*theologicum,* or seminary for poor students. From 1732 till his death (at Leyden on 26th January 1750) he was professor of Oriental languages at Leyden. Schultens was the chief Arabic teacher of his time, and in some sense a restorer of Arabic studies, but he differed from Reiske and De Sacy in mainly regarding Arabic as a handmaid to Hebrew. His chief work was to vindicate the value of comparative study of the Semitic tongues against those who, like Gousset, regarded Hebrew as a sacred tongue with which comparative philology has nothing to do. Schul­tens, on the other hand, certainly went much too far in his appeals to Arabic for the interpretation of the Old Testa­ment ; the laws of comparative Semitic philology were not yet known, so that the comparison of roots was often guess­work, and the value of the exegetical tradition in Hebrew was not accurately determined. Hence he did not leave so much of permanent value for Hebrew grammar and lexico­graphy as might have been expected from his learning; but the systematic illustration of phrases and modes of thought from Arabic literature, *e.g.,* in his *Liber Jobi,* has a higher value, which has been too much overlooked in the reaction against the extravagances of the school he founded. @@1

Albert’s son, John James Schultens (1716-1778), became professor at Herborn in 1742, and afterwards suc­ceeded to his father’s chair. He was in turn succeeded by his son, Henry Albert Schultens (1749-1793), a man of great parts, who, however, left comparatively little behind him, having succumbed to excessive work while preparing an edition of Meidani, of which only a part appeared posthumously (1795).

SCHULTZE, Max Johann Siegmund (1825-1874), German microscopic anatomist, was born at Freiburg in Breisgau (Baden) on 25th March 1825. He studied at Greifswald and Berlin, and was appointed extraordinary professor at Halle in 1854 and five years later ordinary professor of anatomy and histology at Bonn. He died at Bonn 16th January 1874. His contributions to biology were numerous and varied. He founded and edited the important *Archiv für mikroskopische Anatomie,* to which he contributed many papers, and advanced the subject generally, by refining on its technical methods. He also contributed to the knowledge of the *Protozoa* (see Foraminifera, Protozoa). He will be longest remem­bered, however, by his reform of the cell theory. Uniting Dujardin’s conception of animal sarcode with Von Mohl’s of vegetable protoplasma, he pointed out clearly their identity, and included them under the common name of protoplasm. He thus reorganized the theory as established by Schwann, diminished the importance of the cell-wall and nucleus, and laid down the modern definition of the cell as “ a nucleated mass of protoplasm with or without a cell-wall ” (see Protoplasm and Schwann). An obituary notice of Schultze is given in *Arch, mikr. Anat.,* 1875.

SCHUMACHER, Heinrich Christian (1780-1850), astronomer, born at Bramstedt in Holstein, 3d September 1780, was director of the Mannheim observatory from 1813 to 1815, and then became professor of astronomy in Copenhagen. From 1817 he directed the triangulation of Holstein, to which a few years later was added a com­plete geodetic survey of Denmark ; the latter was left in­complete by Schumacher, but was finished after his death. For the sake of the survey an observatory was established at Altona (see Observatory) and Schumacher resided there permanently, chiefly occupied with the publication

of *Ephemerides* (11 parts, 1822-32) and of the journal *Astronomische Nachrichten,* of which he lived to edit thirty- one volumes, and which still continues to be the principal astronomical journal. Schumacher died at Altona on 28th December 1850.

SCHUMANN, Robert (1810-1856), musical critic and composer, was born at Zwickau, Saxony, on 8th June 1810. In deference to his mother’s wish, he made a pre­tence of studying for the law, until he had completed his twentieth year ; but in reality he took so little pains to acquaint himself with the mysteries of jurisprudence and so much to master the technical difficulties of the piano­forte that when the day of examination drew near it was evident that he could not hope to pass with credit. His mother therefore wisely gave up her cherished project, and in the summer of 1830 permitted him to settle for a time in Leipsic that he might receive regular instruction from Friedrich Wieck, the most accomplished and success­ful teacher of the pianoforte then living in North Germany. Under Wieck’s superintendence Schumann would doubt­lessly have become a pianist of the highest order had he not endeavoured to strengthen the third finger of his right hand by some mechanical contrivance the secret of which he never clearly explained. But the process failed most signally, and the hand became so hopelessly crippled that the young artist was compelled to give up all thought of success as a performer and to devote himself thenceforward to the study of composition, which he cultivated diligently under the guidance of Heinrich Dorn.

This change of purpose led him to direct his attention to subjects connected with the higher branches of art which he had previously very much neglected. Moreover, it gave him time and opportunity for the development of a peculiar talent which he soon succeeded in turning to excellent account,—the talent for musical criticism. His first essays in this direction appeared in the form of con­tributions to the *Allgemeine musikalische Zeitung* ; but in 1834 he started a journal of his own, entitled *Die Neue Zeitschrift für Musik,* and to this from time to time he contributed critiques of the most profound character, some­times openly written under his own name, sometimes ostensibly emanating from an imaginary brotherhood called the *Davidsbund,* the members of which were living men and women, Schumann’s most intimate friends, though the society itself existed only in his own fertile imagination. His time was now fully occupied. He composed with in­exhaustible ardour, and by the exercise of his extraordi­nary critical faculty struck out for himself new paths, which he fearlessly trod without a thought of the reception his works were likely to meet with from the public. The habit of passing a just judgment upon the works of others led him to judge his own productions with relentless severity; and it may be safely said that he was harder upon himself than upon any candidate for public favour whose attempts he was called upon to criticize.

Schumann’s first great orchestral work was his *Symphony in Bb,* produced in 1841,—the year after his marriage with Clara Wieck, now so well known to the world as Madame Clara Schumann, the accomplished pianiste, to whose fault­less interpretation of her husband’s works we are indebted for our fullest appreciation of their inherent beauty. Another symphony, in D minor, and an orchestral over­ture, scherzo, and finale, appeared in the same year ; and from this time forward works on an equally grand scale appeared in rapid succession, culminating with his first and only opera, *Genoveva,* which, though completed in 1848, was not produced until 1850. In 1843 Schumann was appointed professor of composition in Mendelssohn’s newly founded conservatory of music at Leipsic. Two years after Mendelssohn’s death he endeavoured to obtain the appoint-

@@@1 A. Schultens’s chief works are *Origines Hebraeae (2* vols., 1724,1738), 2d ed., 1761, with the *De defectibus linguæ Hebraeae* (1st ed., 1731) ; *Com. on Job,* 1737 ; *Com. on Proverbs,* 1748 ; Hebrew grammar (*Insti­tutiones),* 1737 ; *Vetus et regia via Hebraizandi,* 1738 ; *Monumenta vetustiora Arabum* (1740—extracts from Nowairi, Mas'udi, &c. ); ed. of Beha-ed-dîn’s *Life of Saladin ;* his *Opera Minora* (1769) and a *Sylloge Dissertationum* (1772, 1775) appeared posthumously.