

## A sample of 18th century networking: an unpublished letter of Ignaz von Born to Johann Beckmann from 1775

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**Abstract** – A hitherto unpublished letter of Ignaz von Born (1742–1791), dated November 26, 1775, is found in the Collection of Letters of the Manuscript Collection of the National Széchényi Library, Budapest. The recipient of the letter was undoubtedly Johann Beckmann (1739–1811), professor of the Göttingen University. This valuable document gives an insight into the relatively less known period of life of Born that he spent in retirement at Altdedlitz / Staré Sedliště, his estate in Bohemia. The letter discloses some details about his everyday life, correspondence, visitors, publication and research activity, travels, etc. With 1 figure.

**Key words** – biography, enlightenment, Göttingen University, Ignaz von Born, Johann Beckmann, scientific correspondence

### INTRODUCTION

Ignaz von Born (1742–1791) was a prominent person of science, first of all mining and earth science, of the late 18th century Habsburg Empire. In addition to papers and separate works on mining, metallurgy and mineralogy (in broad sense), he published a major book in malacology as well. Beyond his publication activities, he took an important part in the organisation of the scientific life of Bohemia (1772–1776), then Austria (from 1776 till his death). As FLÜGEL (2009) concludes, Born “was the centre of the mineralogical network of the [Habsburg] Monarchy”. He was (a sometimes anonymous) author of Masonic essays and satiric pamphlets, as well. Ignaz von Born was a prominent freemason, a leading figure of the intellectual life of Vienna during the Josephinist era and an acquaintance of Mozart. The composer dedicated the cantata “Die Maurerfreude”, K 471 to Born. According to widespread speculations, Born might have served as model for Sarastro in Mozart’s *Magic flute* (see e.g. WHITTAKER 1998, and references therein).

The life, work and personality of Born attracted many historians of science and culture; he was subject of several theses and books (e.g. ZELLWEKER 1953, HOFER 1955, LINDNER 1986, REINALTER 1991 etc.). Only a fragment of his ob-

viously abundant correspondence, however, is known, although a more thorough knowledge of Born's letters would evidently help to remove the blank spots from his biography and would lead to a better understanding of his complex personality. Most of the known letters of Born are found only dispersed in different collections (e.g. the correspondence of Banks, Bergman, Linné etc.), the only exceptions are (1) the volume edited by BERAN (1971), which contains the annotated correspondence of Born with the two Schreber professors (Daniel Gottfried,



**Fig. 1.** Ignaz von Born (1742–1791), copper etching by Jacob Adam after a painting of Mrs Beyer, née Gabriele Bertrand

professor of economy, public finance and administration in Leipzig and his son, Johann Christian Daniel, professor of *Materia medica* in Erlangen), (2) the paper of RIEDL-DORN (1987) containing several letters of Born written to Nikolaus Joseph von Jacquin and (3) the collection of letters of Austrian “mineralogists” published by FLÜGEL (2009), which, in addition to several letters of Born, includes a table with the known correspondents of Born. Bibliographical data of nine items with 13 letters, mostly those published during his lifetime, are also listed in MOLNÁR & WEISS (1986). The letter published in this paper is found in the Collection of Letters of the Manuscript Collection of the National Széchényi Library, Budapest under the label catalogue heading “Ignác Born to unknown”.

#### TRANSLITERATED TEXT OF THE LETTER

Literal transliteration. Ligatures and omissions are written out in square brackets, e.g. u[nd]. Typical departures from present-day German orthography: “dt” for “t” (e.g. Todt), “k” for “ck” (e.g. glücklich), “ne” for “ene” and “re” for “ere” at word endings (e.g. unsre, verschiedne), “qw” for “qu” (e.g. beqwemer), “th” for “t” (e.g. Antheil), “y” for “i” (e.g. zwey), “z” for “tz” (e.g. besizen).

Texts in italics are remarks of the addressee within the text of the letter, remarks of the addressee written on the bottom of the pages are given at the end of the letter.

Altzedlitsch<sup>1</sup> d[en] 26 Nov.

775

d[en] 10 Dec. 75

Hochedelgebohrner  
Hochzuverehrender Herr Professor

Werden Sie mir wohl verzeihen, dass ich Ihnen seit dem 9[ten] April ein Antwort auf ihren schätzbaren Brief schuldig bin? Fast hätten Sie dem Gerüchte glauben sollen, welches meinen Todt in den Zeitungen ankündigte, so gross ist meine Nachlässigkeit. Aber es wahr auch nicht ganz Nachlässigkeit. Erstnach meiner Rückkunft von Wien fand ich ihren Brief vom April, und in Wien war ich fast fünf Monathe. Meine Reise, die ich von dort aus nach Siebenbürgen antretten sollte, ward von einer Woche auf die andre verschoben, endlich musste ich mich entschliessen, solche bis auf kommendes Frühjahr zu verscharren wo ich zugleich eine Reise nach dem österreichischen Antheil in Pohlen damit verbinden soll. Indessen habe ich in Wien verschiedne ungarische Mineralien gesammelt, wovon ein Theil allzeit für Euer Hochedl[gebohren] bestimmt ware. Nun erwarte ich täglich den Prof. Adolph Murray<sup>2</sup> aus Upsal<sup>3</sup>, einen würdigen Bruder ihres zwey Göttings[chen] berühmten Murraye<sup>2</sup>. Dieser wird mich auf meinem Guthe besuchen, u[nd] er soll zugleich das Kästchen für Sie mit nach Göttingen nehmen. Wäre es nicht so schwer <Page 2> Sachen aus Böhmen nach Göttingen zu senden, so sollte es mir leicht werden, Ihnen das, was wir vorzügliches von Mineralien besizen, mitzutheilen. Weit beqwemer wäre es wenn Sie irgend einem Spediteur in Nürnberg mir anweisen könnten, wohin ich fast jede Woche Gelegenheit habe. *Wangl [?] Adresse für mich in Nürnberg.*

Noch bin ich Ihnen auch der rühmlichsten Erinnerung wegen, die Sie von mir in dem Göttinger Anzeigen<sup>4</sup> gemacht haben, den ergebensten Dank schuldig. Legen Sie ja die zu hohe Idee,

die Sie von meinen Kenntnissen zu hegen scheinen, ab. Ich bin immer noch ein Anfänger, der aber sehr viele Wiss u[nd] Lehrbegierde besitzt. Ihre Schriften besitze ich alle, besonders dirjenig, welche in die Landwirthschaft einschlagen, in welchen Sache ich ein[en] ziemlich guten Theil der besten Bücher gesammelt habe – denn ich baue selbst Getreid, hege Waldungen, habe viele Früchte, eine beträchtliche Menge Schaafe, eine nicht kleine Viehzucht, Wiesen, u.s.w.

Gerle<sup>5</sup> wird Ihnen meinen Indicem fossilium<sup>6</sup> wohl nebst den 1sten Theil der Abhandl[ungen] einer Privatgesellschaft in Böhmen<sup>7</sup> überschikt haben. Zu Ostern erscheint der 2te Theil, wo Sie eine Abhandl[ung] über die Topas der Alten<sup>8</sup> lesen werden, die ich mit <Page 3> fleisse ausgearbeitet habe, um zu sehen, ob mir unsre Kunstrichter Kräfte genung zu trauen werden, mit meiner Minerologie der Alten aufzutreten. Im Gegentheile werde ich meine Bemerkung aus den neuesten Reisebeschreibungen<sup>9</sup> in einem eigenen Werke fortsetzen. Eine andre Abhandl[ung] über die sächsischen Topasfelsen<sup>10</sup> habe ich izt unter die Presse gegeben. Wenn ich noch Musse genung finde, so soll[en] auch zu Ostern Briefe über der Salzburgischen<sup>11</sup> u[nd] Bayrischen Salzwerke erschein[en] die ein junges Mensch<sup>12</sup> an mich geschrieben hat. Mit dem 1sten Theil meines Indicis critici werde ich zum neuen Jahre fertig. Er wird aber in London gedruckt, u[nd] daher weiss ich noch nicht, wenn er unter das Publikum kömmt.

Deliusens<sup>13</sup> Recension in ihrer physikalischen Bibliothek<sup>14</sup> habe ich noch nicht gelesen. Alles, was die praktischen Gegenstände betrifft, ist richtig u[nd] wahr. Aber an Theorie fehlt es oft. Ich weiss nicht, warum er bey der Beschreibung der Maschinen nichts Podas Arbeit vom ungarischen Maschinenwesen<sup>15</sup> genützt hat. Die Theorie der Gebirge ist ganz falsch. Das Werk ward auf Kosten des Hofes gedruckt, u[nd] Trattner<sup>16</sup> sollte es nicht theurer als für 6 Fl[orin] verkaufen. Trattner aber hält nie Wort.

Danken Sie in meinem Nahmen dem H[errn] Prof Less<sup>17</sup>, der mir lezthin durch H[err] Steuereinnehmer Weisse<sup>18</sup> ein Päckchen mit Pflanzen überschikt hat, das ihme <Page 4> H[err] Segviers<sup>19</sup> zu Nismes<sup>20</sup> für mich mitgegeben hat. Was für ein Vergnügen muss es seyn in Göttingen zu studiren, wo man so viele grosse Männer hat, die man bey jedem Anstande zu Rathe ziehen, u[nd] eine so fürtreffliche Bibliothek, die man täglich nützen kann. Wäre ich nicht verehliget, ich würde auf ein paar Jahre dahin ziehen, u[nd] Michaelis<sup>21</sup>, Haine<sup>22</sup>, Kästners<sup>23</sup>, Bekmanns<sup>24</sup> und Erxlebens<sup>25</sup> Schüler werden. *Aber die Cabale des Brodneids wurde es unmöglich machen, zugleich ein Freund aller genanten Männer zu seyn.*

Unser Freund Ferber<sup>26</sup> wird zu Ostern eine Beschreibung der Pfälzischen Qweksilberwerke<sup>27</sup>, u[nd] der Bergwerke zu Derbyschire in Engelland<sup>28</sup> druken lassen.

Sagen Sie mir doch, wie es möglich ist, dass ein einziger Mann – wie Haller<sup>29</sup> ist, so vielerley Gegenstände und alle so glücklich unternehmen kann. Botaniker, Anatomiker, Dichter, Historiker, Romanenschreiber, Vertheidiger der Religion, Staatsmann, Oekonom, Litterator, u[nd] alles in einem so hohen Grade. Wenn ich an ihn denke so geht es mir wie Caesare, der weinte, als er Alexanders Statue sahe. Mit dem Unterschiede, dass ich nicht einmal Caesar bin, u[nd] Haller in meinem Augen unzähligemal schätzbarer ist, als der Menschenwürger Alexander. Doch ich fange an zu schwätzen. Ein Glük für Sie dass das Blatt zu Ende ist. Gönnen Sie mir ihre Freundschaft. Ich bin unaufhörlich

Ihr ergebenster Freund  
Born [mp]

### Marginal notes of the recipient

#### Page 1

*Will mir durch H[errn] Murrai Mineralien senden.  
Reiset in Frühjahr nach 7bürgen u[nd] Pohlen*

## Page 2

Vom 2ten Theile d[er] Böhmischen Gesellschaft

## Page 3

Lässt Abhandl[ung] von Sächsischen Topasfelsen drucken

auch von Bayrischen Salzwerken

Sein Index criticus wird in London gedruckt

Von Delius Bergbauwissenschaft in 4.

## Page 4

Ferber

## NOTES

<sup>1</sup> Staré Sedliště (Czech Republic).

<sup>2</sup> Murray: Three of the four Murray brothers are mentioned. Adolf (Adolph) M. (1751 Stockholm, Sweden – 1803 Uppsala, Sweden), anatomist. Professor of anatomy and surgery at Uppsala University from 1774. Two “two famous Murray from Göttingen” are: Johann Andreas (Anders) M. (1740 Stockholm, Sweden – 1791 Göttingen, Hanover) physician and botanist, extraordinary (from 1764), then (from 1769) ordinary professor of medicine and botany at Göttingen University, director of the botanical garden (from 1764); and Johann Philipp M. (1726 Schleswig, Denmark – 1776 Göttingen, Hanover) historian, extraordinary (from 1755), then (from 1762) ordinary professor of philosophy at Göttingen University, secretary of the Royal Society of Sciences in Göttingen (1762–70).

<sup>3</sup> Uppsala (Sweden).

<sup>4</sup> *Göttingische Anzeigen von gelehrten Sachen* (until 1752: *Göttingische Zeitungen von gelehrten Sachen*, from 1802: *Göttingische Gelehrte Anzeigen*; 1739–1944 and 1953–) a review and literary magazine, since 1753 it has been published by the Royal Society of Sciences in Göttingen. It was edited by Albrecht von Haller (1747–1753), Johann David Michaelis (1753–1770) and Christian Gottlob Heyne (1770–1813). This is the oldest academic journal still published in the German language area.

<sup>5</sup> Gerle, Wolfgang (1744, Frankfurt am Main – 1828, Prague, Bohemia). Bookseller and publisher in Prague (1770–1792), a prominent publisher of scientific literature in the Josephine era. Gerle published several works of Born, e.g. *Index fossilium* and the two journals edited by Born.

<sup>6</sup> BORN I. VON 1772, 1775: *Lithophylacium Bornianum, sive Index Fossilium quae collegit, et in Classes ac Ordines disposuit Ignatius S.R.I. Eques a Born*. Vol. I (1772), Vol. II. (1775) – Gerle, Prague [= Prague], 157 pp., 148 pp.

<sup>7</sup> *Abhandlungen einer Privatgesellschaft in Böhmen zur Aufnahme der Mathematik, der vaterländischen Geschichte, und der Naturgeschichte*. Scientific journal of the “Böhmische Gelehrte Privatgesellschaft”, predecessor of the Academy of Sciences of the Czech Republic. The six volumes of the journal, published by Gerle in Prague between 1775–84, were edited by Born.

<sup>8</sup> BORN I. VON 1776: Versuch über den Topas der Alten und den Chrysolith des Plinius. – *Abhandlungen einer Privatgesellschaft in Böhmen 2*: 1–43.

<sup>9</sup> BORN I. VON 1775: Mineralogische Bemerkungen aus den neuesten Reisebeschreibungen gezogen. Erstes Stück. In: P. S. Pallas: Reise durch verschiedene Provinzen des russisches Reichs. – *Abhandlungen einer Privatgesellschaft in Böhmen 1*: 264–358.

<sup>10</sup> KERN J. G. 1776: *Vom Schneckensteine oder dem sächsischen Topasfelsen*. – Gerle, Prag [= Prague], 49 pp.

<sup>11</sup> Lenoble von Edlersberg J. 1777: Schreiben über die Bearbeitung des Salzstockes zu Hallein im Salzburgischen von Joseph Le Noble von Edlersberg, an Ignaz von Born. – *Abhandlungen einer Privatgesellschaft in Böhmen* 3: 313–348.

<sup>12</sup> Lenoble von Edlersberg, Josef (1749 – 1823 Gmunden, Upper Austria), salt officer at the salt mines of the Imperial and Royal Treasury.

<sup>13</sup> Delius, Christoph Traugott (1728 Wallhausen, Saxony-Anhalt – 1779 Florence), outstanding expert of science and art of mining. Following his studies at the Mining School of Schemnitz / Selmecbánya in Hungary (now Banská Štiavnica, Slovakia), 1751–53, he was employed in the mines near Schemnitz, then from 1756 in the mines in Banat (SE Hungary, now Romania). Professor of mining at the Mining Academy of Schemnitz (1770–1772), then senior officer of the Court Chamber for Coinage and Mining in Vienna.

<sup>14</sup> *Physikalisch-ökonomische Bibliothek, worinn von den neuesten Büchern, welche die Naturgeschichte, Naturlehre, und die Land- und Stadtwirthschaft betreffen, zuverlässige und vollständige Nachrichten ertheilet werden*, a quarterly periodical refereeing new books on natural history, natural philosophy, and rural and urban economy, edited by Johann Beckmann, published in 25 volumes between 1770–1808.

<sup>15</sup> PODA N. von 1771: *Kurzgefasste Beschreibung der, bey dem Bergbau zu Schemnitz in Nieder-Hungarn errichteten Maschinen*. – Gerle, Prag [= Prague], 80 pp.

<sup>16</sup> Trattner, Johann Thomas von (1717 Jormannsdorf [now part of Bad Tatzmannsdorf, Austria], Hungary – 1798 Vienna) publisher and bookseller, a real “self-made man” of the age. From a humble birth, he was raised to knighthood in 1764 and received Hungarian and Lower Austrian nobility. In addition to Vienna, he had printing office in several other towns of the Habsburg Empire (e.g. in Innsbruck, Linz, Pest, Triest, Varasd / Varaždin, Zagreb) and bookstore in major centres of book trading in Germany, e.g. in Frankfurt and Leipzig.

<sup>17</sup> Less, Gottfried (1736 Chojnice / Conitz, Polish Prussia – 1797 Hannover, Hanover), Lutheran theologian. extraordinary (from 1763), then (from 1765) ordinary professor of Lutheran theology at Göttingen University, dignitary of the Lutheran church in Hannover (from 1791).

<sup>18</sup> Weisse, Christian Felix (1726 Annaberg [now part of Annaberg-Buchholz], Saxony – 1804 Störteritz [now part of Leipzig], Saxony), writer and pedagogue. He studied philology and theology at the University of Leipzig (1745–1750). From 1761 district tax collector in Leipzig. Publisher of the *Bibliothek der schönen Wissenschaften*, later *Neue Bibliothek der schönen Wissenschaften und der freien Künste* (1759–1788).

<sup>19</sup> Séguier, Jean Francois (1703 Nîmes – 1784 Nîmes, France), archaeologist, natural history traveller, collector and scientist (best known as botanist). Between 1735–1755 he lived in Italy as scientific companion of Marquis Scipio Maffei.

<sup>20</sup> Nîmes (France).

<sup>21</sup> Michaelis, Johann David (1717 Halle, Prussia – 1791 Göttingen, Hanover), Lutheran theologian, orientalist. Extraordinary (from 1746), then (from 1750) ordinary professor of philosophy at Göttingen University.

<sup>22</sup> Heyne, Christian Gottlob (1729 Chemnitz, Saxony – 1812 Göttingen, Hanover), classical scholar and archaeologist. From 1763 professor of poetry and eloquence at Göttingen University, from 1764 director of the University Library, from 1770 secretary of the Royal Society of Sciences and editor of *Göttingische Anzeigen von gelehrten Sachen / Göttingische Gelehrte Anzeigen*.

<sup>23</sup> Kästner, Abraham Gotthelf (1719 Leipzig, Saxony – 1800 Göttingen, Hanover), mathematician and epigrammatist. From 1746 extraordinary professor at Leipzig University. From 1756 ordinary professor of physics and geometry at Göttingen University, from 1763 director of the observatory as well.

<sup>24</sup> Beckmann, Johann (1739 Hoya, Hanover – 1811 Göttingen, Hanover), founder of scientific technology, and one of the founders of agronomy. Between 1763–65 professor of natural history in the St. Peter Lutheran gymnasium in Saint Petersburg, Russia; from 1766 extraordinary professor of philosophy, from 1770 ordinary professor of economy at Göttingen University.

<sup>25</sup> Erxleben, Johann Christian Polykarp (1744 Quedlinburg, Brandenburg-Prussia – 1777 Göttingen, Hanover) naturalist, veterinary physician. From 1771 extraordinary, from 1775 ordinary professor of physics at Göttingen University.

<sup>26</sup> Ferber, Johan(n) Jacob (1743 Karlskrona, Sweden – 1790 Bern, Switzerland), geologist, mineralogist, expert of mining and metallurgy. He graduated from the Uppsala University as a student of Cronstedt and Linné. He became a member of the Swedish Board of Mines (in 1765). He took several study trips in Europe, including Hungary. From 1774 professor of physics and natural history at the Academic gymnasium in Mitau, Duchy of Courland and Semigallia (now Jelgava in Latvia), from 1783 professor of mineralogy in Saint Petersburg, then from 1786 chief councillor of mines in Prussia, finally, in 1789, he was invited to Switzerland as an advisor in mining.

<sup>27</sup> FERBER J. J. 1776: *Versuch einer Oryktographie von Derbyshire in Engeland*. – Hinz, Mietau [= Jelgava], 104 pp.

<sup>28</sup> FERBER J. J. 1776: *Bergmännische Nachrichten von den merkwürdigsten mineralischen Gegenden der Herzoglich-Zweybrückischen, Chur-Pfälzischen, Wild- und Rheingräflichen und Nassauischen Länder*. – Hinz, Mietau [= Jelgava], 94 pp.

<sup>29</sup> Haller, Albrecht von (1708 Bern – 1777 Bern, Switzerland), a polymath: physician (anatomist), botanist, naturalist, poet, and writer. After his studies in Tübingen, Leiden, and an academic tour to London, Oxford, Paris, Strasbourg and Basel, he had medical practice in Bern (1729–1736). Between 1736–1753 professor of anatomy, surgery and botany at Göttingen University, organizer of the botanical garden and the anatomical theatre, from 1747 editor of the *Göttingische Zeitungen von gelehrten Sachen* until its transformation into the *Göttingische Anzeigen von gelehrten Sachen* in 1753. Founding member of the Royal Society of Sciences in Göttingen (1751). In 1753 he returned to Bern and worked as high-rank civil servant.

#### THE “ACTIVE RETIREMENT” OF BORN

Partly for reasons of health and partly because of inequities suffered during his service at the Treasury, Born resigned his post of a mining councillor and retired to his estate at Altzedlitsch / Staré Sedliště in Bohemia (now Czech Republic) in 1772. He sometimes changed the tranquillity of Altzedlitsch for the eventful life of Prague or Vienna but his unstable health condition made him rather bound to his home. This letter gives us an example how Born was keeping his connections with fellow scientists across Europe through his extensive correspondence. Even after moving to Vienna in 1776, correspondence remained his most important means of communication with foreign scientists, as he has never travelled beyond the borders of the Habsburg Empire since then. His personal contacts were restricted to occasional encounters with foreign scientists, who travelled to the Habsburg Empire (e.g. with Adolph Murray, whose forthcoming visit was mentioned in this letter, he actually spent three weeks in February and March, 1776 at Born, see FLÜGEL 2009). The only but remarkable exception was the unique meeting at Glashütten / Szklenó in Lower Hungary (now

Sklené Teplice in Slovakia) in September 1786, considered one of the first scientific world conferences, where Born demonstrated his amalgamation procedure. In addition to local metallurgical experts, almost 30 foreign colleagues that received special permission to visit the mining and metallurgical facilities of the Habsburg Empire, gathered there and, among others, established the Society of Mining Sciences (Sozietät der Bergbaukunde), the first ever international scientific society (MOLNÁR & WEISS 1986).

#### IDENTIFICATION OF THE UNSPECIFIED RECIPIENT OF BORN'S LETTER

The content of the letter clearly indicated that its unknown recipient was a professor at Göttingen University, most probably one of those listed on the fourth page of the letter.

The note on economic and agricultural writings of the recipient suggested Johann Beckmann (1739–1811), professor of Göttingen University, as the unknown addressee.

The unambiguous proof of this assumption is Born's reference to the "physikalische Bibliothek" of the recipient (*in ihrer physikalischen Bibliothek*), which corresponds to the *Physikalisch-ökonomische Bibliothek*, edited by Johann Beckmann (see note 14).

An additional direct proof is the handwriting of the notes in red ink on the letter. We compared that handwriting with the handwriting of an original manuscript of Beckmann from the Collection of Letters of the National Széchényi Library, Budapest, and the similarity was obvious. (For the most important biographical data of Beckmann see note 24.)

Details of the connection between Born and Beckmann have been unexplored yet, but a fragment of a letter of 26 April, 1791 sent by Born to Beckmann and published by the latter in his *Physikalisch-ökonomische Bibliothek*, gives proof that the two scientists had been in correspondence till Born's death.

#### COMMENTS TO THE LETTER

Born did not waste too much ink to his private life, obviously Born and Beckmann were not intimate friends. Born, however, wrote about his plans concerning scientific journeys, writing and publishing of books, and gave reports about his and his friends' forthcoming books and expressed his opinion about fellow scientists and their work. Reading the letter we also can cast a glance into the intricate network by which minerals, books, manuscripts travelled up and down Europe.



In the opening paragraph of his letter, Born alludes to the rumours that spread in April 1775 on his death. He made humour from the false reports of his death in his other letters as well, e.g. he wrote a letter from “Elysium” to Aduact Voigt, his friend in Prague about his experiences from the other world (BORN 1792). It was at least the second occasion when rumours on Born’s death spread around. Following his accident in the Felsöbánya (now Baia Sprie, Romania) mine in August 1770, his arrival back to Schemnitz was preceded by the arrival of the false reports about his death.

The part discussing his plans for a journey in connection with his stay in Vienna is especially interesting for the Hungarian reader, because, with the exception of his famous study tour taken in 1770, we do not know much about his travels to Hungary and Transylvania. The intention for travel itself indicated that Born’s health conditions became better again at this time. As Born announced in this letter, in the spring of 1776 he set out for his Transylvanian travel postponed from 1775. As he wrote to D. G. Schreber on March 26, 1776 “Tomorrow I depart for Vienna, and from there for Transylvania”<sup>30</sup> (BERAN 1971). According to HAUBELT (1972), however, Born left Bohemia only in May. HAUBELT (1972) assumed that this travel was taken also for private purposes in addition to scientific interest. Considering Born’s shares in the Nagyág mines, Transylvania (now Săcărâmb, Romania), and in Galician mines (Poland / Ukraine, see HOFER 1955), this suggestion of Haubelt is very plausible. At the end of September, Born travelled to Tyrol, at the other end of the Habsburg Empire by the commission of the Treasury to examine the local salt production, and from Tyrol he travelled back via Carinthia and Styria. No wonder that he wrote on November 14, 1776 from Hall in Tyrol to Franz Benedikt Hermann that “I am truly the eternal Jew, since for half a year I have been wandering over both ends of the vast Austrian monarchy”<sup>31</sup> (FLÜGEL 2009). The correspondence with the two Schreber professors (BERAN 1971) gives us a good idea of Born’s extensive mineral exchange activities carried through his friends or through book salesmen. The next passage of the letter provides further data to the knowledge of this exchange network.

The “most honourable commemoration” acknowledged by Born might have been the anonymous laudatory reviews published in the *Göttingische Gelehrte Anzeigen*, May 7, 1774 (Nr. 55), pages 470–471<sup>32</sup> about Born’s letter on the volcano at Eger (Cheb, Czech Republic) to Count Kinsky (Schreiben an Franz Grafen

<sup>30</sup> Ich trette morgen meine Reise nach Wien und von da nach Siebenbürgen an.

<sup>31</sup> Ich bin in der Tat der ewige Jude; seit einem halben Jahr habe ich die beiden Enden der west-schichtigen österreichischen Monarchie durchwandert.

<sup>32</sup> A sentence from the review: “Der Herr von Born legt sich mit rühmlichen Eifer auf die Kenntniss der Natur, und zumal der Mineralogie”.

von Kinsky, über einen ausgebranntes Vulkan bei Eger. Prag, 1773) and in the *Zugabe zu den Göttingischen Gelehrten Anzeigen*, Sept. 10, 1774 (Nr. 34), pages CCLXXXIX–CCCXLIV<sup>33</sup>. The latter review was devoted to Born's travel letters (*Briefe über mineralogische Gegenstände auf seiner Reise durch das Temeswarer Bannat, Siebenbürgen, Ober- und Nieder-Hungarn, an den Herausgeber derselben, Johann Jacob Ferber ... geschrieben*. Frankfurt und Leipzig, 1774). Born noted that he had already collected most of the best books in agriculture. In this context it is worth mentioning that Born collected a significant library (DE LUCA 1776, PAPP 1993). The end of this paragraph gives an interesting insight into Born's little-known everyday life at Altdedlitzsch. In the estate that he had purchased in 1768, Born grew corn and forest, cultivated fruits, bred cattle, which was fed of the fodder from his meadows.

From the above-mentioned correspondence with the two Schrebers and from other letters of Born we know that he carried intensive book traffic in addition to mineral exchange. As Born noted in this letter, Wolfgang Gerle, his publisher in Prague, had already sent to Beckmann the first volume of the printed catalogue of Born's mineral collection (*Index fossilium*, 1772) and the first volume of the scientific periodical he published in Prague (*Abhandlungen einer Privatgesellschaft in Böhmen*, 1775). Then Born gave a report about his recent and forthcoming publications. Born had an excellent classical education, and in this time he had already been dealing with the mineralogy of the antiquity for years. "I have been working on a *Mineralogia veterum* for six years and I may spend another six years on it"<sup>34</sup> he wrote to D. G. Schreber in 1772 (BERAN 1971). The correct interpretation of the antique mineralogical texts was one of Born's favourite topics, as shown by a paragraph from his letter from "Elysium" to Voigt (BORN 1792): "As I'm back in the quiet grove of our ancestors, I make new acquaintance every day, and learn from Theophrastus, Pliny and others what they mean on their *androdamas*, nitre, Magnesian stone etc."<sup>35</sup>.

In addition to journals published by Born, Kern's study about the Schneckenstein topaz was already the third book that he published. Born mentioned the manuscript of this paper already in 1768 in a letter written to D. G. Schreber (BERAN 1971): "I have yet another manuscript in my bookcase, the author is also Mr. Kern, and perhaps no one has a copy of it except me. It is a treatise

<sup>33</sup> A sentence from the review: Dieses vortrefliche Werke enthält eine mit der grössten Aufmerksamkeit gemachte Reise eines kundiges Mannes.

<sup>34</sup> Ich arbeite schon durch 6 Jahre an einer Mineralogia veterum und werde wohl noch 6 Jahre damit zubringen.

<sup>35</sup> Nun bin ich wieder in der ruhigen Aue unserer Alten, mache täglich neue Bekanntschaft, und lerne von Theophrast, Plinius und anderen was sie mit ihren Androdamas, Nitrum, την μαγνησιον λιθον u.s.w. sagen wollten.

about the Saxon Topaz<sup>36</sup>. The “critical index” of his mineral collection, said to have been under preparation, unfortunately, remained unfinished. In the foreword to the second volume of his *Index fossilium*, published in 1775, Born characterised this never completed work as follows: “it would contain my observations taken from the single specimens, illustrating the formation and properties of non-metallic and ore minerals and the underground world<sup>37</sup>. Consequently, Born intended this index a treatise on mineralogy, since the *Index fossilium* is just a detailed inventory of Born’s mineral collection, as Born himself explained to D. G. Schreber on 14 November, 1771 (BERAN 1971): “In fact, it [the *Index fossilium*] is supposed to be only the forerunner of my *Lithophylacium*, to be issued later<sup>38</sup>. Eventually, the expression “*Lithophylacium Bornianum*”, presumably borrowed from the title of Edward Lhuyd’s *Lithophylacium Britannicum*, was printed on the title page of the second volume of Born’s *Index fossilium*. The printing was planned to be done in London as in 1774 Born sold his collection to Charles Francis Greville, British mineral collector, for 1000 pounds.

Born’s plan concerning the completion of the above mentioned two ambitious books were publicly known, e.g. DE LUCA (1776) noted in the section about Born in his *Das gelehrte Österreich*: “The mineralogy of the antiquity, the critical index of his earlier collection and the description of the Imperial and Royal Natural History Cabinet in Vienna is expected from him yet<sup>39</sup>. None of the two works have been completed at last, and only a single paper containing his mineralogical comments to the newest itineraries has been published, although the title of this paper ended as “erstes Stück” hinting at Born’s intention to continue it. This can obviously be explained by the end of the quiet years at Altzedlitsch. By the end of 1776 Born moved to Vienna, re-entered to government service as councillor of mines, took over the management of the natural history collection of the imperial and royal court, threw himself into the social and intellectual life of Vienna etc., later, in the last period prior to his untimely death, he was engaged in the improvement of the amalgamation process.

The most important work of Delius (*Anleitung zu der Bergbaukunst nach ihrer Theorie und Ausübung etc.* Trattner, Wien, 1773) was reviewed in 1775, in

<sup>36</sup> Ich habe noch ein andres Manuscript in meinem Bücherschränken aufbewahrt, das eben Hr. Kern zum Verfasser hat, und vielleicht ausser mir niemand besitzt. Es ist eine Abhandlung von denen sächsischen Topasen.

<sup>37</sup> Si Indicem criticum Lithophylacii hujus adornarem, qui observationes exhibeat, quas mihi circa singula fossilium specimina instituere licuit, & queis aut genesis & proprietas lapidum & metallorum, aut geographia subterranea illustrantur.

<sup>38</sup> Es soll eigentlich nur der Prodomus meines künftig auszugebendes Lithophylacii werden.

<sup>39</sup> Noch hat mahn ihm zu erwarten eine Mineralogie der Alten, einem kritischen Index seiner vormaligen Mineraliensammlung und die Beschreibung des k.k. Naturalienkabinetts zu Wien.

volume VI, number 3, pp. 315–325 of Beckmann’s journal. It is quite interesting to learn Born’s opinion about the celebrated book of Delius. According to Born “all that refers to the practical issues is correct and true, but the theory is often wrong”. Poda’s missed book on mining machinery was published by Born in 1771. The next comment of Born concerns part 1 of chapter 1 (*Von dem theoretischen Theile der unterirdischen Berggeographie, oder von der innen Kenntniss der Gebirge und der Lagerstätten der Mineralien*, pp. 1–88), introduced by Delius in the preface of his work as follows: “The system of the origin of the mountains, and of the veins, which I postulated in a brief paper several years ago, is found in the first sections of this work. It has been improved, explained and supported with reasons and I hope that learned and in the mines experienced naturalists won’t fail to approve it<sup>40</sup>. The “brief paper” mentioned by Delius, which had appeared “several years ago” was the *Abhandlung von dem Ursprunge der Gebürge darinn befindlichen Erzadern, oder der so genannten Gänge und Klüfte, ingleichen von der Vererzung der Metalle und indersonderheit des Goldes*. Leipzig, 1770. Its publication was originally initiated by Born, who sent the manuscript to Schreber from Schemnitz in February, 1770 (see in BERAN 1971). Born’s opinion on the paper of Delius might have been changed during his “mineralogical travel” to the Banat, Hungary and Transylvania. It seems impossible to find out Born’s objections against Delius’ work. Born was not a fundamental neptunist (KLEMUN 2007), but the neptunist approach of Delius was not really far from Born’s idea on the origin of the Hungarian and Transylvanian mountains that he expounded in the 21st letter in his *Briefe über mineralogische Gegenstände auf seiner Reise durch das Temeswarer Bannat, Siebenbürgen, Ober- und Nieder-Hungarn*.

Born concluded this paragraph with an indignant note on the high price of Delius’ book. Instead of the (according to Born) “fair” price of 6 florins, Trattner sold the book for 10 florins (MIHALOVITS 1937). Born’s acid remark on Trattner illustrates his low opinion of the official printer of the court. Born disliked Trattner’s reprinting activity and described it as a robbery in a letter to Trattner (GRÄFFER 1848). In accordance with this antipathy none of the books of Born was printed by Trattner.

The route of a consignment of plants, which arrived to Born from Nîmes via Göttingen with the help of two intermediates, described in the next paragraph of the letter, again demonstrates the operation of the intricate network that linked Born to erudite persons of Europe. In the first pages of his *Briefe*, Born noted that

<sup>40</sup> Das System von dem Ursprunge der Gebirge, und der Erztgänge, welches ich vor einigen Jahren in einer kleiner Schrift angenommen habe, ist in dem ersten Abschnitte dieses Werks verbessert, erläutert, und mit Gründen unterstützt: und ich hoffe, dass vernünftige und in dem Bergbaue erfahrene Naturkündiger demselben ihren Beyfall nicht versagen werden.

he was not involved in the science of botany, nevertheless he established a little botanical garden at Altszedlitsch. Due to the presents of his acquaintances, among them J. Ch. D. Schreber and P. S. Pallas, 550 species were found in the garden in 1773. "My garden is one of my pastimes now"<sup>41</sup> – Born wrote to J. Ch. D. Schreber (BERAN 1971).

One cannot find out whether the laudatory remarks on the professors of the Göttingen University were owing to politeness or to sincere admiration. We only know that in 1791 eleven books of the listed prominent professors were included in the auction catalogue of Born's library (ANONYMOUS 1791). This list of names of illustrious professors triggered an interesting personal remark of Beckmann: "But the fraudulence caused by professional jealousy would make it impossible to be a friend of all these men at the same time."

J. J. Ferber, Swedish-born expert of mineralogy, geology and mining, mentioned in the next paragraph, was one of Born's best friends. They may have got acquainted in 1768, during Ferber's visit to Bohemia. Born utilised their intimate friendship to circumvent the rule of official secrecy introduced in the Habsburg Empire for mining and metallurgy in 1772. This rule prohibited the publication of works of state-employed mining staff about mining and related sciences even after their resignation from the state service. Therefore, Born's account of his mineralogical journey to the Banat, Transylvania and Hungary was published by Ferber in the forms of (at least partly fictive) letters sent by Born to Ferber. Born himself admitted this trick in one of his letters to Daniel Gottfried Schreber (BERAN 1971). One year before, in 1773, it was Born who published Ferber's account of his travel to Italy in the form of letters (Ferber: *Briefe aus Wälschland über natürliche Merkwürdigkeiten dieses Landes an den Herausgeber derselben Ignatz Edlen von Born*. Prag). The description of the mercury mining of Idria in Carniola (now Idrija in Slovenia) was also published under the name of Ferber in 1774 (*Beschreibung des Quecksilber-Bergwercks zu Idria in Mittel-Craeyn*. Berlin). Again Born himself admitted his authorship in a private letter (BERAN 1971). Two other books on mining and mineralogy of Bohemia and Hungary (namely the *Beyträge zur Mineralgeschichte Böhmen*. Berlin, 1774, and the *Physikalisch-Metallurgische Abhandlung über die Gebirge und Bergwerke in Ungarn, nebst einer Beschreibung des Steirischen Eisenschmelzens und Stahlmachens von einem Ungenannten*. Berlin, 1780), which were published under the name of Ferber, may have been written partly or fully by Born. In the foreword of the latter book, however, Ferber reiterated long (and quite suspicious) affirmations that Born had not provided him the smallest help to the book. This volume also contains a brief study on Styrian iron metallurgy. This may also have been written by Born, since

<sup>41</sup> Mein Garten ist itzt eine meiner Ergötzungen.

the story told by Ferber in the foreword about “an anonymous manuscript” he had received is quite similar to the “cover story” produced by Ferber in the foreword of the book on mercury mining of Idria, based on Born’s manuscript (see above).

The panegyric of Albrecht von Haller may be considered as a continuation of Born’s earlier laudation of the Göttingen scholars. Haller was professor of the Göttingen University between 1736–53, and as organiser of the botanical garden, editor of the *Göttingischen Zeitungen von gelehrten Sachen* and first president of the Royal Society of Sciences left a lasting heritage there.

After the (self) ironic opening, Born closed his letter in the same way. Born liked to finish his letters in a playful or even humorous tone (see the last paragraphs of letters 7, 11, 13, 14, 15, and 18 in his *Briefe über mineralogische Gegenstände auf seiner Reise durch das Temeswarer Bannat, Siebenbürgen, Ober- und Nieder-Hungarn*). Born was famous for his wit and published satiric writings as well. The first of them was the *Staatsperücke* (in this satire a wig tells its story to its owner), which appeared in 1773, allegedly without Born’s knowledge and approval (DE LUCA 1776). The best example of Born’s sharp sarcasm is his anonymous (more exactly pseudonymous) *Monachologia*, a peculiar production of Born’s sparkling wit and naturalist way of thinking (for further data see PERTLIK 2010). This natural historical account of the monastic orders, a Linnean system of monks, was published in dozens of reprints and translations, even in 1934, more than 150 years after its first publication (*Joannis Physiophili Specimen monachologiae methodo Linnaeana tabulis tribus aeneis illustratum, cum adnexis thesibus e pansophia P.P.P. Fast etc.*, 1783).

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