

and it was also recognised that they were frequently elongated into tubes or joined so as to form larger vessels. In all these researches and descriptions paramount importance was attached to the form and composition of the framework of this cellular arrangement, and only little to its contents. In fact, the historian of botany¹ characterises the period from 1800 to 1840 as that of the study of the cellular framework of plants. The skeleton, as it were, of plant structure received primarily the greater attention. In the course of these researches, which, with a few important exceptions, were all carried out in Germany, one point was permanently settled, namely, that "the cell is the one fundamental element of all vegetable structure."² No one did more to establish this important fact than Hugo von Mohl, whose name has been somewhat cast into the shade by the more attractive writings of Schleiden. It was Schleiden who first brought the new cellular theory into popular recognition, not without an admixture of errors, which had to be gradually eliminated in the various controversies with which his name is connected.

446.
Hugo von
Mohl.

¹ See Sachs, *loc. cit.*, p. 276, &c. This period finds its consummation in the researches of Hugo von Mohl. It begins with those of Brisseau Mirbel, the first French author who took up this line. His labours were continued and criticised by a long list of German naturalists. Sachs also refers to the erroneous habit these earlier phytotomists had of getting their diagrams of what they saw by the microscope made by other persons who were supposed to be impartial—a custom fortunately abandoned by Mohl, who in his drawings did not give

"undigested copies of the objects but his own impressions of them" (p. 281).

² Sachs assigns the final establishment of this principle to the year 1831, and considers it as one of Mohl's achievements, since, although it had been already announced by Sprengel and Mirbel, it had not been sufficiently supported by observations. Even the curious but antiquated idea, according to which the spiral fibre formed a fundamental part of plant structure, survived up to 1830 (p. 323).