spectroscope), into the still wider conception of a general science of evolution, as enunciated already forty years ago in the writings of Herbert Spencer, and in a more shadowy form by Herder in the eighteenth century, and by Leibniz in the seventeenth.

Seeing, then, that the treatment of the descriptive sciences of nature has been so radically changed during the course of the century, and that the change has been accompanied by a complete revolution in our modes of thinking and reasoning on these subjects, the historian of Thought cannot be content with merely chronicling the progress of the methods in use in the separate sciences, such as mineralogy, geology, botany, and zoology, even with the addition of the more recent sciences of palæontology, physiology, and comparative anatomy. He might in doing so fairly grasp the history of the descriptive sciences up to the year 1850. It is exactly in this manner that Whewell, in his 'History of the Inductive Sciences,' treated this part of his subject. Beyond that period the old landmarks designated by those names have disappeared or become of secondary importance. On the other side, whilst a history of Evolution in Science might seize. on the great characteristic feature of the more modern research which belongs to the second half of the century, it would hardly suffice to sum up the leading ideas of the descriptive branches of science as they were carried on on independent lines during the earlier years of our period. Evolution had then no definite meaning, and Biology was a disregarded term. We must thus look out for some more general aspects which belong alike to the earlier

11. Herbert Spencer.

12. Whewell's divisions abandoned.