

SCHWÄRTZER (SEBALD). *Continued.*

This book—from the MS. begun by Schwärtzer himself on St. Michael's day, 1584—was edited, in part at least, by Tutschky (see p. 87). Kell says

Metallverwandlungskünste.

See SCHRODER (FRIEDRICH JOSEF WILHELM), *Neue Alchymistische Bibliothek*, 1772, I. ii. p. 1.

The biographical notices of Sebald, or Sebalt, Schwärtzer, or Schwertzer (in the *Beytrag* he is also called incorrectly Sebastian), are imperfect, and do not quite tally with one another.

According to the older accounts he was a German by birth, who, at quite an early age, engaged in alchemical pursuits and travelled far and wide to meet other alchemists and gather knowledge and experience and make display of his art. He had some material by which he effected his so-called transmutations and which passed for the 'stone.' The 'stone,' according to one story, was not made by himself, but was his share of the plunder obtained by the murder of Sebastian Siebenfreund, in which he had a hand along with Thumeysser and others. This story is in itself doubtful; in one version his name is not even mentioned, and though the author of the *Fegfeuer* stigmatizes him as an assassin, Schmieder denies any participation of his in the outrage, and gives reasons in support of this position. Kell, who brings other specific charges against him of fraud and deception, makes no reference whatever to those of murder and robbery, and does not seem to be aware that they had ever been brought. One may assume that, if they had been as well known as the narratives would lead one to believe, Schwärtzer could never have occupied the position which he did, while those who had complaints against him, and were not disposed to let him off easily, would certainly not have allowed crimes like these to have lain hid had they existed.

The narrative, as given by Kunckel, states that in 1584 he came from Italy, appeared at Dresden at the court of Saxony, and on St. Michael's day delivered to the Elector Augustus an account of transmutation in a manuscript written by himself, and requested permission to demonstrate his ability by an experiment. On 5 May, 1585, the experiment was performed, when three marks of mercury were transmuted into gold, and the Elector gave the Countess of Hallach who was present, a portion (3 loth) of the gold. When the Elector died he is said to have left in the treasury seventeen millions rixdollars, and it was believed by Kunckel and others that they were the product of nine months' operations by Schwärtzer, and to this sum the next Elector, Christian, added several millions in gold. At his death Duke Frederick William carried on the government as regent, and it was in consequence of his treatment of Schwärtzer that the latter left Dresden and went to Prague, to the Emperor Rudolph, who was a great patron of alchemists.

This narrative of Kunckel's was challenged by Wiegleb who tried to show that the accumulations probably came from the royalty on certain mines and that the transmutations which Schwärtzer appeared to effect were deceptions in which real gold was employed. Wiegleb, in turn was criticised by Kortum, who has a good deal to say in Kunckel's support and defence, and who further tells us that Schwärtzer learned his alchemy in Florence and in Venice, and especially from a Dr. Puti. There is no reference by him to the Siebenfreund tragedy.

that it differs from the MS, in important points. Anyhow Schwärtzer's and Kunckel's dates do not quite agree.

More recent examination of the archives has enabled Kell to give a fuller account of Schwärtzer's life at the court at Dresden than had previously appeared, which, while in certain points it differs materially from the earlier notices, is entirely silent as to where and how and from whom Schwärtzer acquired his knowledge of alchemy.

According to Kell's report Schwärtzer had been for many years the factor or agent for a certain Johann Machnitzky in Olmütz, and in 1584 was carrying on business in Nürnberg in velvet, silk, fine linen, cloth, fur, ornaments, wine, and all sorts of foreign food stuffs, which he supplied to the Elector's court at Dresden. Some ore having been delivered to him in part payment, the treasurer, Gregor Schilling, showed him the store of bullion which had been accumulated. The question having thereupon arisen as to the Elector's attitude towards alchemy, and Schilling having expressed his own disbelief in it, Schwärtzer took the opportunity of converting mercury into silver by a grey powder which he had, much to the other's bewilderment, and by means of a red powder into gold. In a couple of days the affair had come to the Elector's ears, and Schwärtzer had to appear at the court and was solicited to give up the powder and explain the process. He, however, affirmed that he had no more with him at that time, and would require to go to Nürnberg for it, as well as to transact some business. On his return to Dresden some little time afterwards Schwärtzer gave the Elector some of the grey powder and his wife some of the red, and after due heating of mercury, gold and silver were poured out of the respective crucibles.

Schwärtzer was now pressed by the Elector to take up his abode at the court. He pleaded, however, that his business would be ruined by his neglect of it, but finally agreed to the proposal when he had wound up his affairs and was cleared of his various obligations by the Elector. Accordingly on 20 Sept., 1584, he was formally appointed the Elector's factor, with a salary of 1200 florins, but in the patent of his appointment there is no more than a hint of the occult art.

After his appointment he tried to get the tin mines by gradual purchases into the hands of the Elector, so as to create a monopoly. The attempt had been made before, but had not succeeded and the Elector was advised in the present case to leave the owners free and be content with his royalty, which advice he followed. With more effect he urged that to get over the confusion which had grown up in the Mansfeld works they should be placed under the single control of the Elector, and he also made an effort to improve the position of the linen industry, to introduce weavers from the Low Countries for the manufacture of velvet, silk, and fine cloth, and to check the outflow of the coinage to foreign countries.

But even more by his alchemical performances, in which the Elector thoroughly believed, than by these schemes Schwärtzer gained the Elector's confidence. Several were exhibited, and in May, 1585, that which is referred to by Kunckel took place.

SCHWÄRTZER (SEBALD). *Continued.*

After this the court removed to Annaberg, where, as Kunckel tells us, were the great laboratories the experiments were continued, and, it is said Johann Georg of Brandenburg came to be instructed in the process.

Doubts, however, were beginning to arise about Schwärtzer's probity; for at Frankfurt, during the fair, a report was issued by a certain Valten Glezsch that Schwärtzer had palmed off upon the Elector stolen gold, as if he had made it himself, and for that reason was in prison in the Hohenstein. The man was apprehended and tried for this defamation, but nothing could be proven, and he got off. The affair did not affect the relations of Schwärtzer to the Elector or shake the confidence which was reposed in him. On the contrary, he made every effort to free Schwärtzer from his obligations as a Burgess of Nürnberg, so as to attach him entirely to his services. Augustus the Elector died 11 Feb., 1586, and although his successor Christian I., was not so favourably disposed towards Schwärtzer, he nevertheless reappointed him as factor by a decree dated 6 Feb., 1587. He subsequently showed him goodwill, and exerted himself to bring to a decision a law plea about debts which had been running for a considerable time between Schwärtzer and two Nürnberg merchants, Imhof and Welsler.

On 25 August, 1590, Schwärtzer gained the position for which he had been anxious, that of supreme manager of the Mansfeld copper-slate mines. They were in debt and confusion, the yield was gradually falling off, and the miners were clamorous for arrears of wages, but before he could make any improvement, the death of the Elector took place, and although he was continued in his position by the administrators of the electorate, he found the task of rehabilitating the mines was too great, and he resigned early in 1592. In July he was again in Dresden as factor of Sophia, the Elector's widow. When he was here an attempt to blackmail him was made by Machnitzky, who wrote to him, plainly accusing him of having made away with the two Electors by poison. Schwärtzer showed this minatory letter to the widow, Machnitzky was apprehended and lodged in the Hohenstein. He, however, laid his complaint before the Emperor Rudolph II., who interested himself in it, and the lawsuit raised by Schwärtzer in Dresden did not come to a decision, for by the Emperor's influence Machnitzky was liberated: 24 Feb., 1593.

'Complementum oder Ergänzung der Joachims-thalischen an Herrn Mathesii Sarepta angehenkten Kurtzen Chronica,' in Johann Mathesius, *Sarepta*, Leipzig, 1618, Ann. 1598.

Keren Happruch, . . . oder Teutsches Fegfeuer der Scheide-Kunst, 1702, pp. 102, 103, 122.

Kunckel, *Laboratorium Chymicum*. 1716, p. 586;

1767, pp. 541, 594, 602.

Die Edelgebome Junger Alchimia, 1730, pp. 21, 28, 33 (story of the murder).

Lenglet Dufresnoy, *Histoire de la Philosophie Hermétique*, 1742, iii. p. 296.

Fictuld, *Prober-Stein*, 1753, Th. ii. p. 127.

Wiegleb, *Historisch-kritische Untersuchung der Alchemie*, 1777, pp. 237, 247, 258, 274, 275, 276, 279, 290; 1793 *ibid.*

Baumer, *Bibliotheca Chemica*, 1782, p. 90.

Güldenfolk, *Sammlung von mehr als hundert wahrhaften Transmutationsgeschichten*, 1784, p. 136 (from Kunckel).

Betrag zur Geschichte der Höhem Chemie, pp. 9235, 244, 257, 492.

and went to Prague. In the meantime, however, Schwärtzer had resigned his connection with the Electoral service, and had also placed himself at the disposal of the Emperor, and was appointed by him Imperial mining captain in Joachimsthal 19 Aug., 1592. The cause of this sudden change of masters was due, according to Kunckel to the treatment he had received from the Administrator after the death of the Elector Christian, but Kell has brought forward certain facts to show that Kunckel's explanation is untenable, and that it is more likely that Schwärtzer was not certain what revelations, damaging to himself and his prospects might not be made at Machnitzky's trial. Besides, he knew that the Emperor was keenly interested in alchemy and its adepts, whereas it was no longer of account at Dresden, and his reception and promotion so far justified his action.

After his departure his accounts were overhauled, an arrest was put on his house and goods, and he was summoned to Dresden. By the influence of Sophia he obtained a postponement of the examination, and then laid his case before the Emperor, and showed that the charges of maladministration had been trumped up by his enemies. Various attempts were made to get him to Dresden, which he contrived to evade, and though the evidence against him was very strong and his transactions in Joachimsthal were beginning to be suspected, the matter never came to a trial, for his death took place 7 January, 1598. He is said to have been made a noble by the Emperor.

Schwärtzer seems to have been able, by his skill and power of persuasion, to gain confidence, but he was not straightforward in his business transactions and official intrusions, as appears from the lawsuits he had and his reluctance to face the examination of his accounts.

His reputed transmutations, of which Kell has given a description, seem to have been effected by preparations of the precious metals themselves, for his so-called 'red tincture,' judging by the mode of its formation, was mainly composed of iron, though it may possibly have contained a trace of gold. It may, therefore, not have been without foundation the report which was raised at the Frankfurt fair about the deception he had played upon Augustus, and the great treasure which was found after the death of the Electors must have been derived from some other source than Schwärtzer's nine months' labours to which it was enthusiastically ascribed by Kunckel.

Kortum verteidiget die Alchimie, 1789, pp. 125-155.

Taschenbuch für Alchemisten, 1790, pp. 198-200. Gmelin, *Geschichte der Chemie*, 1797, i. pp. 258, 259, 263, 294, 295.

Murr, *Litterarische Nachrichten zu der Geschichte des sogenannten Goldmachens*, 1805, pp. 50-52.

Schmieder, *Geschichte der Alchemie*, 1832, p. 316.

Hoefler, *Histoire de la Chimie*, 1843, ii. p. 125; 1869, ii. p. 120.

Ladrague, *Bibliothèque Ouaroff, Sciences Secrètes*, 1870, No. 1316.

Richard Kell, *Sebald Schwertzer als Kursächsischer Faktor und Kaiserlicher Berghauptmann Dissertation*, Leipzig, 1881, 8°, pp. 80.

A. Bauer, *Chemie und Alchemie in Österreich bis zum beginnenden XIX. Jahrhundert*, Wien, 1883, pp. 29, 30, 41.

Kopp, *Die Alchemie*, 1886, i. pp. 127, 194, 214; II. p. 344.

Allgemeine Deutsche Biographie, 1891, xxxiii. p. 436 (article by H. A. Lier, mainly from Kell).

SCHWARTZBURGICUS (JULIUS GERVASIUS).

See GERVASIUS (JULIUS).

SCHWARTZENWALD (JOANNES VALENTINUS VON).

Epistola Novi Præservativi Universalis Naturalis. Nunciatoria criminis læsæ Majestatis læsæque graviter famæ vindicatoria ad prænobilem et excellentissimum Dominum Jacobum, Joannenn, Wenceslaum Dobrzensky De Nigro Ponte, Philosophiæ & Medicinæ Doctorem, ejusdemque in Alma Cæsarea Regiaque Universitate Carolo-Ferdinanda Pragensi Professore extra ordinarium, Dominum, Amicum & Patronum suum Colendissimum. Anno 1681.

No place or printer.

8°. Pp. [39, 1 blank].

He does not appear to be well known, and this book seems to have been all that he wrote. I have seen no mention of it but Mercklin's, copied by Langet. It was almost certainly printed at the University

press at Prague. The author signs his name at the end: Ioan. Valentinus von Schwartzen-Wald, M.D., and adds: Dabam è musæolo meo Phosphoroburgi ad Solis-Vicum 20. Oct. Anno 1681.

Mercklin, *Lindeniuss renovatus*, 1686, p. 695.

Manget, *Bibliotheca Scriptorum Medicorum*, 1731, II, ii, p. 337.

SCHWARTZFUS (ANONYMUS VON).

Das Blut der Natur, oder Entdeckung des allergeheimsten Schatzes derer Weisen, seyende nichts anders, als der rothe Lebens-Saft, davon alle Geschöpfe nach dem Willen des Allmächtigen herkommen, erhalten, und fortgepflanzt werden. Denen Kindern der Weisheit zum Besten hervorgegeben von Anonymus von Schwartzfus. Hamburg, gedruckt bey Georg König, 1706.

8°. Pp. 79 [misprinted 99] 1 blank.

Lehr-Sätze eines unvergleichlichen Philosophi von der Weisheit und Chymie, denen Geheimnüs-Begierigen zu betrachten Zum andernmahl auf vieler Liebhaber Anhalten vermehret und ans Licht gebracht durch Anonymum von Schwartzfus. Hamburg, gedruckt bey Georg König, an der alten St. Michaelis Kirche, im Jahr 1706.

8°. Pp. 64.

Brunnen der Weisheit und Erkänntnifs der Natur, aus welchem die, nach denen Geheimnissen der Natur durstenden Liebhaber das wahre Wasser der Weisen nach Vergnügen schöpfen können; Von einem unvergleichlichen Philosophus gegraben, und geöffnet durch Anonymum von Schwartzfus. Frankfurt und Leipzig, bey Johann Georg Efslinger. 1767.

8°. Pp. 47 (including the frontispiece) [1 blank]. The tailpiece is the owl with spectacles sitting between two lighted candles and holding two burning torches crossed in front.

See FÜNF Curieuse Chymische Tractätlein, 1767.

See HERMETISCHES A. B. C., 1779, iii, p. 218.

SCHWARTZFUS (ANONYMUS VON). *Continued.*

Das Blut der Natur, oder Entdeckung des Allergeheimsten Schatzes der Weisen, seyende nichts anders als der rothe Lebensfafft, davon alle Geschöpfe nach dem Willen des Allmächtigen herkommen, erhalten, und fortgepflanzt werden. Denen Kindern der Weisheit zum Besten hervorgegeben von Anonymus von Schwartzfufs. Frankfurt und Leipzig, bey Johann Georg Efslinger. 1767.

8°. Pp. 79 (including the frontispiece), [1 blank].

See FÜNF Curieuse Chymische Tractätlein, 1767.

See HERMETISCHES A. B. C., 1779, iii, p. 225.

The two preceding tracts are also mentioned in the title of *Drey Curieuse Chymische Tractätlein*, 1706, (q.v.), as contained in that collection, but they are wanting in the actual copy. Though forming

Semler, *Unparteiische Samlungen zur Historie der Rosenkreuzer*, 1788, iii, p. 107.

two of the *Fünf . . . Tractätlein*, they have separate title pages, signatures and pagination.

Nothing seems to be known of this author, whose name is probably fictitious. Kopp does not mention the 'Lehr-Sätze,' but only the other two.

Ladrague, *Bibliothèque Ouvaroff, Sciences Secrètes*, 1870, Nos. 619-621, 1279-81, 1485-88.

Kopp, *Die Alchemie*, 1886, ii, pp. 319, 337, 391.

SCHWEIGHARDT (THEOPHILUS).

See FLORENTINUS DE VALENTIA.

See MÖGLING (DANIEL).

Lenglet Dufresnoy, *Histoire de la Philosophie Hermétique*, 1742, iii, p. 283.

Beitrag zur Geschichte der höhern Chemie, 1785, p. 603.

Semler, *Unparteiische Samlungen zur Historie der Rosenkreuzer*, 1787, ii, p. 75.

Gmelin, *Geschichte der Chemie*, 1797, i, p. 563 (quotes Schweighardt without any explanation).

Murr, *Über den wahren Ursprung der Rosenkreuzer und des Freymaurerordens*, 1803, pp. 42, 56.

Nicolai, *Einige Bemerkungen über den Ursprung und die Geschichte der Rosenkreuzer und Freymaurer*, 1806, p. 93.

Hoefler, *Histoire de la Chimie*, 1843, ii, p. 327; 1869, ii, p. 319.

Kloss, *Bibliographie der Freimaurerei*, 1844, p. 86, No. 2535.

Kopp, *Die Alchemie*, 1886, ii, p. 7.

SCHWEITZER (JOHANN FRIDERICH).

See HELVETIUS (JOANNES FRIDERICUS).

Under HELVETIUS the reference is given erroneously to vol. ii. instead of vol. i. of Haller's work.

Haller, *Bibliotheca Botanica*, 1771, i, p. 512.

SCHWERTZER (SEBALD).

See SCHWÄRTZER (SEBALD).

SCHWIMMER (JOHANN MICHAEL).

Tractatus Physicus in quo nobiliores ex Physica secretiori Curiositates exhibentur, non minüs utilissimæ, quàm jucundissimæ lectu, cum Indice Rerum duplici. Operâ M. Jo. Michaelis Schwimmer, Rudolphopolitani, Collegii Philosophici Jenensis Adjuncti. Jenæ, Apud Jo. Jac. Bauhofern, Bibliopolam. M.DC.LXXIII.

4°. Pp. [8] 256 [8]. On the title-page there is a vignette illustrative of Sympathy and Antipathy.

SCHWIMMER (JOHANN MICHAEL). *Continued.*

Another edition of this work is quoted: *Curiositates ex physica secretiori*, Jenæ 1672, 8°. The present edition contains fourteen dissertations dealing with the sympathy and antipathy supposed to exist throughout creation, animate and inanimate, and the author shows himself familiar with the literature of the subject, to which, indeed, this book is a convenient guide. The magnet, naturally, is discussed in this connection, and reference is made to William Gilbert, who is called 'Magneticae Philosophiae facile princeps,' and to his $\mu\alpha\kappa\rho\gamma\eta$

Zedler, *Universal Lexicon*, 1743, xxxvi. col. 500.
Jöcher, *Allgemeines Gelehrten-Lexicon*, 1751, iv. col. 419.
Haller, *Bibliotheca Botanica*, 1771, i. p. 565 (list of his works).

SCOPOLI (GIOVANNI ANTONIO).

Elementi di Chimica, e Farmacia di Gio. Antonio Scopoli C. di S. M. I. R. A. per gli affari delle Miniere, P. P. di Chimica, e Botanica nell' I. R. Università di Pavia ec. Nuova Edizione, divisa in due Tomi: alla quale si aggiungono le Tavole delle Chimiche Affinità del Sig. Bergman, e le Note del Sig. Giuseppe Mirone-Pasquali P. P. di Chimica, e Farmacia nella R. G. Università di Catania. Tomo I. Giovanni Riscica Negoziante di Libri Catania Nelle Stampe degli Etnei Per Franc. Pastore MDCCXC. (Con Approv.)

8°. Pp. [2] xvi, 197 [3 blank].

Tomo II. Pp. [23 250] [2 blank].

Metallurgische Beobachtungen.

See ALLGEMEIN nützliches chemisch-physikalisches Mancherlei, 1782, ii. p. 310.

Vom Schwefel und dessen Verhalten gegen die Metalle.

See ALLGEMEIN nützliches chemisch-physikalisches Mancherlei, 1781, i. p. 296.

Giovanni Antonio Scopoli was born at Cavalese in the Tyrol, (3) 13 June, 1723. His early education was obtained at Trent and Hall. He studied at Innsbruck, graduated doctor of medicine in 1743, and practised first in his native place. At Innsbruck he devoted himself to botany, although the subject was not then taught, and made excursions and collected such a number of specimens and arranged them so systematically that he meditated a history of the plants of his native country.

This idea was relinquished when in 1753 he went to Styria on the summons of Count Firmian, prince bishop of Seckau. After two years at this court he proceeded with the Count to Gratz and to Vienna, and having entered for the post of a district physician, passed the required examination.

The thesis he sustained on the occasion excited the admiration of Van Swieten, who procured for him the appointment of first physician to the Mines at Idria in Carniola, and to this was subsequently added the duty of instructing the mining students in metallurgical chemistry. His position here was however, rendered most uncomfortable by intrigues and jealousies, but he withdrew from intercourse with his colleagues, and turned for solace and

or Terella, which exhibited the magnetic virtue of the earth.

Schwimmer was Magister Philosophiæ and rector of the Rudolstadt Gymnasium, and published numerous works: *Physicalische Ergötlichkeiten*, Erfurt, 1701, 8°; *Frankf.*, 1705, 1706, 8°; *Physicalischer Zeit-Vertreiber*, Jena, 1676, 8°; *Physicalischer Lust-Garten*, Rudolstadt, 1690, 12°; *Quædam Naturæ miracula circa Vegetabilia*, Jenæ, 1673, 8°, &c., &c.

He died at Rudolstadt, in 1704.

Haller, *Bibliotheca Medicinæ practicae*, 1779, iii. pp. 264, 327.

Billings, *Index-Catalogue*, 1891, xii. p. 767. (The above book is the only one quoted. The publisher's name is written *Bautzofem*, an easily incurred mistake).

relaxation to botany, making numerous excursions in Carniola and gathering the material which he afterwards published in his 'Flora Carniolica.' On these journeys he made observations on the insect life, and embodied his results in his 'Entomologia Carniolica,' and a proof of the merit of his work is the high opinion of it expressed by Linnæus. He also undertook an examination of the mercury ores and published a book about them, Venice, 1761, included in which was an account of his treatment of the diseases to which the miners are liable. During this time he extended his botanical survey, with the intention of issuing a new edition of his 'Flora.'

Scopoli held this post for ten years, and in 1766, after repeated applications, he was named councillor of the Department of Mines and professor of mineralogy at Schemnitz, in succession to von Jacquin, who had been transferred to Vienna, as professor of botany and chemistry. Before this appointment came to him he had refused the offer of several others, one of these being to succeed J. G. Lehmann at St. Petersburg. At Schemnitz he had to relinquish his botanical studies, but he devoted himself ardently to the duties of his chair.

After spending some years at Schemnitz, during

SCOPOLI (GIOVANNI ANTONIO). *Continued*

which he was unwearied in exploring the mineral riches of Hungary, he was in 1776 appointed to the chair of botany and chemistry in Pavia, which was more to his liking. There he founded a botanic garden, built a chemical laboratory and enriched the museum with his own fine collection of minerals and made many journeys to collect specimens to complete it. It was his influence and example which stimulated the study of natural history in Lombardy, and he also brought about the reopening of the iron works at Cavarina.

In 1784 appeared his translation of the chemical dictionary of Macquer, which, from two volumes in the original, was extended to ten, by the additions which he made and the new articles he inserted.

Towards the end of his life he lost the sight of the right eye by his laborious microscopic investigations, and for fear of impairing the other he gave up writing; in consequence, one of his works,

Göttingische Anzeigen von Gelehrten Sachen, 1754, 1764, 1769, &c., &c. (reviews of various works by him).

E. G. Baldinger, *Biographien jetztlebender Aerzte und Naturforscher in und ausser Deutschland*, 1772, Bd. 1. (Stück 4, 1772), pp. 161-170.

Haller, *Bibliotheca Botanica*, 1772, ii. pp. 434, 705 (botanical works).

Haller, *Bibliotheca Anatomica*, 1777, ii. p. 496 (two anatomical tracts).

Ignaz v. Luca, *Das gelehrte Oesterreich*, 1778, I. ii. pp. 123-131 (and references).

Baumer, *Bibliotheca Chemica*, 1782, p. 47.

Meusel, *Das Gelehrte Teutschland, oder Lexikon der jetzt-lebenden Deutschen Schriftsteller*, 4th ed. 1784, iii. p. 514; Nachtrag, 1786, i. p. 602; 1787, ii. p. 353, 1788, iii. p. 335; 1791, iv. pp. 675, 858; 1795, V. ii. p. 318.

Carl Jos. Bouginé, *Handbuch der allgemeinen Litterargeschichte*, 1791, iv. pp. 682, 711 (a notice of him with a list of his chief writings, from Baldinger).

Gmelin, *Geschichte der Chemie*, 1798, ii. p. 462, &c., &c.

Reuss, *Repertorium commentationum*, 1803, iii. (*Chemia et Res Metallica*), p. 106.

Fuchs, *Repertorium der chemischen Litteratur*, 1806-08, pp. 343, 375, 387, 393, 399, 444.

SCOTUS (MICHAEL).

Libellus de Secretis Naturæ.

See ALBERTUS MAGNUS, De Secretis Mulierum, &c., 1669, p. 204

Almuchabota Ablegalim Alkakib Albaon, id est Compendium Magiæ innaturalis nigræ, continens Citationes et Vincula diversorum Spirituum.

See SAMMLUNG der größten Geheimnisse aufserordentlicher Menschen in alter Zeit.

Quæstio curiosa de Natura Solis et Lunæ.

See LACINIUS (JANUS), Pretiosa Margarita Novella, 1546, f. 195.

See THEATRUM CHEMICUM, 1660, v. p. 713.

Eine curiöse Frage von der Natur Solis und Lunæ.

See LACINIUS (JANUS), Pretiosa Margarita Novella, 1714, p. 451.

'Deliciae Floræ et Faunæ Insubricaæ,' remains unfinished. He spent eleven years at Pavia and died there 8 May, 1788.

His good nature rendered him confiding and somewhat credulous, and this, it is said, gave Spallanzani the opportunity of causing him acute mortification which disturbed his peace and may have shortened his life.

Scopoli was an outstanding botanist and chemist in the eighteenth century, was a member of many learned societies and carried on a large correspondence.

Besides his botanical writings he wrote several works on mineralogy, metallurgy, crystallography and his 'Fundamenta chemiæ,' Prague, 1777, 8°, Papiae, 1780, 8°; German translation, Vienna 1786, 8°, by Meidinger, who also translated his work on the mercury ores.

Hirsching, *Historisch-literarisches Handbuch berühmter und denkwürdiger Personen, welche in dem achtzehnten Jahrhundert gelebt haben*, 1809, XII. i. pp. 49-52.

Biographie Médicale, Paris, Panckoucke (1820-25), vii. p. 181.

Biographie Universelle, 1825, xli. p. 359; no date, xxxviii. p. 546.

Antonio Lombardi, *Storia della Letteratura Italiana*, Modena, 1828, ii. pp. 51, 112.

Sprengel, *Geschichte der Arzneykunde*, 1828, v. pp. 54, 61.

Hofer, *Histoire de la Chimie*, 1843, ii. p. 374, 1869, ii. p. 365.

Emilio de Tipaldo, *Biografia degli Italiani illustri . . . del secolo XVIII. e de' Contemporanei*, Venezia, 1844, ix. pp. 252-6 (by G. Chiappa).

Poggendorff, *Biographisch-literarisches Handwörterbuch*, 1863, ii. col. 880.

Nouvelle Biographie Générale, 1864, xliii. col. 635.

Von Wurzbach, *Biographisches Lexicon des Kaiserthums Oesterreich*, 1877, xxxiii., p. 210 (and references).

Dictionnaire Encyclopédique des Sciences Médicales, 3ème Série, 1880, viii. p. 34.

A. Bauer, *Chemie und Alchymie in Oesterreich*, 1883, p. 76.

SCOTUS (MICHAEL). *Continued.*

The actions of Michael Scot as a wizard of mighty power, which have given him a place in literature from Dante to the present time, and have kept him in popular remembrance for six or seven hundred years, may have helped to make of him a semi-mythical personage to obliterate the events of his life, and to obscure the real gifts and achievements on which his perverted renown has been based. Hence, there is more supposition, plausible perhaps, but still supposition, than well-established fact in the current biographies, but when one considers how very little information has been transmitted to us, and how those who might have had something to tell us have shown themselves adverse to him, there is nothing else to do but to eke out what little is certain by justifiable hypotheses and to explain away or refute the calumnious remarks of the older writers. This has been done very carefully by Wood Brown, and his account, based on original researches and manuscript authorities, is as complete, and altogether as satisfactory, as is likely to be got now, unless manuscripts at present unknown may hereafter throw unexpected light on some parts of his history.

Michael Scotus, Michael Scot, or Michael the Scot, was born in the south of Scotland, somewhere on the Border, in the latter part of the twelfth century. His early education was obtained probably at home, and while tradition asserts that he first went to Oxford, it seems quite certain that he passed over to Paris, and there acquired the highest possible reputation as master of the polite arts; grammar, rhetoric, logic, arithmetic, music, mathematics, and astronomy, which formed the substance of the curriculum in arts of the Scottish Universities till the close of the nineteenth century when it was finally ruined as a curriculum by the system of options. In the highest branches of study Michael was so distinguished that he was known as Michael the Mathematician, and, by his knowledge of the stars, gained fame as an astrologer. He seems also to have advanced to the study of theology, and to have graduated as doctor and taken orders. From Paris he went to Italy, and resided at Bologna, already famous as a school of law. Thence he went south to the court of Sicily to the Prince of Palermo, who afterwards became Frederick II., King of Sicily and Emperor of Germany, and from his earliest writings it has been inferred that he acted as tutor to the prince for some time. In Sicily he may have acquired knowledge of Greek and Arabic, he taught the prince mathematics, and wrote two books for him on astronomy. It is probable that the treatise entitled 'Physionomia,' and subsequently 'De Secretis' as above, which is dedicated to the Emperor, was written early in the year 1209, and was intended as a gift to the Emperor on the occasion of his marriage. After this event Michael set sail for Spain, and took up his residence at Toledo.

In Spain he remained about ten years, and continued his studies in branches of learning which discredited him ultimately with the orthodox, and may have given him his subsequent reputation as a magician.

Before he left Sicily, it is pretty certain that he was familiar with the Natural History of Aristotle, through an Arabic version and had adopted passages from it in his 'Physionomia,' but after settling in Toledo, where the works of Avicenna and others had been translated by an earlier band of Latin and oriental scholars, he made a full translation of Aristotle's treatises on Natural History from the Arabic, with the help of a Jew, and

his first version was finished probably towards the close of the year 1209. Another version by Scotus, known as the 'Abbreviatio Avicennæ,' has the date of its completion specified, namely 1210. There is even a third version, from the Greek, which has been also ascribed to him, not without good reasons.

Though engaged with these translations, he did not, however, neglect the subject which had given him his distinctive name. He continued to work at astronomy, and translated the work on the Sphere of Alpetrongi or Alpetragius. Manuscripts of this work in the Paris library, which happen to be dated, inform us that the translation was completed in 1217.

From Toledo Scot visited Cordova, which had been famous in the tenth century as the resort of Jewish scholars, and was the birth-place of Averroës, who, as the most distinguished expositor of Aristotle, was attracting much attention at the beginning of the thirteenth century. His doctrines, so far as they were known, had been denounced as unsound, but, in spite of that, his writings were eagerly studied, and a translation of them was entered upon by Scot, perhaps at the instigation of the Emperor, and certainly with his countenance and support. In this work he was assisted by two or three other scholars, along with a Jewish interpreter. He was called Alphagirus, and he worked along with Scot, and this is the person whom Roger Bacon designates Andrew, the Jew and whose work he says was appropriated by Scot. Wood Brown has vindicated Scot from this charge and has pointed out the analogy between this college of translators and their methods in the second decade of the thirteenth century with that which translated Avicenna a century earlier.

Scot returned to Sicily about 1220, bringing with him his translations for the Emperor. They had been condemned by the Church, and the author of them was a strongly suspected person. The translations, however, were not made public, and Scot, leaving these studies and returning to those which had first given him his fame, took once more his position as imperial astrologer, and produced new works on the same subject, among which was his Commentary on the 'Sphere' of Sacrobosco. This was printed at Bologna by Iustinianus de Ruberia, in the year 1495, small 4^o, ff. 40. He also engaged in a more thorough study of medicine, a subject which had occupied his attention from the days when he wrote his treatise 'physionomia.' He gained great renown as a practical physician, and there remains in manuscript a tract by him, 'De Urinis,' and an elaborate receipt for a pill, which exists in a manuscript in the British Museum, and a contracted form of which is contained in the first book of the first part of the Secrets of Alexis.

While Scot was acting as astrologer and physician of the Emperor, the latter endeavoured to procure for him some preferment in the Church. The attempt was not successful, and, it is thought, the disappointment caused thereby affected Michael to a great extent, and brought upon him that depression which found vent in the prophecies ascribed to him, referring not only to calamities coming on certain Italian cities, but to his own and the Emperor's death.

In 1229, after the rupture between the Emperor and the Pope, the former thought it was now time both for his own credit and that of Michael's, to publish the translation of Averroës which had been so long kept back. A circular letter, setting forth his design in causing the translation to be made, was drawn up, and it was conveyed, probably by

SCOTUS (MICHAEL). *Continued.*

the hands of Michael himself, to the chief centres of learning, to Bologna and Paris certainly, for copies of it to these schools are extant Bacon states that in 1230 Michael Scotus made his appearance with books of Aristotle and commentaries thereon by learned men, so that it is reasonable to infer that Scot visited Oxford once more, and, though there is no positive evidence to support the supposition, it is possible that Scot not only continued his journey on to Scotland but ended his days there. It is noteworthy that there is no allusion to his death having occurred in Italy at any definite place, whereas tradition points to his having been buried at Melrose or Holme Cultram, not very far from the place of his birth.

He may have even lived long enough to impress his character of prophet and wizard upon the people, and to give rise to the legends about him, the scenes of which are located in or about the valley of the Tweed.

The only direct evidence that he was of Balwearie is that given by the author 'W.' (I presume P. F. Tytler) of the article in the 'Edinburgh Magazine,' 1820, vii. p. 104, note 'who says that the title of the Louvain edition, 1487, of the 'Physionomia' is: Michaelis Scoti de Balverie de Procuracione (sic) et Hominis Physionomia. This is probably the edition which Hain merely quotes under date 1484, and which has not been met with by his successors. There is a copy of it in the British Museum which I have inspected, but I have observed in it no allusion whatever to Balwearie.

Since he was alive in Oxford in 1230, and his death is alluded to by a writer in 1235, the date of the event is restricted to a narrow limit, and is as well defined as it is ever likely to be. Anyhow it is quite obvious that Michael the Scholar could not have been the Michael Scot of Balwearie, the ambassador to Norway in 1290, with whom he is identified by some of his biographers.

Of the works above mentioned, the 'Physionomia' was based partly on portions of Aristotle's works on animals, partly on the Secreta Secretorum and partly on works by Rhazes. It became very popular, and was widely circulated in manuscript, and was printed as early as 1477. Ten editions at least appeared in the fifteenth century, and the book was printed again and again in the sixteenth and seventeenth centuries. There are translations of it in French, German, Italian, and Polish, and though it was never turned into English, considerable sections of it have been embodied in that rather rare book, Hill's 'Physiognomy,' London, W. Jaggard, 1613, small 8^o, and in the 'Masterpiece' which has been popularly assigned to Aristotle. The book of secrets in Dutch, which goes under the name of Aalbert (*q.v.*), i.e. Albertus Magnus, also contains a number of Michael's propositions.

Dante, *Lo'nfemo (sic) e'l Purgatorio e'l Paradiso di Dante Alaghieri (sic)*, Aldus, Vinegia, 1515, f. 47 *recto* (canto xx.). (The commentators have notes on the passage about 'Michele Scotto': Grangier, Paris, 1697, p. 254, Cary, Bohn's edition London, 1850, p. (103), note 3, 'Philaethes,' Teubner, Leipzig, 1871, i. p. 151, Toynbee, *A Dictionary of Proper Names . . . in the works of Dante*, 1898, p. 382; and many others.)

Gesner, *Bibliotheca Universalis*, Tiguri, 1545, f. 513, a; 1574, ed. Simler, p. 506, a.

Bale, *Illustrium Maioris Britanniae Scriptorum Summarium*, 1548, f. 98; 1557-59, I. Cent. iv., No. lxxvii. pp. 351-352; II. Cent. xiv., No. lii. pp. 214-215.

Of these various editions I have described several in a paper on Scot read in 1877 to the Glasgow Archaeological Society (not yet printed), but the list then given was quite incomplete. Wood Brown speaks of eighteen editions quoted between 1477 and 1660, and he himself adds half-a-dozen to that number. This, however, falls short of the reality, for the printed editions and translations can hardly be fewer than fifty, if indeed they do not go beyond that number. Details of these editions will be given in my published paper. The treatise is in three books, each with an introduction. The first deals with generation, conception, and birth; the second with the signs of the complexions; the last with physiognomy proper, which professes to define and interpret the character and disposition from observation and comparison of the different parts of the body. Bruce has given a pretty full abstract of the contents.

The book of Magic, as has been argued by Wood Brown, is possibly a perversion of a work on algebra by Michael, if the first word of the title denote that art, the symbols having been converted into the magical signs or characters of demons. Brown has described a manuscript on vellum of this treatise in black, red, and green letters which have an oriental appearance, but which are not decipherable. The portion in Latin is what has been printed, and the manuscript is of the seventh century. I have seen another manuscript of exactly the same kind in Lord Crawford's library at Haigh Hall.

The printed copy above bears date: Pragae in Bohemia. Pridie Id. Febr. MDXLI., but whether that refers to the date of the first printed edition or not I cannot say. It cannot denote the place where or the time when it was written, unless it was a fabrication assigned to Scotus.

It is not unlikely, however, that when Michael Scot was at Toledo, he would not let slip the opportunity of learning what he could of the magic for which that city of all others was most distinguished. Doubtless it embraced what was afterwards known as natural magic or experimental physics and juggling, as well as black magic strictly so called, involving the invocation of the infernal powers.

There, too, he experimented in alchemy, for it was in Spain, to which it had been brought by the Arabs, that the art first found a place in Europe. He wrote certain treatises on the subject: Liber Magistri Miccaelis Scoti in quo continetur Magisterium, a compilation or the translation of a book called Liber Luminis Luminum, and a work De Alchimia. All these presumably genuine tracts remain in manuscript, but they have been considered in some detail by Wood Brown.

The 'Quaestio Curiosa,' above mentioned, which is generally ascribed to Scot, is not really by him, as may be inferred from its style and contents,

Joannes Picus, *Mirandulae . . . Comes, 'Disputationes in Astrologiam,'* lib. VIII. c. vi.; lib. XIII. c. vii., *Opera omnia*, Basil., 1572, i. pp. 657, 729 (he calls Michael 'scriptorem nullius ponderis, multae uerò superstitionis').

Nazari, *Della Tramutazione Metallica Sogni tre*, 1599, p. 141.

Delrio, *Disquisitiones Magicae*, 1603, ii. p. 202 (quotes Michael Scotus as a writer on chiromancy, but not on physiognomy).

Juan. Matthæus Lumensis, *Libellus de Rerum Inventoribus*, 1613, p. 44 (Michael's 'Cervilerium,' or iron skull-cap).

Maier, *Symbola Aureae Mensae*, 1617, p. 481.