referred to under Abiogenesis. In this regard also he was led to pay considerable attention to the infusorial animalcules. His great work, however, is the *Dissertationi de Fisica Animale e Vegetale* (2 vols., 1780). Here he first interpreted the process of digestion, which he proved to be no mere mechanical process of trituration, but one of actual solution, taking place primarily in the stomach, by the action of the gastric juice. Verifying this by the important experiment of artificial digestion outside the stomach in sealed tubes, he was attacked by John Hunter, but emerged victorious from the encounter. Of no less importance are his researches on reproduc­tion, in which he experimentally settled the relative functions of the ovum and the spermatozoon. See Reproduction.

SPANDAU, a strongly-fortified town in the province of Brandenburg, Prussia, is situated at the confluence of the Havel and Spree, 8 miles to the north-west of Berlin. It has recently been converted into a fortress of the first class, and is now the key of the defences of the capital. The Julius tower in the citadel, which is surrounded by water, contains the imperial war treasure (Reichskriegs­schatz),—a sum of £6,000,000 in gold, kept in readiness for any warlike emergency. Besides numerous barracks, Spandau contains various military establishments appro­priate to an important garrison town ; and its chief industries are connected with the preparation of munitions of war. The Government factories for the manufacture of small arms, artillery, gunpowder, &c., cover upwards of 200 acres, and employ about 4000 workmen. The other industries are not very important ; they comprise miscellaneous manufactures, fishing, boat-building, and some shipping on the Havel. The population in 1885, including the garrison of nearly 4000 men, was 31,463.

Spandau is one of the oldest places in the Altmark, and received town-rights in 1232. It afterwards became a favourite residence of the Hohenzollern electors of Brandenburg, and was fortified in 1577-83. In 1635 it surrendered to the Swedes, and in 1806 to the French. A short investment in 1813 restored it to Prussia. The population in 1816 was 6250.

SPANGENBERG, August Gottlieb (1704-1792), Count Zinzendorf’s successor, and bishop of the Moravian Brethren, was born July 14, 1704, at Klettenberg, on the south of the Harz Mountains, where his father was court- preacher, and ecclesiastical inspector of the grafschaft of Hohenstein. Left an orphan at the early age of ten, he was sent to the excellent high school at Ilefeld, and passed thence (1722), in poorest circumstances, to Jena to study law. Prof. Buddeus received the poor youth into his family, and a “stipendium” was procured for him. Theology rather than law was his natural destination, and it needed only the impulse of the remark of Buddeus that the inevitable prospect before a true theologian is ignominy and trial to convert the student of law, who was pro­foundly exercised with religious conflicts, into a student of theology. Somewhat after the manner of the Wesleys at Oxford a little later, he studied the mystics, read the Bible, observed rigid devotional exercises, sought to quicken his sense of sin, avoided taking the Lord’s Supper with unbelievers in the Lutheran Church, and took an active part in a religious union of students and in schools for poor children just outside Jena. He took his degree in 1726, and began to give free lectures on theo­logy. In 1727 he made the acquaintance of the Moravian colony at Herrnhut and its head, Count Zinzendorf. A “ collegium pastorale practicum ” for the care of the sick and poor was in consequence founded by him at Jena, which the authorities at once broke up as a “Zinzendorfian institution.” But Spangenberg’s relations with the Moravians were confirmed by several visits to the colony, and the accident of an unfavourable appeal to the lot alone prevented his appointment as chief elder of the community, March 1733. Meanwhile his free lectures in Jena met with much acceptance, and led to an invitation from Gotthelf Francke to the post of assistant professor of theology and superintendent of the educational depart­

ment of his orphanage at Halle. He accepted the invitation, and entered on his duties in September 1732. But it soon appeared that the differences between the Pietists of Halle and himself were far too serious to admit of any harmonious co-operation. He found their religious life too formal, legal, external, and worldly ; and they could not sanction his comparative indifference to doctrinal correctness and his incurable tendency to separatism in church life. Spangenberg’s participation in private obser­vances of the Lord’s Supper brought matters to a crisis. His intimate connexion with Count Zinzendorf was made a further charge against him. His preaching was pro­nounced “singular,” and an “affected humility towards common people ” obnoxious. He was offered by the senate of the theological faculty of Halle the alternative of doing penance before God, submitting to his superiors, and separating himself from Zinzendorf, or leaving the matter to the decision of the king, unless he preferred to “ leave Halle quietly.” The case came before the king, and on April 8, 1733, Spangenberg was conducted by the military outside the gates of Halle. At first he bent his steps to Jena, but Zinzendorf at once sought to secure him as a fellow-labourer, though, with that “jesuitry” of which Wesley subsequently complained, the count wished to obtain from him a declaration which would remove from the Pietists of Halle all blame with regard to the disruption. Spangenberg found amongst the Moravians his life-work. He could amongst them carry out his fundamental principle that the churches are but spheres in *all* of which Christians are to be found, and that the one church of Christ is only where believers live in Christian fellowship. He joined the Moravians at a moment when the stability of the society was threatened, and a wise organizer, enterprising missionary, and theo­logical teacher was imperatively required. He became its theologian, its apologist, its statesman and corrector, through sixty long years of incessant labour. For the first thirty years (1733-62) his work was mainly devoted to the superintendence and organization of the extensive missionary enterprises of the body in Germany, England, Denmark, Holland, Surinam, Georgia, and elsewhere. His missionary work tended to still further modify and broaden his theological opinions, unsatisfactory as the Pietists of Halle had found them in 1733. It was on an island off Savannah that Spangenberg startled John Wesley with his questions and profoundly influenced his entire future career. One special endeavour of Spangen­berg in Pennsylvania was to bring over the scattered Schwenkfeldians to his faith. In 1741-42 he was in England collecting for his mission and obtaining the sanc­tion of the archbishop of Canterbury. During the second half of this missionary period of his life he superintended as bishop the churches of Pennsylvania, defended the Moravian colonies against the Indians at the time of war between France and England, became the apologist of his body against the attacks of the Lutherans and the Pietists, and did much to moderate the mystical extravagances of Zinzendorf, with which his simple, practical, and healthy nature was out of sympathy. The second thirty years of his work (1762-92) were devoted to the consolidation of the German Moravian Church. Zinzendorf’s death (1760) had left room and need for his labours at home. At Herrnhut there were conflicting tendencies, doctrinal and practical extravagances, and the organization of the brethren was very defective. Spangenberg proved him­self to be the man required. In 1777 he was commis­sioned to draw up an *idea fidei fratrum,* or compendium of the Christian faith of the United Brethren, which was published two years afterwards and became the accepted declaration of the Moravian belief. As compared with