a whole"; his *History of Botany*, to which we have been greatly indebted in this little book, is perhaps the most charming, and at the same time philosophical, contribution yet made to the historical literature of natural science.

We cannot within our limits do more than hint at what Vegetable Physiology owes to Sachs. Only the nature of his most important work can be indicated, under four heads.

(a) *Contributions to a knowledge of the everyday*