

BERNHARD WOYTEK – DANIELA WILLIAMS (EDS.)

ARS CRITICA NUMARIA

JOSEPH ECKHEL (1737–1798) AND THE
TRANSFORMATION OF ANCIENT NUMISMATICS

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Bernhard Woytek – Daniela Williams (eds.)

Ars critica numaria

**Joseph Eckhel (1737–1798) and the Transformation
of Ancient Numismatics**

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Cover image:

Joseph Eckhel, contemporary portrait miniature.
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Illustration opposite:

Kunsthistorisches Museum Vienna, ceiling painting in gallery X.

The personification of numismatics contemplating a group of bronze statuettes of the “Tres Monetae” in her raised
right hand; in her lowered left hand a large laurel wreath. On the right a bust of Eckhel on an inscribed base.

Franz Xaver Simm (1853–1918), oil on canvas (around 1890).

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The Genesis of Eckhel's *Doctrina numorum veterum* and Georg Zoëga's Numismatic Papers*

[Figs. 1–14 on pp. 401–410]

The eight-volume *Doctrina numorum veterum* is Joseph Eckhel's principal work. First published in Vienna between 1792 and 1798, in the final years of the author's life, it was immediately recognised as a landmark of classical scholarship by contemporaries.¹ Eckhel's personal renown is inextricably linked with the fame of his *magnum opus*, as is apparent from the most authoritative obituary for the Austrian numismatist, published in 1799 by the French classicist and natural historian Aubin-Louis Millin de Grandmaison (1759–1818). He stressed that with the *Doctrina*, a new era of numismatics had been inaugurated: for Millin it was an “ouvrage immense qui devoit donner à la science une forme absolument nouvelle”.² For this reason, Millin in his necrology famously likened Eckhel's achievement in numismatics to Linnaeus's in natural history³ – a comparison, however, not coined by Millin, but dating back to the mid-1780s: it was used by Johann Wolfgang Goethe (1749–1832) in a letter dated 25 January 1787, where he cited a dictum by Friedrich Münter (1761–1830) – curiously without giving Eckhel's name, as we shall see later on.⁴

Barclay V. Head dedicated his masterly *Historia numorum*, an epochal single-volume handbook on Greek numismatics, the first edition of which appeared in 1887, to the memory of Eckhel, whom he calls “*scientiae numorum veterum insignis magister*” in the dedication.⁵ In the preface, Head discusses several aspects of the advancement of ancient numismatic studies in the 19th century in some detail, but above all pays tribute to Eckhel's *Doctrina*, “a marvellous compendium of wide research and profound erudition, a work which can never be altogether superseded, and which the Numismatist may always consult with advantage for the first principles of the science of his predilection”.⁶

The printing of the *Doctrina* – which appeared in three different editions, in Vienna and Germany – has an unusually complex history that was recently reconstructed in another contribution.⁷ The problem to be studied here is the genesis of Eckhel's main work, which, surprisingly, has never been properly investigated either. In fact, the secondary literature contains hardly any useful indications on how the *Doctrina* came into being. In the classic mid-19th century account of Eckhel's life and work, Joseph Bergmann merely mentions that the manuscript of the *Doctrina* in the author's hand is kept in the Vienna coin cabinet⁸ – a statement that needs to be qualified, as shall become apparent later. Hence,

* Thanks for their help in preparing this paper are due to Michael Alram (Vienna), Ivan Boserup and Helle Horsnæs (Copenhagen) as well as to Christopher B. Frey and Daniela Williams (Vienna).

¹ See, for example, the review of volume 1 by Heyne 1793.

² Millin 1799, p. 17. Later on in the text, he elaborates on this point by explaining: “Eckhel a donc rendu le service le plus important à la science, en la soumettant, dans son ensemble, à un arrangement philosophique et régulier, et en réunissant les notions les plus exactes et les plus certaines en un corps de doctrine” (p. 20).

³ Millin 1799, p. 4: “il est le réformateur de la science numismatique, comme Linnéus a été celui de la science de la nature”.

⁴ On Goethe and Eckhel, cf. the contribution by Kay Ehling in this volume. See also Pick 1931, p. 119.

⁵ Head 1887, p. [v]. On the genesis of this work see Kagan 2015.

⁶ Head 1887, p. [xiii].

⁷ See in detail Woytek (forthcoming) a.

⁸ “Eckhel's Manuscript dieser *Doctrina numorum veterum* verwahrt die Bibliothek des k. k. Münzcabinetes” (Bergmann 1857, p. 340).

I propose to examine the making of this seminal work on the basis of the following four (groups of) sources:

- (1) Eckhel's *Descriptio numorum Antiochiae Syriae*, published in 1786,
- (2) Eckhel's papers kept in the archives of the Kunsthistorisches Museum, Vienna,
- (3) Eckhel's correspondence, the critical edition of which is currently in preparation,⁹ and other contemporary letters,
- (4) the numismatic papers of the Danish classicist Georg Zoëga (1755–1809), kept at the Royal Library, Copenhagen, as well as an excerpt from them by Friedrich Münter.

* * *

The *Descriptio numorum Antiochiae Syriae* (1786)

This is arguably Eckhel's least known monograph,¹⁰ a book hardly ever cited, to which Bergmann devotes less than four lines of his bio-bibliographical account, merely giving its title.¹¹ Still, the volume is of the utmost importance in the present context (fig. 1). It is a slim quarto without any illustrations, containing two main parts: a long preface of 22 pages, and a systematic treatise on several aspects of the coinage of Antioch-on-the-Orontes, from Hellenistic to Byzantine times, on 56 pages. This volume was printed in 1786, in the same year as Eckhel's catalogue of unpublished ancient coins in the imperial coin cabinet¹²: the *Sylloge I* that supplemented his well-known catalogue of the Vienna collection of Greek and Roman coins in two folio volumes published seven years earlier.¹³ This first *Sylloge* – thus named because Eckhel expected further volumes to follow, although in the end it remained the only instalment ever to be published – lists acquisitions of ancient coins made by Eckhel for the emperor's collection after the 1779 *Catalogus* had gone to press, as well as coins that he had been able to classify correctly (or more accurately) since that time. It is accompanied by ten plates, on which select specimens are illustrated. Both of these 1786 publications of Eckhel's were printed by Johann Thomas von Trattner (1717–1798) and seem to have been distributed together. Sometimes they are therefore found bound together, although they are both self-contained books.

The second part of the *Descriptio*, on the coins of Antioch, is divided into six chapters, dealing with the coins of the city bearing dates according to several different eras,¹⁴ Roman silver coins struck in Antioch in the imperial period without a date,¹⁵ imperial Antiochene bronze coins bearing the formula SC,¹⁶ Roman colonial coins struck at Antioch,¹⁷ late antique coins of Antioch,¹⁸ and coins “of Antiochians struck outside Antioch” – dealing with series produced in Antiocheia ad Daphnen, Antiocheia Ptolemaïdis (Ace), and Antiocheia ad Callirhoën (Edessa).¹⁹ The book's overall purpose is indicated in its subtitle: it was a *specimen Artis criticae numariae*, a sample chapter of a general work on Greek and Roman coins which, at that planning stage, Eckhel intended to publish under the title *Ars critica*

⁹ See Woytek 2017. The study of Eckhel's letters started in the framework of the project “Joseph Eckhel (1737–1798) and his numismatic network”, funded by the Austrian Science Fund (FWF, project no. P25282) from 2013–2015.

¹⁰ Eckhel 1786a.

¹¹ Bergmann 1857, p. 340.

¹² Eckhel 1786b.

¹³ Eckhel 1779.

¹⁴ “*Numi Antiochiae epocha notati*” (Eckhel 1786a, pp. 2–27).

¹⁵ “*De numis imperatoriis argenteis sine epocha*” (Eckhel 1786a, pp. 27–46).

¹⁶ “*De numis Antiochiae imperatoriis aeneis inscriptis S.C.*” (Eckhel 1786a, pp. 47–49).

¹⁷ “*De numis Antiochiae coloniae*” (Eckhel 1786a, pp. 49–55 [typo: recte 51]).

¹⁸ “*De numis Antiochiae inferioris aevi*” (Eckhel 1786a, pp. 55 [typo: recte 51]–53).

¹⁹ “*De numis Antiochenorum extra Antiochiam signatis*” (Eckhel 1786a, pp. 53–56).

numaria. It is the work known to us under the title *Doctrina numorum veterum*.²⁰ As Eckhel explains at the beginning of the introduction, the little book was to be regarded just as an “appetiser” (“*promulsis*”).²¹ He selected the treatise on the coinage of Antioch as an example of the entire work because of the wealth of the numismatic material from this city, and also because of the manifold scholarly problems it presented, giving the author an opportunity to demonstrate “ἀκριβεία” (“meticulousness”) in his efforts to solve them.²² More generally, Eckhel chose the chapter on Antiochene coins to serve as an illustration of the principles of his new approach to the numismatic legacy of the ancient world, which he laid out in his programmatic “*praefatio*”: the latter was to be re-used six years later, with but slight changes, as the preface of volume 1 of the *Doctrina*. As Eckhel explained in 1792, he felt unable to provide a “better and more suited” text to explain “the plan and the reasons” for undertaking the entire work and the “distribution of the whole into parts” than the preface written for the *Descriptio*.²³

The choice of subtitle for the 1786 book – and, in fact, to some extent its entire concept – was based on one of the most elegant publications on ancient coinage of the 17th century, the *Specimen universae rei nummariae antiquae* by Andreas Morell (1646–1703), the first edition of which had appeared in Paris 103 years before Eckhel's *Descriptio*.²⁴ In this small book in octavo format, Morell presented, on 18 excellent plates and 136 pages, images of and learned commentaries on mostly Roman imperial and provincial coins of note from various international collections. His aim was to introduce his project of a vast corpus of ancient coinage, which he planned to publish in ten volumes by the end of the 1680s, to an international readership.²⁵ The project as such proved much too ambitious: Morell's circumstances of life were truly troubled – as a Protestant, he was imprisoned three times in Paris following dissensions with Louvois, the First Minister of Louis XIV, and his health was impaired towards the end of his life following a stroke²⁶ – so that he did not live to see any part of the work completed. His copperplates depicting Roman Republican coins and those of the twelve Caesars were published decades after his death, in Amsterdam, accompanied by prolix commentaries by other scholars, in altogether five folio volumes.²⁷ The only explanatory texts penned by him ever to be printed were those in his *Specimen*. Eckhel held Morell in high esteem and praised the latter's extraordinary enthusiasm for ancient numismatics, as well as his erudition and his skill in drawing coins, on the first page of the *Descriptio numorum Antiochiae Syriae*.²⁸ The choice of title for his 1786 book is eloquent testimony that Eckhel was happy to place himself in the tradition inaugurated by the Swiss scholar. However, the overly large scope of Morell's project, which included illustrations of every single coin type, was a cautionary example of how not to conceive a comprehensive work on ancient coinage, in Eckhel's view.²⁹ In the preface of the *Descriptio*, Eckhel also described the abortion of other all-encompassing numismatic projects since the 16th century, and discussed the inadequacies of the existing numismatic dictionaries and compilatory works.³⁰

²⁰ On the change in title in the course of the publication project, see further below in this paper, as well as the contribution by Andrew Burnett in this volume.

²¹ Eckhel 1786a, p. [III]: “*Habes, amice lector, promulsidis instar, partem exiguam vasti operis, artis videlicet criticae numariae*”.

²² Eckhel 1786a, p. XIX.

²³ See Eckhel 1792–1798, vol. 1 (1792), f. *r: “*propositum, et causas et totius in partes distributionem*”; the two prefaces: Eckhel 1786a, pp. III–XXII, and Eckhel 1792–1798, vol. 1 (1792), ff. *r–[*3]v.

²⁴ Morellius 1683. A second edition of this work was published in Leipzig in 1695.

²⁵ Morellius 1683, pp. 135–136 gives an overview of the planned distribution of the material over ten volumes.

²⁶ On Morell's life, see Amiet 1883.

²⁷ *Thesaurus Morellianus* 1734 and 1752. On Morell's project and his materials, see the contribution by Martin Mulsow in this volume.

²⁸ Eckhel 1786a, p. [III].

²⁹ Eckhel 1786a, p. [III]: “*cum operis sui fines longius porrigeret, quam quibus aut hominis vita, aut privati sumptus sufficerent*” etc.

³⁰ Eckhel 1786a, pp. IV–V.

He was determined to do better. Since there were no reliable general works summing up the then current state of knowledge in ancient numismatic scholarship or adequately reflecting the huge increase in known Greek and Roman coin types during the 18th century, Eckhel decided to take action himself: “*His malis ut remedium quaererem, pluribus abhinc annis coepi moliri commentarios nulla tum adhuc lege atque ordine, quod privato tantum usui intenderam, quorum cum interim moles excresceret, & amicorum iudicio non privatim modo sed & publice profuturi putarentur, ad construendam ex praeeparata materia artem criticam numariam animum appuli.*”³¹ Hence, the *Doctrina* goes back to notes that Eckhel had originally started to take haphazardly for his own use, “several years” before 1786 – he does not say precisely when. As we will see below, other sources allow for a more precise reconstruction of the chronology. In any case, as Eckhel told his readers in 1786, only when his notes had eventually grown in scope and when unnamed “friends” had pointed out to him their general usefulness for numismatic scholars did he start to prepare a systematic work from them.

In so doing, Eckhel was guided by four main principles, which he accurately laid out in the preface.³² Firstly, he included only coins that he had seen himself or that were reported by trustworthy authors; the imperial collection in Vienna was his most important reference, especially for Roman coins. Secondly, he excluded from his work fourré coins of all kinds and barbarous copies, because it was not possible to use ancient forgeries or imitations for the reconstruction of history.³³ Thirdly, he was determined to embrace the concept of *brevitas*³⁴ by omitting everything superfluous, in order to be able to complete his work in the span of his lifetime. Therefore, he decided to leave out not only fake coins, redundant commentaries and uncertain conjectures,³⁵ but also for example Roman imperial coins with banal reverses – after all, his aim was not to compile a detailed catalogue of all the known issues, but a systematic general handbook.³⁶ Fourthly, Eckhel knew perfectly well that in the scholarly context of his work the concept of *brevitas* also had its limits: he wanted his *Ars critica numaria/Doctrina* to be sufficiently detailed to be helpful to scholars, and it was evident to him that it would be counterproductive to leave out important information. There was no lack of very short manuals for beginners, like the *Science des médailles* by the Jesuit Louis Jobert (1637–1719). This work,³⁷ translated into several languages in the course of the 17th and 18th centuries, was a classic already by the time of Eckhel – who, however, ridiculed the “*tenue opusculum*” with a scornful remark.³⁸

In 1786, Eckhel declared the greater part of his systematic work on ancient coinage to be finished,³⁹ and outlined its structure. Like the 1779 *Catalogus* it was to have two *partes*: the first would contain the Greek autonomous, the Royal (Hellenistic) and the Roman provincial – as well as colonial – coinage, in a strictly geographical order; the second would deal with the Roman Republican coinage (the non-anonymous issues of which were to be presented in the traditional alphabetical order) and the

³¹ Eckhel 1786a, p. XI. This text is repeated with just one significant change in Eckhel 1792–1798, vol. 1 (1792), f. [*4]r, where we read “*ad construendam ex praeeparata materia numorum veterum doctrinam animum appuli*”.

³² Eckhel 1786a, pp. XI–XV.

³³ In the version of the preface printed in the *Doctrina* – Eckhel 1792–1798, vol. 1 (1792), f. [*4]r–v –, these first two points are merged into one.

³⁴ Eckhel 1786a, p. XII.

³⁵ In the true spirit of Enlightenment scholarship, it was very important to Eckhel to make clear what was certain and what was not: “*Ego hoc animo ad scribendum istud opus accessi, ut quae certa sunt, persequeretur ut certa, quae incerta, ut incerta, & si ad quae explicanda destituar conjecturis saltem idoneis & verisimilibus, ea in ignotorum numero haberem*” (Eckhel 1786a, p. XIII).

³⁶ Eckhel 1786a, pp. XII–XIII.

³⁷ First edition: [Jobert] 1692; further French editions were to follow.

³⁸ Eckhel 1786a, p. XIV: “*quod si totum memoria complectare, tam parum te eruditum praestabo, quam dudum fueras*”. For a comprehensive listing of the various editions and translations of Jobert’s work, see the article by Burnett in this volume.

³⁹ Eckhel 1786a, p. XI: “*cujus [...] operis iam maiore sui parte absoluti*”.

Roman imperial coinage, carefully purged of the “filth of forgeries”,⁴⁰ in chronological order.⁴¹ Eckhel hastened to stress that imperial coins without precise chronological indications in their types and legends would be classified separately, in a group of “*numi vagi*”, at the end of the respective reigns.⁴² While this basic structure was clear, the precise shape of the publication was still unknown in 1786: Eckhel was not sure of how many volumes it would exactly consist,⁴³ but it was obvious that it would be a multi-volume work, costly to print.

This latter fact was one of the reasons for the publication of the *Descriptio numorum Antiochiae Syriae*, as Eckhel clearly stated towards the end of the preface. He evidently had great difficulties in finding a publisher: the production of a highly scholarly work written in Latin on a niche subject (with a very restricted audience), almost without illustrations⁴⁴ – which in practice meant that it had to be consulted in a well-equipped numismatic collection and/or library in order to be fully appreciated – quite understandably did not strike publishing firms as a potentially rewarding project. Thus Eckhel planned to release his work by subscription, so as to minimise the risk for the publishing house, and wanted to test the market with the 1786 *Descriptio*. Details of the subscription scheme were necessarily unclear then, since the publisher remained to be found.⁴⁵ Eckhel invited the readers of the *specimen* of his great work to comment on it and signalled readiness to adapt the proposed concept (or parts thereof) according to their suggestions, if necessary, in the phase of preparation of the final manuscript.⁴⁶

We do not know whether Eckhel received much feedback on his book, in the years after 1786. Apart from a glowing review by Christian Gottlieb Heyne, the most important reaction in print was undoubtedly Domenico Sestini's presentation of Antiochene coins from the Ainslie collection,⁴⁷ organised according to the six chapters of the second part of Eckhel's *Descriptio*. Sestini published material that complemented Eckhel's treatise and critically reviewed some of Eckhel's hypotheses: however, he dealt exclusively with the ‘practical’ part of the 1786 *Descriptio*, not the programmatic preface. As for reactions to the latter, it is plausible to assume that a short passage added by Eckhel to the preface in 1792, justifying the almost complete lack of an illustrative apparatus in the work, is a response to questions or suggestions concerning this matter.⁴⁸ In the end, the first edition of the *Doctrina* was indeed marketed through a subscription scheme; there were more than 200 subscribers. It was not published by Trattner, who had been responsible for the *Descriptio*, as noted above, but was begun by Joseph Vinzenz Degen

⁴⁰ Eckhel 1786a, p. XVII: “*figmentorum illuvie[s]*”.

⁴¹ Eckhel 1786a, pp. XV–XVII.

⁴² Eckhel 1786a, pp. XVII–XVIII.

⁴³ Eckhel 1786a, p. XIX: “*Quot voluminibus constituturum sit opus universum, necdum aut definivi aut definire potui*”.

⁴⁴ The unillustrated *Descriptio* thus faithfully anticipated the structure of the *Doctrina*.

⁴⁵ Eckhel 1786a, pp. XIX–XX: “*At quoniam haec [sc. the elevated number of volumes of the planned work] majores sumptus postulant, quam quos libenter decernat cognita bibliopolarum cautio, quos certus tantum quaestus allicit, ipsum vero opus ejus est naturae, quae avidos emptores non spondeat, ad haec, quod alterum est malum, conscriptum lingua, quae jam fere aut non intelligitur, aut fastiditur, satis esse causae existimo, cur tentatae praenumerationis, aut subscriptionis, ut ajunt, via eorum, qui haec studia amant, explorandam voluntatem existimem, de cujus ratione, cum tempus postulabit, eruditorum collegia planius certiusque instruam*”.

⁴⁶ Eckhel 1786a, p. XX: “*Pergam interim quam institui, telam texere, hac tamen mente atque animo, ut re adhuc integra libenter velim uti consiliis eruditorum, si quid expenso hoc specimine in operis universi ratione aut parte mutandum existiment*”.

⁴⁷ Heyne 1787 and Sestini 1790, pp. 1–50 (“Descrizione delle medaglie della città d'Antiochia di Soria che si conservano nella Collezione Ainslieana”). On Eckhel and Sestini, see the contribution by Federica Missere Fontana in this volume.

⁴⁸ Eckhel was content with always citing the sources of the coins he described (whether collections or printed books), see Eckhel 1786a, p. XVI; in the passage added to the preface in 1792, for volume 1 of the *Doctrina*, he explains that he almost completely abstained from adding coin illustrations in view of the high costs projected for them, and points out that he is following the example of Vaillant, Harduin and others in this respect: Eckhel 1792–1798, vol. 1 (1792), ff. **2v and [**3]r.

(1762–1827), who published the first two volumes; subsequently Joseph Camesina († 1827) took over with his publishing house “Camesina & Comp.” for the rest of the work.⁴⁹

Altogether, the *Descriptio numorum Antiochiae Syriae*, intended as an “appetiser” for Eckhel’s *opus magnum*, contains information that is important for understanding the genesis of the *Doctrina*, but neither does it enlighten us as to the absolute chronology of the writing process, nor do we learn as much about Eckhel’s scholarly practice in the preparation of the work as we would like to. Fortunately, other groups of sources tell us more about these aspects.

Eckhel’s manuscripts: from *Geographia numismatica* to *Doctrina numorum veterum*

Questions of research practice and information management in early modern scholarship have been central to the interest of intellectual historians ever since the publication of Ann M. Blair’s monograph *Too Much to Know*, at the latest.⁵⁰ Very recently, especially Martin Mulsow’s preliminary studies of the papers and materials left by Andreas Morell⁵¹ have demonstrated how much research on the history of numismatics has to gain from this approach. In the case of Eckhel, we are particularly fortunate in having several manuscript sources at our disposal that, on the one hand, throw some light on how Eckhel managed the flood of historical, geographical, antiquarian and numismatic information that eventually had to be incorporated into the *Doctrina*. On the other hand, some of these documents also offer us glimpses of various preparatory stages of the work itself. Eckhel’s papers, kept in the archives of the coin cabinet and of the collection of Greek and Roman antiquities of the Kunsthistorisches Museum in Vienna, are a hitherto completely untapped source for his work. What follows is to some extent a report on work in progress: not all of his manuscripts have been subjected to exhaustive study so far; hence, just a preliminary survey of the material is presented here.

Almost all numismatic manuscript documents in Eckhel’s hand are in Latin;⁵² they are all written in black ink and undated, so that the period of their composition has to be inferred from the contents, which often proves very difficult. My overview will mainly deal with three groups of manuscripts kept in the archives of the Vienna coin cabinet: three notebooks in quarto format (nos. 5–7), three notebooks in folio format (nos. 79–81), and three important volumes of manuscripts obviously bound after Eckhel’s death, identified as manuscripts of the *Doctrina* on their spine labels (nos. 120–122).

Of minor importance in the present context are the three notebooks in quarto format, nos. 5–7. They have two different types of bindings: nos. 5 and 6 are bound in unassuming orange boards, whereas no. 7 is in a half-leather binding sporting monochrome red marbled paper and a large label on the front board which is, however, left blank.⁵³ All three notebooks were used by Eckhel for notes and excerpts on miscellaneous antiquarian topics. Notebook no. 6⁵⁴ contains a wealth of information – especially bibliographical references – on various aspects of games in the ancient world, on arms and armour, politics, trade, banquets, weights and measures, music, clothing, buildings, funerals, as well as remarks on ancient geography, topography and chronology. Its companion volume, the bulky notebook

⁴⁹ For the subscription scheme and especially for Eckhel’s problems with Degen and the change of publisher in the course of production of the work, see Woytek (forthcoming) a.

⁵⁰ Blair 2010. See, for example, also several articles in the collected volume edited by Zedlmaier – Mulsow 2001.

⁵¹ Mulsow 2017; see also his contribution in the present volume.

⁵² A document containing commentaries on antiquarian and numismatic literature, which was compiled over a certain period of time and is entitled “Beurtheilung verschiedener Werke” (bound into volume no. 64 of the archives of the coin cabinet, pp. 139–150), at first glance seems to be an exception, but in fact Eckhel switched from German to Latin after his critical remarks on the first work treated.

⁵³ The ties of no. 7 are lacking.

⁵⁴ It comprises 129 pages (some of which are left blank) numbered in Eckhel’s hand, followed by 12 blank leaves.

no. 5,⁵⁵ is dedicated entirely to ancient religion, religious practice and mythology;⁵⁶ again, Eckhel here compiled mainly references to ancient primary textual sources and to the contemporary secondary literature. An inspection of notebook no. 7,⁵⁷ in the half-leather binding, shows that it covers basically the same topics as notebooks nos. 5 and 6 – mythology, religion and various aspects of everyday life in the ancient world – but contains considerably less information. Evidently, we are dealing with a precursor of notebooks nos. 5 and 6 (bound in orange boards). As his notes grew, Eckhel must have realised that he needed more space, and split the contents of notebook no. 7 in two: from this moment onwards, he kept a separate notebook for ancient religion and mythology, and another for all other topics. Large parts of the text in the original notebook no. 7, especially all the entries pertaining to gods, have systematically been crossed out, doubtless by Eckhel himself: certainly after he had copied the relevant portions into notebooks no. 5 or 6, as random spot checks confirm. That notebook no. 7 belongs to an earlier phase of Eckhel's activity also ties in well with the fact that it has a different binding than the other two.⁵⁸

In general, notebooks nos. 5–7 contain (also bibliographical) background information that is essential for understanding and interpreting the iconography of ancient artefacts, especially coins. The strong focus on religion and myths – topics to which Eckhel dedicated a separate notebook in the second phase of compiling his notes – is in keeping with the prominence of types relating to these fields on ancient coinage. The basic resources for Eckhel's work are rounded off, *inter alia*, by comparative chronological tables⁵⁹ and an “*Index Pellerinianus*”, a comprehensive index to the multi-volume work on ancient coins by Joseph Pellerin (1684–1782), which is notoriously difficult to navigate.⁶⁰

Among the momentous manuscript volumes in Eckhel's hand preserved in Vienna, three books in modest, but durable half-leather bindings, whose boards are covered in 18th century monochrome (red or brown) marbled paper, stand out because of their in-folio format (archives nos. 79–81). Stylistically, their bindings are very similar to that of the quarto notebook no. 7, described above. These three folio notebooks – highly diverse in character between themselves – are dedicated to three different classes of ancient coins. All are characterised by more or less generous right- or left-hand margins left blank for additions and corrections; this is a feature they share with the quarto notebooks nos. 5–7, incidentally. No. 79 contains notes on the autonomous and Roman provincial coinage of cities of the Mediterranean in strictly alphabetical order (from Aba to Zilia), mostly based on the numismatic literature, and to a much lesser extent on collections. Entries for several different cities may be found on the same page, but Eckhel left room between entries that allowed him to add information subsequently, which he did assiduously, evidently over a certain period of time.⁶¹ The information contained in this notebook is basic, often not very detailed, and a far cry from what was published in the *Doctrina* from 1792 onwards. Its concise nature may be exemplified through the first entry, for the city of Aba in Caria (see

⁵⁵ 357 pages numbered in Eckhel's hand, followed by 12 blank leaves.

⁵⁶ It contains notes on priesthoods, sacrifices, all the gods of the pantheon, as well as on minor Graeco-Roman deities, Egyptian and eastern gods, *numina* and personifications, mythical creatures, on the attributes of gods, their symbols and related topics.

⁵⁷ It comprises 285 pages numbered in Eckhel's hand and many blank leaves at the end.

⁵⁸ Another (undated) notebook in Eckhel's hand in exactly the same type of binding as no. 7 is preserved in the archives of the collection of Greek and Roman antiquities of the Kunsthistorisches Museum in Vienna (no. 19); it deals mainly with gems, but also contains miscellaneous other notes on ancient art and coinage. Eckhel refers to this notebook as “*alter tomus socius*” of the manuscript notebook no. 7 on the first page of the latter. Notebook no. 19 is currently being studied by this author; see also further below (with notes 163 and 164).

⁵⁹ Bound into volume no. 84 of the archives of the coin cabinet.

⁶⁰ To be found in volume no. 64 of the archives of the coin cabinet. Eckhel's manuscript “*Index*” was then copied in a different, neater hand; the latter “*Index*” is preserved in volume no. 82 of the archives of the coin cabinet.

⁶¹ The notebook, whose pages are not numbered, also contains a two-page appendix.

fig. 2): it comprises only two manuscript lines, with reference to two coins of that city published by Joseph Pellerin in 1767,⁶² whereas the passage on Aba in volume 2 of the *Doctrina* occupies as many as 25 lines of one column of printed text.⁶³ The second entry of the notebook's first page, on Abacaenum in Sicily, comprises two later additions in which Eckhel notes specimens of this city viewed by him in the collections of Dominique Magnan (1731–1796) and Abbé Bertrand Capmartin de Chaupy (1720–1798) during his stay in Rome in 1772/1773;⁶⁴ other references to the Chaupy collection are to be found in the volume as well. Secondary notes (partly in somewhat darker ink) added gradually to the entries on several cities throughout the manuscript refer to coins published in Eckhel's *Numi veteres anecdoti* of 1775.⁶⁵ These additions provide definitive *termini ante* for the start of this large manuscript notebook: when the original entries in volume no. 79 were written, Eckhel did not yet have information on the coins that he saw in Rome in 1772/1773 or that he published in 1775. This dating agrees with a secondary entry that Eckhel inserted for the coinage of Scodra,⁶⁶ since it refers to coin images sent to him by his correspondent Giacomo Gradenigo (1721–1796) in the autumn of 1776.⁶⁷ Hence, no. 79 must be an early notebook, almost certainly commenced by Eckhel before he left for Italy in August 1772,⁶⁸ which he possibly used during his work in Italian collections and which he continued to add to after 1775. The latest *terminus* that I have been able to determine for the active use of this notebook is the existence of (the manuscript of?) Eckhel's *Catalogus* of the imperial coin collection, published in print in 1779, to which he refers.⁶⁹ To the left of most of the city names in this notebook, small crosses were added by Eckhel subsequently – presumably indicating that the information in the respective entry had been used in (or transferred to) another context. Whether the notes in this notebook may be identified as the early “*commentarii nulla tum adhuc lege atque ordine*” that Eckhel prepared just for himself, as he wrote in 1786,⁷⁰ is not sufficiently clear. We shall return to the important manuscript notebook no. 79 later.

No. 80 is quite different. It is inscribed “*Moneta Romanorum*” on the first page, where it also says: “*De hac agetur sectionibus binis*”; thereafter follows a short general characterisation of these two sections, the most important part of which is a definition of the somewhat ambiguous term “*numi consulares*.”⁷¹

⁶² “*Urbs Cariae. Solus Pellerin Suppl. T. III. p. 133 et 134 duos numos hujus urbis vulgavit, unum cum capite M. Aurelij, alterum Alexandri Sev. inscriptio ABEΩN.*”

⁶³ Eckhel 1792–1798, vol. 2 (1794), p. 571.

⁶⁴ On which see the contribution by Daniela Williams in this volume.

⁶⁵ See, for example, the entry on Abydus: “*Augusti unum [sc. numum] v(ide). in meo opere p. 193*”: Eckhel 1775, in reality p. 194 (the first coin of Abydus with the portrait of Augustus to be published, from the collection in Florence). Under Stratonicea we read “*Nomina et historiam hujus urbis v(ide) in meo opere p. 210*” (Eckhel 1775, pp. 210–211); under Stobi “*Autonomus editus in meo opere p. 67*” (Eckhel 1775, pp. 67–68); under Uranopolis Eckhel added “*Numus editus in meo opere p. 69*” (Eckhel 1775, pp. 69–70). Many other examples could be added. Note especially the phrasing “*in meo opere*” – it clearly refers to the only book published by Eckhel up to that time.

⁶⁶ “*Illyrici. Autonomos vide in ectypis a Gradenigo missis.*”

⁶⁷ In a letter dated 18 October 1776 (Kunsthistorisches Museum Vienna, coin cabinet, archives V, no. 81; the illustrations were mistakenly bound with letter no. 119, ff. 9r and 10r). See also similar notes regarding an earlier 1776 letter by Gradenigo to Eckhel under Cenchræa and Issa.

⁶⁸ Bergmann 1857, p. 326.

⁶⁹ Under “*Claudiopolis Bithyniae, vel Isauriae, quae et Bithynium*” Eckhel notes: “*Est tamen in numo Domitiani musei Caes(arei) annus PMΔ., de quo vide meum catalogum.*” Since Eckhel gives no page number, it is unclear if this note refers to the printed version of the *Catalogus* of 1779 (the relevant passage is in part 1, p. 144) or a manuscript precursor, which must have been written in the second half of the 1770s.

⁷⁰ Eckhel 1786a, p. XI.

⁷¹ “*Prima complectitur numos Consulares, quo nomine intelligo numos omnis generis a S. P. Q. R. libero signatos, seu familiae nomen inscriptum habeant, seu non, quo etiam revocantur numi complures Augustorum capite insignes seu Romae, seu in coloniis signati, propterea quod familiae Romanae nomen prodant. Secunda complectitur numos Augustorum, Augustarum, Caesarum, et Tyrannorum.*” Note that this definition differs from the one that Eckhel adopted later: see Eckhel 1792–1798, vol. 5 (1795), p. 1.

This notebook, the pages of which are numbered sequentially in Eckhel's hand (up to p. 239), unlike those of volume no. 79, contains material on various aspects of Roman Republican coinage, to be used for volume 5 of the *Doctrina* that was to deal with the "*numi consulares et familiarum*", as Eckhel put it in 1795. Apart from notes for or drafts of introductory chapters, the volume most importantly contains, on pp. 81–230, a basic draft for the "*Catalogus familiarum*": the alphabetic catalogue of pre-imperial Roman coins with personal names, ordered according to *gentes*. This central part of notebook no. 80 was made immediately accessible by cutting off the lower corners of the pages (fig. 3).

It is possible to recognise the draft preserved in Eckhel's notebook in the final version published in the *Doctrina*, although, both for the introductory chapters and the discussion of the coinage, the text seems to have been rewritten completely. The text in volume no. 80 is partly crossed out vertically – doubtless by Eckhel himself, exactly as in notebook no. 7 described above, in order to mark content that had been transferred to the final manuscript, when he prepared the latter, rephrasing the original text. For example, the crossed-out text on p. 3 of notebook no. 80, under the headline "*De Magistratu A. A. A. F. F. stante republica*", may be seen to have provided the basis for the beginning of chapter V of the *Doctrina*, entitled "*An ad solos IIIviros pertinuerit monetae negotium*".⁷²

The folio notebook no. 81, by contrast, is extremely heterogeneous in content: it comprises an alphabetical listing of Roman emperors, empresses and usurpers, from Achilles to Zoe (pp. 1–229), whose names were probably not written by Eckhel himself. He made minor notes – mostly giving bibliographical references – underneath some of these underlined headers, but many spots are left blank. This list is followed, on pp. 231–236, by a text and various notes on fake Roman imperial coins that provided the material for the "*praefatio*" of volume 6 of the *Doctrina*.⁷³ Furthermore, the manuscript contains, among other things, a list of questions about coins from international collections that had come up in the course of Eckhel's work, ordered by the cities or countries where the respective coins were kept (Florence, Paris, Naples, England etc., pp. 244–252), as well as a few pages with excerpts from books on ancient architecture published in the 1760s (pp. 253–255).

Finally, there is an impressive set of three thick manuscript volumes in quarto format in somewhat worn 19th century half-leather bindings with gilt spines and labels stating "*ECKHELII [sic!] DOCTRINA MANUSCRIPT*", vols. 1, 2 and 3; the lower label of the third volume adds "*ET SYLLOGE*". These volumes (nos. 120–122 in the archives: fig. 4) contain densely inscribed pages in Eckhel's handwriting, numbered by Eckhel himself; however, as in the volumes described previously, generous margins were left (and very frequently used) by the author for additions and corrections. As we will see shortly, the manuscript is not complete. It is evident that the set of manuscript volumes nos. 120–122 in its present state is the result of the decision, taken after Eckhel's passing, to have *Doctrina*-related posthumous papers in his hand bound together. Evidently, whoever was responsible for these volumes tried to bind the quires in the order corresponding to the printed work, although some blatant mistakes in the sequence are evident; heterogeneous additions were bound in at the end of volume no. 122.

Hence, unlike notebooks nos. 5–7 and nos. 79–81, the three manuscript volumes nos. 120–122 are secondary compilations: originally Eckhel was working with loose quires here, not with pre-bound notebooks. Two title-pages (in Eckhel's hand) are bound in at the start of volumes nos. 120 and 121: in the former, a handwritten version of the title-page of volume 4 of the *Doctrina*, in the latter, the handwritten title-page of volume 8. These title-pages do not directly match the coinage treated in the two volumes, but just fit on a general level insofar as volume 4 of the *Doctrina* is a "Greek" volume⁷⁴

⁷² Eckhel 1792–1798, vol. 5 (1795), p. 65.

⁷³ Eckhel 1792–1798, vol. 6 (1796), pp. III–XX.

⁷⁴ Eckhel 1792–1798, vol. 4 (1794) deals with Egypt and northern Africa; it also contains "*observata generalia*" and the indices to volumes 1–4.

– and manuscript volume no. 120 deals with “Greek” coinages⁷⁵ –, while volume 8 is a “Roman” one, and manuscript no. 121 contains texts on Roman coinage.

Volume no. 120 is not numbered sequentially overall, but section-wise. The first is an overarching section comprising Spain, Britain, Germany and Italy, up to Samnium (82 pages). This part of the manuscript is important for our purpose since it is the key to reconstructing the genesis of the work as such, as we shall see. It is followed by a few pages of diverse content.⁷⁶ The second section of the manuscript deals with Gaul (31 pages), the third with Italy, in a more advanced version as compared to the first section (120 pages), the fourth covers Sicily (120 pages), while the fifth is entitled “*EUROPA ORIENTALIS GRAECIA ORIENTALIS*” (up to the island of Thera; 315 pages, followed by two blank leaves). The sixth section – separately numbered, but bound into the Greek section – covers the coinage of the Macedonian kings (56 pages), and finally the seventh “*ASIA*” which preserves, for part of Asia Minor, two different versions, equivalent to two subsequent stages of the manuscript preparation. We first find pages numbered 1–48 covering the Cimmerian Bosphorus, Pontus (general introduction, then Amasia to Zela), as well as Paphlagonia (from *Aboni tichos* to Sinope). These pages 1–48 are followed by four blank leaves of the same paper quality: this paper has a slightly darker hue of brown and shows a different structure as compared to the rest of the manuscript volume. After the four blanks there is another part starting with the headline “*ASIA*” and the cities of the Cimmerian Bosphorus, but this part is considerably longer, spanning the numbered pages 401–640 and going up to Side in Pamphylia, where volume no. 120 ends. The portion of this long part of the manuscript dealing with Pontus and Paphlagonia up to Sinope ends on p. 429: at only 29 pages it is significantly shorter than the treatment of the same material bound in before, numbered 1–48.

Hence, volume no. 120 contains material relating exclusively to the Greek section of the *Doctrina*, more precisely to volumes 1–3. As opposed to notebook no. 79, where the material is arranged in alphabetical order, it is here ordered geographically. It is important to underline that Eckhel’s famous general introduction to the *Doctrina*, the “*Prolegomena generalia*”,⁷⁷ is missing entirely here. What we read in manuscript no. 120 are drafts – with the notable exception of twelve pages of text (six leaves) that we deliberately have not described in detail so far. They belong to two different parts of the *Doctrina* and are bound into volume no. 120 in two different places. Eight pages briefly mentioned above (in note 76), numbered 81–88, are to be found near the beginning of the volume, after section one. They contain text on Cilician coinage, starting in the middle of the treatment of Anazarbus. Furthermore, they cover the cities of “*Anchiale*”, “*Anemurium*”, “*Antiochia ad Sarum, quae et Adana*”, “*Antiochia incerta*”, and “*Argos*”. Two further leaves, containing four pages numbered 41–44, are bound in after the end of the section on Greece (after p. 315 and the two blanks), and before pp. 1–48 on the Cimmerian Bosphorus etc. They deal with the coinage of “*Ceos vel Cea*”, “*Carthaea*”, “*Julis*”, “*Cimolis*”, “*Cythnus*” and “*Delus*”. The printer’s sanguine marks on these six leaves prove them to be part of the final manuscript from which the respective passages of the *Doctrina*⁷⁸ were typeset (see fig. 5).⁷⁹ All the rest of volume

⁷⁵ Volumes 1–4 of the *Doctrina* cover the “*numi urbium, populorum, regum*”, in Eckhel’s terminology; although this comprises not only Greek, but also all the other non-Roman coinages of the Mediterranean and adjacent regions, this section is a *parte potiori* generally referred to as the “Greek” section of his work.

⁷⁶ Eight pages on Cilicia (numbered 81–88), which we will analyse further below, and the unnumbered tract “*De numis urbium Italicarum ex aere gravi*”. On the passage of the *Doctrina* corresponding to this chapter (Eckhel 1792–1798, vol. 1 [1792], pp. 85–89), see the contribution by Maria Cristina Molinari in this volume.

⁷⁷ Eckhel 1792–1798, vol. 1 (1792), pp. I–CLXXXIII.

⁷⁸ Eckhel 1792–1798, vol. 2 (1794), pp. 326–329 (Ceos etc.) and vol. 3 (1794), pp. 44–49 (Cilicia).

⁷⁹ It is evident from these pages that in Eckhel’s final manuscript references were given in brackets within the text; they were then converted into footnotes by the printer. The text on the coinage of “*Antiochia incerta*” on p. 88 of the final manuscript is incomplete as compared to the printed version (Eckhel 1792–1798, vol. 3 [1794], pp. 48–49: the passage from “*His in dubiis fueram*” to “*adhuc nobis ignotam putare*” is missing), but this discrepancy is easily accounted for.

no. 120 consists of preliminary drafts, which may be attributed to (at least) two different redactions. A very rough draft, partly not in full sentences, but in note form is found at the beginning, in the overarching section. Exactly as in the folio notebook no. 80, described above, the text of the drafts of course does not immediately correspond to what was printed in the *Doctrina* in the years from 1792 onwards. Just as in that notebook, we find Eckhel's practice of crossing out entire pages or smaller portions of text vertically, presumably once he had incorporated the information they contained into an improved version or the final text.

In the overarching first section that seems to represent Eckhel's earliest draft of any part of the work, almost all the text up to p. 77 is crossed out in this way. To give but one example of the style of this first part of manuscript no. 120, on p. 3, the header "HISPANIA" is followed by the words "*Duplex monetae Hispaniensis genus. 1. cum Hispania sui juris esset. 2. cum Romanis subdita*" (see fig. 11). This short statement, needless to say, is not to be found anywhere in the printed *Doctrina*, and it is only by analysing the first two pages of the *Doctrina*'s introduction on Spain very closely that one may recognise a slight echo of these words in the final product. At the very end of p. 1 of the printed introduction, we read "*Indubitatum est, Hispanos liberos suique adhuc juris in inscribenda moneta sua usos quoque lingua patria, proinde vetustissimos habendos numos, quos peregrinae linguae contagio nondum corrupit*"; on p. 2, the phrasing "*cum Hispaniae urbes jam esse Romanis obnoxiae esse coeperunt*"⁸⁰ doubtless ultimately derives from the words "*cum Romanis subdita*" in manuscript no. 120. Another example of the character of this initial part of the early manuscript may be given from p. 6, where Eckhel briefly noted: "*In Hispaniae numos commentati sunt Velasquez (Luis Joseph) Ensayo sobre los alphabetos de las letras desconocidas de Espanna. Madrid 1752 in 4. Lastanosa. Mahudel dissertation historique sur les monnoyes antiques d'Espagne, Paris 1725. 4^{to} Henricus Florez.*" This short note was the nucleus of a two-page chapter in the introduction to the Spanish section of the *Doctrina*, entitled "*De eruditorum operibus Hispaniensem monetam illustrantibus*";⁸¹ especially the works by Mahudel and Velasquez are also discussed on other pages of the introduction to Spain.⁸²

Of a particular significance for the study of the *Doctrina*'s genesis are the two manuscript versions preserved for the section of the work dealing with the Cimmerian Bosphorus, Pontus and Paphlagonia. While the longer text written on the pages numbered separately 1–48 (to which Eckhel still added references and material here and there, later on) does not precisely correspond to the version as printed in volume 2 of the *Doctrina*, it is extremely close to the final product. It seems to represent the penultimate stage of the manuscript, to be followed only by the clean copy from which the text was printed – and which is lost for this section. In comparison to the shorter version numbered as pp. 401–429, for example the "*Prolegomena ad numos Ponti et Paphlagoniae*" (pp. 3–6) are new, which eventually found their way into the *Doctrina*.⁸³ This penultimate stage, however, still included the author's editorial notes: instructions to add material from elsewhere for the final version. Thus, for example at the end of the treatment of the cities of Pontus (p. 32), we read "*Numos regum Ponti vide post numos Paphlagoniae huc insere*"; after the treatment of the coins of Sinope, Eckhel noted "*Sequantur numi regum Paphlagoniae*" (p. 48). The previous version of the same section, on pp. 401ff., comprises many more additions and corrections than the later draft; to judge from the different inks and pens used, this version was

After Eckhel had finished his fair copy, he must have prepared an attachment containing a lengthy rebuttal of a pertinent passage in a work by Sestini. This manuscript attachment is no longer preserved, but on p. 88 there is a note to the printer in German referring to it: "NB Beylage". Incidentally, the coin discussed in this passage was struck in Antiochia ad Cydnum (Tarsus), as we now know; Eckhel was thus right to reject Sestini's attribution to Antiochia ad Cragum.

⁸⁰ Eckhel 1792–1798, vol. 1 (1792), pp. 1–2.

⁸¹ Eckhel 1792–1798, vol. 1 (1792), pp. 9–10.

⁸² Eckhel 1792–1798, vol. 1 (1792), pp. 1, 6.

⁸³ Eckhel 1792–1798, vol. 2 (1794), pp. 340–343.

improved over a longer period of time. However, unlike the practice in the first section of the work, Eckhel did not cross out pp. 401ff. vertically, after he had replaced this version.

Notes to self by the author appear to be a defining feature of Eckhel's manuscripts for the *Doctrina* in general. For example, in the section on Side – whose characteristic coin type is the pomegranate – Eckhel had originally used the Latin term “*malum granatum*” for this fruit in the (first?) draft, but then noted: “NB. *Pro granatum ubique scribe Punicum*” (p. 640). He wished to change the term for the subsequent stages of the manuscript, which unfortunately are not preserved; however, in the printed version of the *Doctrina*, we accordingly find the term “*malum Punicum*” in the corresponding section.⁸⁴

To sum up, manuscript volume no. 120 seems to document (at least) three different stages in the preparation of Eckhel's manuscript for parts of the first three volumes of the *Doctrina*. Firstly, the initial draft, which is without any doubt represented by the first, overarching section, whose text is almost entirely crossed out, and most probably also by the long section on the coinage of Asia, numbered 401–640. Secondly, an advanced draft, which was much closer to the final product, but still not perfect: this stage is clearly represented by the pages 1–48 on the Cimmerian Bosphorus, Pontus and Paphlagonia, for example (which are also written on paper of a slightly different quality as compared to the major part of the volume). Thirdly, a tiny sample of Eckhel's fair copy that was handed to the printer and bears the latter's marks in red chalk – just six leaves of text, two on the island coinage from Ceos to Delus and four on coins of Cilicia, from Anazarbus to Antiochia incerta.

Apart from the latter, no manuscripts for the Greek section of the *Doctrina* following the coinage of Side in Pamphylia are preserved. The monumental manuscript no. 121 covers exclusively Roman coins from the Late Republican issues of the *triumvir r. p. c.* Lepidus down to the late Roman coinage in the name of Helena. Like no. 120, this volume is not numbered sequentially throughout, but again by section, although there are just three of them: the first comprises the coinage of Lepidus and Mark Antony (63 pages), followed by 1380 pages on imperial coins from Julius Caesar to Helena. A separately numbered 40-page section “*Supplementa ad numos Augustorum*” is bound in after p. 120 of the imperial section. Hence, the text of this manuscript volume corresponds to text printed in volumes 6 to 8 of the *Doctrina*. More precisely, it starts with Lepidus (p. 34 of the *Doctrina*'s volume 6) and extends down to the coinage treated on pp. 142–145 of volume 8. The first lines of the first page of manuscript no. 121 make it clear that, again, we are looking at a draft, and not at the final manuscript from which the *Doctrina* was typeset. Here Eckhel remarks that the coins of, *inter alios*, Brutus, Cassius and Sextus Pompey, which precede the treatment of the coins of Lepidus in volume 6 of the *Doctrina*,⁸⁵ “are to be taken from the treatise on families” (“*sumendi ex tractat. de familiis*”) – another reminder of the author to himself, for the preparation of the final manuscript; the “*tractatus de familiis*” may be identified as the manuscript notebook no. 80 in the archives of the coin cabinet.⁸⁶ Despite this, it seems that the text as we find it in the Roman part of the preserved manuscript is, by and large, relatively close to the text as printed. It is plausible to assume that manuscript no. 121 represents an advanced draft.

Manuscript volume no. 122, by contrast, is much more heterogeneous. Like volumes 120–121, it is not numbered continuously, but by section. The text preserved in no. 122 does not directly continue from manuscript no. 121: the draft for the chapter on the coinage from Iovianus to Constantine XIV (= XI) Palaeologus is missing;⁸⁷ manuscript no. 122 starts with the chapter “*Pseudomoneta*” of vol-

⁸⁴ Eckhel 1792–1798, vol. 3 (1794), p. 14.

⁸⁵ Eckhel 1792–1798, vol. 6 (1796), pp. 19–33.

⁸⁶ See pp. 154–155 of this manuscript for the coins of Brutus and pp. 181–183 for the coins of Sextus Pompey.

⁸⁷ Eckhel 1792–1798, vol. 8 (1798), pp. 147–273. Interestingly, there is a caesura in the printed text exactly at this point, between the treatment of the coins of Helena and Iovianus: on p. 146 of the *Doctrina*, a single-page general “*Monitum*” about the coinage of the Later Empire is inserted.

ume 8 of the *Doctrina* (pp. 1–64 in Eckhel's manuscript numbering),⁸⁸ after which we find an essay “*De tribunicia potestate*” (pp. [1]–65), corresponding to chapter 10 of the “*Observata generalia*” at the end of the same volume.⁸⁹ It is followed, after blank leaves, by pp. 41–177 of additions that continue the “*Supplementa*” section from manuscript no. 121. Manuscript no. 122 further contains proofs of pp. 273–496 of volume 8 of the *Doctrina* with many corrections in Eckhel's hand; each quire is marked “*Corr. 1.*” by him on the last page, indicating that these were the first proofs. As indicated on the spine label, manuscript volume no. 122 is rounded off by the 1786 *Sylloge I*: not in manuscript form, however, but in the form of printed sheets of the final product (complete with the ten plates), albeit with a very few manuscript additions in Eckhel's hand (unfortunately cropped by the bookbinder), supplying minor additional references to ancient authors or the secondary literature.

Joseph Bergmann's very general statement, quoted in note 8 above, according to which “das Manuscript dieser *Doctrina numorum veterum*” is kept in the Vienna coin cabinet, may thus be seen to be imprecise. Except for the six leaves bound into manuscript no. 120, described above, the final manuscript from which the eight volumes were typeset from 1792 to 1798 unfortunately does not seem to have survived – unless it still remains to be discovered somewhere. What we have instead are notebooks of various kinds as well as (more or less advanced) drafts for large parts of the Greek and Roman sections, from which Eckhel then prepared his final manuscript.

The materials used by Eckhel for composing the *Doctrina* that we have analysed so far were for the most part text-based – what about coin images? In general, it seems evident that Eckhel was rather a man of words than a man of pictures: the choice to publish a groundbreaking numismatic handbook almost completely devoid of illustrations speaks for itself. Hence, his manuscripts to some extent simply mirror the author's text-mindedness: this is a striking contrast to Andreas Morell, aptly characterised by Martin Mulsow as a “visual person”,⁹⁰ who kept a huge number of impressions of coins in his personal archive, compiled scrap books (“*Bildnotizbücher*”) and produced countless drawings of coins that were to be engraved on plates. While Morell's way of conducting numismatic research may be described as visual thinking (“*visuelles Denken*”),⁹¹ Eckhel's approach evidently was much more theoretical, and language-based: it may perhaps be termed “numismatic philology”. Consequently, what Morell bequeathed to posterity were essentially images, while Eckhel left words.

However, this general characterisation of Eckhel's scholarly practice needs to be put into perspective. First and foremost, Eckhel was the curator of the imperial coin collection, which meant that he was surrounded by coins almost every day, from 1774 until his death in 1798. Consequently, the primary objects played a fundamental part in his work, and the need to substitute them with (or consult them in the form of) ‘secondary objects’ such as images or impressions arose just for the types not represented in Vienna. Also, Eckhel of course did work with coin illustrations to some extent: not only with those in books, but for example also with drawings or engravings depicting coins that were sent to him by his correspondents, and which sometimes are found – or at least mentioned – in several of the letters sent to him; we briefly touched upon the images he received from Giacomo Gradenigo in 1776. Furthermore, Eckhel inherited a group of drawings of rare and unpublished coins together with the scholarly papers of his teacher Joseph Khell (1714–1772), which he carefully kept together for study and publication.⁹² As we learn from one of the letters he sent to Countess Bentinck, he was also well

⁸⁸ Corresponding to Eckhel 1792–1798, vol. 8 (1798), pp. 277–320.

⁸⁹ Eckhel 1792–1798, vol. 8 (1798), pp. 391–449.

⁹⁰ Mulsow 2017, p. 319 (“*der visuelle Mensch*”).

⁹¹ Mulsow 2017, p. 337.

⁹² Eckhel 1775, f.)(3r–v: “*coepi colligere [...] numorum ipsa ectypa, quae sibi [sc. Khellio] ex variis regionibus, at majore numero ab illustrissimo Marchione Antonio Savorgnano Veneto [...] liberaliter sunt suppeditata*”.

capable of making coin impressions himself.⁹³ But Eckhel's archive of coin impressions and images is no longer extant,⁹⁴ presumably because it was integrated into the huge collection of numismatic illustrations compiled by his colleague Franz de Paula Neumann (1744–1816),⁹⁵ which is still preserved in the archives of the Vienna coin cabinet: Neumann, who succeeded Eckhel as director of the cabinet, integrated images from Eckhel's files into his own, as research on Eckhel's correspondence has shown.

In the above discussion of Eckhel's manuscripts nos. 120–122, the problem of chronology was deliberately left aside. It is evident that it took him many years to compose his drafts, but – as anticipated above – the texts themselves in general give very few clues as to the precise date when they were written. One exception can be found on p. 115 of the section on Sicily in volume no. 120, where we read: "*Numi Italiae incerti. Vide horum aliquos in Sylloge I. p. 22.*" This reference of course provides a *terminus post quem* of 1786 for the respective part of the manuscript.⁹⁶ In this context, it is important to bear in mind that when Eckhel published the *Descriptio numorum Antiochiae Syriae* in the very same year, the grand work was already completed "*majori sui parte*", according to the somewhat vague passage in the *Descriptio* already cited.⁹⁷

Finally, a word on terminology. As we have seen, for the understanding of the relationship between the various notebooks and manuscripts described above, cross references are extremely instructive. Several intriguing ones may be found in the (early) folio manuscript book no. 79 with the alphabetical listing of Greek mints. Here Eckhel repeatedly refers to a work of his that he calls "*Geographia numismatica*". These references are never part of the original entries on certain mints, but always secondary additions in his hand. They are partly generic,⁹⁸ but sometimes also comprise page references. To give one very clear example, the article "*Claudiopolis Bithyniae, vel Isauriae, quae et Bithynium*" of notebook no. 79 (briefly mentioned in note 69 above) shows several corrections as well as four additions in the margin. One of them reads: "*Lege etiam, quae dixi in Neoclaudiop(olei) Paphl(agoniae) in Geogr(aphia) numism(atice) p. 424*" (figs. 6 and 6a). This is a reference to the Greek section of the draft for his main work that was to be published as *Doctrina numorum veterum*, preserved in manuscript no. 120 in the archives of the Vienna coin cabinet. In the section on the coinage of Asia that is numbered 401–640, we indeed find Eckhel's treatment of the coinage of Neoclaudiopolis on the page indicated in the notebook: it starts with the headline and three lines on p. 423 and then fills the entire p. 424 (figs. 7–8). This indicates that the references to a "*Geographia numismatica*" in Eckhel's notebook no. 79 most probably refer to the first draft of the Greek section of his work.⁹⁹

⁹³ Written on 26 November 1788 (Tartu, University of Tartu, Friedrich Ludwig Schardiuse collection 780, f. 2r): "Bey beschädigten Münzen nützt mir auch die beste Zeichnung nichts. Ich muß mit eignen Augen sehen. Ein andermal werde ich mir die Freyheit nehmen, zwey verschiedene Arten vorzuschlagen, womit man sehr leicht, u(nd) ohne Beschädigung der Münzen Abdrücke davon machen kann."

⁹⁴ For a hint at what may once have existed, see twenty-odd illustrations (primarily drawings) of ancient coins stuck on pages that were bound in at the end of volume no. 2 of the archives of the coin cabinet of the Kunsthistorisches Museum, a codex containing primarily letters sent to Erasmus Frölich (1700–1758) and Joseph Khell. They are accompanied by an envelope inscribed in Eckhel's hand: "*Numi partim incerti, partim quos edendos non censeo*" – hence this was a negative selection.

⁹⁵ On which see, for example, Steinbüchel 1829, p. 102 note.

⁹⁶ See Eckhel 1786b, pp. 22–23.

⁹⁷ Eckhel 1786a, p. XI.

⁹⁸ See, e.g., the entry on Salamis in the notebook no. 79: "*vide [...] meam geogr. numism. in Pergamus.*"

⁹⁹ Since not all parts of manuscript no. 120 belong to the first draft (as pp. 401–640 probably do), not all the "*Geographia numismatica*" page references of notebook no. 79 find a direct match in manuscript no. 120. One may cite Eckhel's entry on the coins of Heraclea Lucaniae in notebook no. 79 as an example: "*de quibus [sc. about coins with the legend HEΛENITΩN listed by Goltzius] v(ide) p(aginam) 445 304 meae Geogr(aphiae) numism(atice)*" – but in manuscript no. 120, the pages on the coinage of "*Helena insula quae et Cranae*" are numbered not 304, but 196–198 in an advanced draft.

Definite proof of this identification is provided by an important leaf bound in after the title-page of manuscript volume no. 120 that we have not mentioned so far. It immediately precedes the first chapter of the manuscript – which belongs to its earliest stage, as shown above – and bears exclusively the words “*GEOGRAPHIA NUMISMATICA*” in Eckhel’s hand (fig. 9). This is probably the original title-page of Eckhel’s first draft of his masterwork, containing systematic notes on Greek and Roman provincial coins.

In the *Doctrina*, the entire first half of the work – volumes 1–4 – is called “*De numis urbium, populorum, regum*”; the title “*Geographia numismatica*” is nowhere to be found. However, as the manuscripts nos. 79 and 120 in the archives of the Vienna coin cabinet show, this must have been the name that Eckhel originally – in the 1770s – chose for his work. The title “*Geographia numismatica*” must have been selected at a time when the author perhaps intended to work exclusively on Greek (and Roman provincial) coins: it does not make sense in the context of Roman Republican or imperial numismatics and would thus have become obsolete as a general title from the moment in which he decided to publish an all-encompassing work on ancient coinage, covering also the Roman Republican and imperial series. Whether Eckhel perhaps informally continued to use it as a subtitle for the first half of his work, on non-Roman coins, is unknown.

Be that as it may, the title “*Geographia numismatica*” is very familiar to historians of our discipline. It first seems to occur as the title of one of the geographical maps accompanying the 1736 catalogue of the Tiepolo collection of ancient coins.¹⁰⁰ A manuscript by Alexandre-Xavier Panel (1699–1764) in eleven volumes, describing the “Museo de medallas de la Real biblioteca” in Madrid, which was written in the years after Panel’s relocation to Spain in 1743, is called “*Geographia numorum*”.¹⁰¹ Erasmus Frölich uses the expression “*Geographia numaria*” in the introduction to an alphabetical listing of Greek mints in his handbook on Greek numismatics.¹⁰² At the end of the 18th century, “*Geographia numismatica*” was chosen as the title for compendious works on Greek (and Roman provincial) coinage in tabular form: for a minor work by Johann Friedrich Wacker (1730–1795),¹⁰³ but, more importantly, also in 1797 for Domenico Sestini’s (1750–1832) *Classes generales geographiae numismaticae*, in which the Italian numismatist paid homage to Eckhel’s system of geographical classification. It is this very book, in which the latter was probably first referred to as “*systema Eckhelianum*” in print.¹⁰⁴

Scholarly correspondence

As pointed out at the beginning of the preceding section, the manuscripts left by Eckhel are all undated. We have seen that he must have started notebook no. 79 at an early moment of his numismatic activity, before he had published anything on the subject, and we know from the 1786 *Descriptio* and a reference in manuscript no. 120 that he was working on what was to become the *Doctrina* in and after that year. Still, in an overall perspective it is difficult to arrive at an understanding of how Eckhel’s work unfolded over time from the manuscripts kept in Vienna. Fortunately, several passages in Eckhel’s own correspondence – as well as the occasional reference in letters exchanged between other scholars – provide valuable evidence in that respect. The following list of the most relevant citations is ordered chronologically; I have numbered them for ease of reference.

¹⁰⁰ Tiepolo 1736, vol. 1: “*Geographia numismatica urbium et populorum quorum nummi in Museo Theupolo asservantur*”.

¹⁰¹ See the contribution by Jean Guillemain to this volume, no. 54 in the appendix.

¹⁰² Frölich 1758, p. 70.

¹⁰³ Wacker 1795. This was published posthumously by Johann Gottfried Lipsius (1754–1820) and printed as an annex to Lipsius 1795; in the preface, Lipsius makes reference to Eckhel’s *Doctrina* (Lipsius 1795, p. 12).

¹⁰⁴ Sestini 1797. As Sestini puts it on p. [V], this work is nothing but the *Doctrina numorum veterum* in the form of a “*compendium*”, with the addition of unpublished coins unknown to Eckhel. As for terminology, see also the “*prefazione*” of Sestini 1796, p. [III]: “il sistema ch’egli [sc. Eckhel] stabilisce”.

1. Giuseppe Garampi (1725–1792) to Gaetano Marini (1742–1815), 13 January 1780¹⁰⁵

“[Sc. Eckhel] sta ora lavorando una istruzione numismatica, la quale però ci prevede che sarà di 5 o 6 volumi in 4°, volendo ivi inserire tutte le sue speciali osservazioni. Ora Sua Maestà ha fatto consegnargli tutti i cammei e gemme intagliate che conservansi nel tesoro cesareo, e staranno in avvenire sotto la di lui custodia. È dunque applicato ora a farne l’inventario e a illustrarli. Prevedo però che il maggior imbarazzo sarà quello di discernere l’opere antiche dalle moderne: pratica che non si può facilmente rendere fuor di Roma. Egli però conserva diligentemente i giudizi datigli su di ciò dal Signor Don Carlo Albani.”

2. Eckhel to Pieter van Damme (1727–1806), 26 April 1780¹⁰⁶

“Il y a quelques années, que j’ai commencé à écrire *la Science des Médailles*, ouvrage, qui sera bien détaillé, et qui est déjà fort avancé” (f. 450v).

3. Eckhel to Gabriele Lancillotto Castelli, prince of Torremuzza (1727–1792), 6 July 1782¹⁰⁷

“Effecisti his Tuis conatibus, ut, quod jam olim in Hispania sua cum laude praestitit Florezius,¹⁰⁸ nihil jam amplius in Siculorum numorum parte desideremus, levastique laborem, a me, qui universam scientiam rei numariae jam inde ab annis pluribus elaboro, Trinacriae reliquijs impendendum” (f. 167r).

4. Georg Zoëga to Christian Gottlob Heyne (1729–1812), 29 August 1782¹⁰⁹

“Ich arbeite täglich sechs Stunden im Museum [sc. the imperial coin collection in Vienna]. Da bekomme ich die Schubladen partienweise wie ich sie verlange, und gehe sie durch unter Anführung einer Suite von Manuskripten, die der Abbé Eckhel mir anvertraut, die theils ausgearbeitete Abhandlungen, theils Entwürfe sind, sämtlich bestimmt ein grosses Werk auszumachen woran er schon seit vier Jahren arbeitet, und woran er noch vier andre zu wenden gedenkt, einen Inbegriff der gesamten Numismatik.”

5. Eckhel to Luigi Lanzi (1732–1810), 17 September 1782¹¹⁰

“Ex quo catalogum musei Caesarei confeci, totus sum in scribendo tractatu de universa re numismatica. Opus istud ut multum jam promovi, restant tamen plurima, quae laboris postulant multum, et consilij, ac denique magna temporis portio limae impertienda” (f. 1r).

6. Giovanni Giacomo Monti († 1783/1785) to Eckhel, 2 October 1782¹¹¹

“La prego a scusare la mia ignoranza, che m’obbliga di ricorrere a lei, e ad occuparla in sì piccole cose, ma ella lasci per me il solo tempo d’avanzo, e non si distraiga dalla bell’opera, che ha intrapreso sopra tutta la scienza numismatica dalla quale aspetto gran lume per le mie fatiche intorno a questo museo” (f. 1r).

7. Eckhel to Jean-François Séguier (1703–1784), 23 May 1783¹¹²

“Vous me pressez de vous communiquer des observations, que j’ai faites sur plusieurs médailles publiées par M(onsieu)r Pellerin, et qui n’ étoient pas assez exactement expliquées par ce grand homme. Je suis bien fâché de ne vous pouvoir satisfaire dans ce moment. Comme elles sont réparties ça et là dans mon grand ouvrage, que j’écris à cette heure sur toute la numismatique, et qui est déjà fort avancé, il ne m’est pas possible de faire en peu de tems ces excerpts” (f. 4v).

¹⁰⁵ Piergentili 2015, p. 415. From 1776 onwards, Garampi had been papal nuncio in Vienna, where this letter was written.

¹⁰⁶ The Hague, Museum Meermanno, FA 400, ff. 450r–451r.

¹⁰⁷ Palermo, Biblioteca Comunale, Qq H 178, ff. 167r–168v. Torremuzza was the author of a standard work on ancient Sicilian coinages.

¹⁰⁸ Enrique Flórez (1702–1773), a Spanish historian who published a groundbreaking work on ancient Spanish coinage.

¹⁰⁹ Andreasen 1967, pp. 292–293 (letter no. 185).

¹¹⁰ Macerata, Biblioteca Comunale “Mozzi Borgetti”, Ms 770–II (515).

¹¹¹ Kunsthistorisches Museum Vienna, coin cabinet, archives V, no. 143.

¹¹² Nîmes, Bibliothèque Municipale, 143, ff. 4r–5v.

8. Eckhel to Georg Zoëga (1755–1809), 4 December 1785¹¹³

“*Quod ad majoris molis opus alterum attinet, nimirum scientiam numariam, fere ad coronidem educ-tum jam est, nihilque aliud jam deest, quam ampla prolegomena, et quod cuperem, novem annorum lima*¹¹⁴” (f. 285r).

9. Eckhel to Pieter van Damme, 8 June 1786¹¹⁵

“[Sc. the *Descriptio numorum Antiochiae Syriae*] contient un essai de l’*Ars critica numaria*, à la quelle je travaille depuis plusieurs années. Vous verrez dans la préface le plan de mes idées plus détaillé, et vous verrez au meme tems, que j’ai entrepris un travail aussi pénible, que dangereux” (f. 472r).

10. Eckhel to Charlotte Sophie Countess of Bentinck (1715–1800), 26 November 1788¹¹⁶

“Ob meine große *Ars critica numaria*, an der ich schon mehrere Jahre arbeite, ein besseres Ganzes heissen wird, werden andere entscheiden müssen” (f. 1r). “Ich habe diese Parthie [sc. the chapter on contorniates] mit vieler Anstrengung ausgearbeitet. Doch hätte ich niemals Lust, sie unter die andern Medaillon zu setzen, weil sie nicht gleichzeitig, und allemal nur Aftermedaillen sind, sondern aus ihnen lieber eine besondere Suite zu machen” (f. 1v).

11. Eckhel to Georg Zoëga, 2 September 1790¹¹⁷

“Die Ausarbeitung meiner *Ars critica numaria* macht immer ihre Vorschritte, u(nd) vielleicht bin ich im künftigen Jahre im Stande, den Druck anzufangen. Bey einem Werke, das sich in so viele Gegenstände theilt, ist das schlimmste, daß, je mehr man sich dem Ende zu nähern glaubt, man noch desto mehr zu bearbeiten vorfindet. Dieß erfahre ich itzt zum meisten, seit ich mit den Prolegomenis generalibus beschäftigt bin” (f. 291v).

12. Eckhel to Georg Zoëga, 8 August 1792¹¹⁸

“Der erste Band der *Ars critica numaria*, der ich aber den Namen *Doctrina numorum veterum* gegeben habe, wird sicher künftigen Monath erscheinen” (f. 296r).

13. Eckhel to Esprit-Marie Cousinéry (1747–1833), 17 February 1795¹¹⁹

“Je ne sais pas, si vous avez connaissance de mon grand ouvrage qui s’imprime actuellement ici, dont le titre est, *Doctrina numorum veterum*, il-y-a déjà cinq volumes in 4^{to} d’imprimés, et trois autres en suivront encore. Je n’y gagne rien, et tout le profit est au libraire; je me suis seulement réservé un petit nombre d’exemplaires pour ceux à qui je devois faire des présens. [...] Un volume coûte 6 à 7 florins d’Autriche. Le total sera pour vous une somme assez considérable. Si par hazard vous étiez dans le cas de pouvoir céder au Cabinet impérial quelques médailles que vous avez en double, et qui y manquent, je pourrois acheter pour vous un exemplaire, et le vous envoyer. Comme tout ce que la numismatique a d’intéressant, y est compris, rédigé par un travail de plus de 15 années, vous vous pouvez passer moyennant celui de tout ce fatras des livres que vous me demandez, et qui, ôtre le prix considérable, sont si difficiles à être trouvés” (ff. 13v–14r).

¹¹³ Bonn, Universitäts- und Landesbibliothek, S. 711, ff. 284r–285v.

¹¹⁴ The “nine years’ polish” is an evident allusion to Catullus c. 95, 1–2 (*Zmyrna mei Cinnae nonam post denique messem / quam coepta est nonamque edita post hiemem*) and/or Horace, Ars P. 388–389 (*nonumque prematur in annum / membranis intus positis*). The Alexandrian poets and their Neoteric followers in Rome pledged themselves to creating elaborate, highly learned, sometimes oversophisticated poems regardless of the necessarily lengthy production process. I am grateful to my father Erich Woytek for advising me on this point.

¹¹⁵ The Hague, Museum Meermanno, FA 400, ff. 472r–473v.

¹¹⁶ Tartu, University of Tartu, Friedrich Ludwig Schardiusse collection 780.

¹¹⁷ Bonn, Universitäts- und Landesbibliothek, S. 711, ff. 291r–292r.

¹¹⁸ Bonn, Universitäts- und Landesbibliothek, S. 711, ff. 295r–296v.

¹¹⁹ Paris, Bibliothèque de l’Arsenal, ms. 5983, ff. 13r–14r.

These passages add substantially to our knowledge of the chronology of Eckhel's work. Eckhel was appointed keeper of the ancient coins of the imperial cabinet in Vienna on 1 March 1774.¹²⁰ By 1780, the year after the publication of the two-volume *Catalogus* of the imperial collection of ancient coins, Eckhel had been working on his general work on ancient coinage for "several years" and calls it "very much advanced" (no. 2). In the summer of 1782, Zoëga informed Heyne that Eckhel had been busy with it for four years – which implies a starting date of 1778 – and that he intended to work on it for four more (no. 4). Hence, Eckhel effectively must have conceived the *Doctrina* while preparing the *Catalogus*. As we have seen in the previous section, for his project Eckhel was able to use materials that he had started compiling much earlier still: the Vienna notebook no. 79 on Greek and Roman provincial coinage, for example, dates from the period before his trip to Italy in 1772/1773. With a huge project like the *Doctrina*, one may argue that it is to some extent a question of definition when the preparatory stages were completed and the writing proper began.

The same passage in the letter by Zoëga (no. 4) would point to a date of late 1786 for the projected conclusion of the work, which is in good agreement with what Eckhel told his readers in the *Descriptio numorum Antiochiae Syriae* published in 1786, where he stated that the major part of his work had already been finished by that time.¹²¹ Already by 1780 Giuseppe Garampi had heard – presumably from Eckhel himself, with whom he was in touch in Vienna – that the work would perhaps comprise as many as five or six quarto volumes (no. 1). Hence, twelve years before the publication of volume 1 of the *Doctrina* in 1792, Eckhel already had quite a good idea of what the final product should look like. Such an early chronology is in keeping with a passage in a letter written to Cousinéry in February 1795, where Eckhel says that he has been working on the *Doctrina* for more than 15 years – which means that he started before 1780 (no. 13).

The two-part structure of the *Catalogus* much prefigures that of the *Doctrina*. After the catalogue had been published, in 1779, Eckhel was concentrating on his handbook (no. 5), at least as far as numismatics was concerned: the transfer of the ancient gems and cameos of the imperial collection into the coin cabinet – and, consequently, into Eckhel's custody – in 1779/1780 (no. 1),¹²² ultimately leading to a splendid publication on this material by Eckhel,¹²³ naturally delayed the completion of his multi-volume work on ancient coinage.

In December 1785, the year before the publication of his *Descriptio numorum Antiochiae Syriae* in which he announced the project in print, Eckhel informed Georg Zoëga that the work was almost completed, but that the introductory chapters still had to be written, and the final polish was still missing (no. 8): we may safely assume that Eckhel was working on the manuscripts that are preserved in Vienna at that time, but that the final version – of which only six leaves survive – had yet to be prepared. In November 1788, the chapter on contorniates, to be printed in the section "*Pseudomoneta*" of volume 8 of the *Doctrina*,¹²⁴ had already been written (no. 10). From the passage cited above under no. 11 we learn that Eckhel was working on the famous "*Prolegomena generalia*" of volume 1 in September 1790. This introduction was evidently the last part of the *Doctrina* to be written; Tanini's supplement to Banduri's work on Roman imperial coins, published in Rome in 1791,¹²⁵ is not only the last entry in the chronological list of numismatic publications featured in the *Prolegomena*,¹²⁶ but Eckhel also

¹²⁰ This is the date of the decree by the Oberstkämmerer; Eckhel was to take up his post about two weeks later, on 14 March: see Bergmann 1857, p. 328.

¹²¹ Eckhel 1786a, p. XI.

¹²² On this transfer, see also Hassmann – Winter 2016, p. 67.

¹²³ Eckhel 1788. On this work see the contribution by Gabriella Tassinari in this volume.

¹²⁴ Eckhel 1792–1798, vol. 8 (1798), pp. 277–314.

¹²⁵ Taninius 1791.

¹²⁶ Eckhel 1792–1798, vol. 1 (1792), p. CLXXII.

comments on aspects of Tanini's book in another part of the introduction, which was evidently penned after he had received the new monograph, thus during the year 1791 at the earliest.¹²⁷ Georg Zoëga was informed about the last-minute title change, from "*Ars critica numaria*" to "*Doctrina numorum veterum*", in August 1792 (no. 12). Before that, reference to the work is made in letters under the title "la science des médailles" (1780, no. 2), "*Scientia rei numariae*" (1782, no. 3) or "*Scientia numaria*" (1785, no. 8) as well as "*Ars critica numaria*" (1786–1790, nos. 9–11), never as "*Geographia numismatica*": this may indicate that the latter name, known to us from the Vienna manuscripts nos. 79 and 120, was a designation used by Eckhel just at the very earliest stage of his work on the manuscript, in the 1770s. By 1780, it had become clear that the work would embrace both Greek and Roman coinage, and the term was no longer appropriate: Eckhel was to rewrite not just the *Geographia numismatica*, but the entire *Scientia rei numariae*.

Georg Zoëga's papers in Copenhagen and Friedrich Münter's numismatic manuscript

Eckhel and Zoëga met in 1782 for the first and only time in their lives. Zoëga, who had been designated as the future curator of the Royal Danish coin collection in Copenhagen, then held a grant from the Danish government and was travelling Europe to study numismatics. He first stopped at Göttingen, where he briefly stayed for consultations with his teacher Christian Gottlob Heyne, with whom Zoëga had studied from 1773 to 1776 and again in 1779/1780.¹²⁸ Then he set out to Gotha, where he met the aged numismatist Julius Carl Schläger (1706–1786) and worked in the famous coin collection for about a week. On 5 July 1782 Zoëga arrived in Vienna, the first main destination of his trip, with a letter of recommendation to Eckhel written by Heyne on 10 June 1782.¹²⁹ Zoëga stayed for about five months, until the beginning of December 1782, enjoying a period of intense and fruitful study. Four letters in his correspondence provide us with information on his activities. On 10 July 1782, five days after his arrival, he told his brother W. C. Zoëga that he had already taken up his numismatic studies: "Bey [...] den Gelehrten denen ich empfohlen war" – apart from Eckhel this was the latter's colleague at the coin cabinet, Franz Neumann¹³⁰ – "habe ich eine sehr günstige Aufnahme gefunden, u. heute angefangen im kais. Museum zu arbeiten. Ich habe die Erlaubniß alle Tage von 9–12 u. 3–6 da zu seyn, u. habe alsdann sowohl die Münzen als die Bibliothek zu meinen Diensten."¹³¹

In the important letter of appreciation written to Heyne on 29 August 1782, already quoted above in part (no. 4), Zoëga gives more details about his work in the museum in Vienna:

"Da bekomme ich die Schubladen partienweise wie ich sie verlange, und gehe sie durch unter Anführung einer Suite von Manuskripten, die der Abbé Eckhel mir anvertraut, die theils ausgearbeitete Abhandlungen, theils Entwürfe sind, sämtlich bestimmt ein grosses Werk auszumachen woran er schon seit vier Jahren arbeitet, und woran er noch vier andre zu wenden gedenkt, einen Inbegriff der gesamten Numismatik, Sammlung und Absonderung alles dessen was bisher in der Wissenschaft gutes gesagt worden, nach eignem Plane, geordnet mit eignen Zusäzen und Verbesserungen, just ein

¹²⁷ Eckhel 1792–1798, p. CXVIII.

¹²⁸ On the close relationship between Zoëga and Heyne, whose influence was crucial in Zoëga's decision to become an archaeologist, see Graepler 2015. The letter in which Zoëga announced that he was coming to Göttingen: Andreasen 1967, pp. 272–273, no. 171 (14 May 1782).

¹²⁹ Kunsthistorisches Museum Vienna, coin cabinet, archives V, letter no. 90. For a transcription and illustration of this letter, see Williams – Woytek 2015, pp. 109–110.

¹³⁰ A letter of recommendation by Heyne to Neumann, written on the same day as the letter to Eckhel (10 June 1782), is preserved in the archives of the collection of Greek and Roman antiquities of the Kunsthistorisches Museum Vienna (Korrespondenz Neumann, vol. IIIA); see Woytek (forthcoming) b.

¹³¹ Andreasen 1967, p. 287 (letter no. 182).

Werk wie wirs bedürfen um das Studium leicht und zusammenhangend zu machen, ihm Würde und Festigkeit zu geben die ihm bisher noch mangeln. Ein solches Werk war es das ich mir wünschte als ich anfieng zu allererst mich auf diese Wissenschaft zu legen, ich denke ich schrieb Ihnen einmal meine Gedanken davon, weil alles was mir in die Hände kam nur Bruchstücke waren, kein ganzes, auch keine Fugen daß man sie an einander passen könnte.¹³² Ich kann von diesen Handschriften freien Gebrauch machen, mir daraus aufzeichnen so viel ich will, und wo sie mich nicht befriedigen wende ich mich an den Mann selbst. Er hat seine Wohnung gleich unter dem Cabinette, und da bin ich ihm immer willkommen. Ich hätte in der Wahl eines Lehrers nicht glücklicher seyn können. Auch in Neumann haben Sie mir einen sehr schätzbaren Freund verschafft, den ich izt erst, indem ich eben im Begriff bin zu den Griechischen Münzen überzugehn, recht zu brauchen anfangen werde.”¹³³

This letter sheds light not only on Zoëga's studies in the imperial coin cabinet, but also on the genesis of Eckhel's *Doctrina*. According to Zoëga's account, he studied not only the ancient coins of the imperial cabinet, during his six-hour working days there, but also manuscripts that Eckhel made available to him for perusal and copying: these were in part completed essays, but partly mere drafts or notes; all of them were written for Eckhel's all-encompassing handbook on ancient numismatics. Zoëga consulted the coins in parallel with the relevant parts of the manuscripts and asked the learned keeper of the collection for help when needed. He started with the Roman coins, on which he was working in July and August 1782; on 29 August he was about to begin viewing the Greek coins, for the study of which he hoped to be able to rely on Neumann's expertise as well as Eckhel's. The Greek coins kept Zoëga busy for about the same time as the Roman ones, about two months, as we learn from a letter that he wrote to his friend Christian Hieronymus Esmarch (1752–1820) on 6 October 1782: “Ich bin hier in Erreichung meiner Absichten sehr glücklich gewesen, viel mehr als ich auf rechnen durfte, werde hier eben deswegen auch eher fertig als ich glaubte. Noch 14 Tage so habe ich das kaiserliche Cabinet zu Ende gebracht, und bey der Gelegenheit mir ein System gemacht um ein jedes andres geschwinde und leicht zu übersehen.”¹³⁴ Hence, in the course of about four months, Zoëga had not only viewed the Roman and Greek coins of the imperial cabinet that he wanted to see, but also studied Eckhel's pertinent manuscripts. Towards the end of his stay, he examined the ancient gems of the Vienna collection as well, as he told his brother a few days before his departure: “Eckhel hat das Zutrauen zu mir gehabt mir sowohl die Medaillen als die Edelsteine des Cabinets, welche letztere nicht einmal inventirt sind, zum freyen Gebrauch zu lassen, zugleich seine eignen Papiere, woraus ich in wenigen Monaten mehr Unterricht geschöpft habe als ich in so viel Jahren durch eigne Lektüre u. Erfahrung hätte sammeln können.”¹³⁵ As mentioned above, the gems and cameos had been placed in Eckhel's custody just a couple of years earlier, in 1779/1780.¹³⁶

Zoëga left Vienna on 5 December 1782 and travelled on to Italy.¹³⁷ He was never to return to his native Denmark: he lived in Rome from January 1783 onwards, started a family there and died in the Eternal City on 10 February 1809, at the age of 54. He left a considerable quantity of excerpts, notes and manuscripts that were rightly considered to be of the highest intellectual value by his friends: the papers contained, among other things, print-ready manuscripts of several monographs. The famous sculptor Bertel Thorvaldsen (1770–1844), one of the central figures of the Danish expatriate com-

¹³² This is a reference to the momentous letter Andreasen 1967, pp. 246–251 (no. 148; 11 September 1781), where he told Heyne: “Nun dünkt mir das ein wunderlich Ding daß alle die von Münzen schreiben sich das Ansehen geben als supplirten sie, und nirgends existirt der Hauptkatalog. [...] des Geschriebnen ist so erstaunlich viel, und schließt sich nirgends an einander” (p. 247).

¹³³ Andreasen 1967, pp. 292–293 (letter no. 185).

¹³⁴ Andreasen 1967, p. 297 (letter no. 188).

¹³⁵ Andreasen 1967, p. 308 (letter no. 191, to W. C. Zoëga, Vienna, 1 December 1782).

¹³⁶ See the letter by Garampi to Marini, no. 1 in the list of the preceding section of this paper.

¹³⁷ See Andreasen 1967, pp. 305–306 (letter no. 190, to Esmarch).

munity in Rome, packed all of Zoëga's papers in a sealed chest and safeguarded it, mainly in order to prevent unauthorised use or theft by Italian scholars. Between March and May 1809 – thus a short time after Zoëga's demise – the Danish classical scholar Georg Koës (1782–1811) compiled an inventory of the papers in Thorvaldsen's house in Rome in via Sistina. As has correctly been pointed out recently, there is no reason whatsoever to suspect that Koës rearranged the material, but he probably catalogued what he found in the order in which he found it; Zoëga is believed to have been a very well organised scholar.¹³⁸ Later that same year, the Danish state acquired the papers from Zoëga's estate for the Royal Library in Copenhagen, where they have since been kept, under the shelfmark NKS 357b fol. They are still ordered according to Koës' catalogue, comprising 17 categories (numbered in Roman numerals), with numerous sub-sections.¹³⁹

During a study visit to the Royal Library in Copenhagen in the autumn of 2014, category IV of Zoëga's papers, dealing with numismatic matters, was critically examined by Daniela Williams and this author. The focus was on section IV.3, which in the library catalogue is somewhat mysteriously referred to as: "*Schedae inscriptae: Note e Studij di Numismatica, quarum initium non auctoris manum prodet.*"¹⁴⁰ The nucleus of this section is a group of more than 600 unbound pages with closely written manuscript notes mostly in Latin and in black ink, but sometimes also in pencil (fig. 10). These well-used pages – which do not have any kind of title – doubtless form a coherent group; apart from it, other miscellaneous numismatic notes are part of this section as well, for example papers kept in wrappers (in fact, a reused proof-sheet) inscribed "Note e Studij di Numismatica" which gave the entire section its (misleading) name in the catalogue by Koës.

The pages of the coherent group that are relevant to our purpose measure c. 21–22.5 cm in height, with a width of c. 16.5–17 cm. Most of them are bifolia, with some single leaves being used as well. Numbering is not straightforward: not single pages or leaves are numbered, but mostly bifolia, in Arabic, in the upper right corner of the first page of each bifolium. However, in some cases unnumbered leaves are additionally inserted, and in others sub-numbers like 50b, 50c, 50d etc. (up to 50l) are introduced. Numbers 1–137 are attested, with nos. 34–43 and some other single ones missing. At the end of the collection, quires with separate numberings like [P1]–P11 and [A]–Δ are to be found, as well as unnumbered pages/quires.

The manuscript starts with a treatment of Roman imperial coinage, from Caesar to Julianus and Helena (with very few notes on later coins), on quires 1–33. After a gap (34–43 are missing), a geographical survey of Greek coins follows: Hispania to Oricus Illyrici (44–57), Phoenice Epiri to Mosteni Lydiae (58–82) and Nacrasa Lydiae to Zeugitana (83–98).¹⁴¹ This is followed by typological commentaries on the Roman coinage of Alexandria (99–100) and a systematic treatment of royal coinages of the Greek world, starting with a general introduction and the Kings of Macedon (101–103). Then, on bifolia 104–107, the royal issues of Syria, Cappadocia, Bithynia, Parthia etc. and Cyrenaica are discussed, followed by additional notes on the coinage of Alexander the Great and excerpts from Pellerin and Eckhel's 1775 *Numi veteres anecdoti* (108–110c). The bifolia in the "royal" section bear a double numbering: in addition to the *numerus currens* (101–107), they are marked "Rg. 1" (= 101) to "Rg. 7" (= 107). The remaining quires (numbered 111–137, plus the separately numbered or the unnumbered ones, as detailed above) all contain excerpts from numismatic literature as well, with a particular emphasis on the 18th century and especially on works by Viennese numismatists – in addition to Eckhel and Neumann e.g. by Erasmus Frölich – and books by Pellerin; it is not necessary to provide a listing of all of them in

¹³⁸ Boserup 2015, p. 17.

¹³⁹ For a detailed account of the cataloguing of Zoëga's papers, see Boserup 2015.

¹⁴⁰ See Boserup 2015, p. 22 (Appendix).

¹⁴¹ This division into three bundles is modern and purely arbitrary: it results from the simple fact that each group is in separate wrappers, although they form a continuum.

this context. The section on Greek and Roman coins of the manuscript is made accessible through an exceedingly detailed 72-page manuscript index of cities, kings and emperors, on smaller pages measuring c. 19.1–21.2 cm × 8.4–10 cm.

This manuscript may be identified as the ensemble of notes compiled by Zoëga during his research visit to Vienna from July to November 1782. Not only do we find the odd direct reference to explanations by Eckhel in these papers,¹⁴² but even their structure ties in neatly with what we know about Zoëga's numismatic activity in the imperial collection from his letters: he started with the Roman coins and subsequently, from late August onwards, studied the Greek coins. Also, he was making full use of the excellent numismatic library of the imperial collection, as documented by his numerous excerpts. While the latter are not relevant in our context, his notes on the Roman and Greek series are of the highest importance: they constitute an accurate snapshot of how far advanced Eckhel's work was in 1782.

Zoëga's manuscripts provide a sort of skeleton of the Roman imperial and the Greek sections of what eventually was to become the *Doctrina*. They document that by mid-1782, Eckhel had compiled a basic draft for the entire Greek section, as well as for the imperial coins from Caesar to the mid-4th century AD. Zoëga's numismatic papers, as preserved today in Copenhagen under the shelfmark NKS 357b fol. IV.3, do not contain any information on Roman Republican coinage. The fact that there is a gap in the numbering of the quires from 34 to 43, between the Roman and Greek sections, might *prima facie* be taken to indicate that his notes on the pre-imperial Roman issues are simply missing, but this is uncertain; we will return to this problem further below.

As for their outward appearance, the loose quires of Zoëga's manuscript clearly matched the original form of Eckhel's drafts, before the latter were bound together. However, unlike Eckhel, Zoëga did not leave margins for additions or corrections, but used the full width of the pages. Structurally, the main characteristic of the manuscript is its informal organisation: sometimes we find full sentences, but often just brief notes, interspersed with coin descriptions, dates, and references to secondary literature, evidently compiled by the Danish scholar on a daily basis, as he proceeded with his study of the coins. However, a guideline in the form of a written text is clearly recognisable. A comparison of the first page of the Greek section of Zoëga's manuscript, containing general information on the coinage of Spain,¹⁴³ with the corresponding initial passage in Eckhel's manuscript of the Greek section of the *Doctrina*, which we have already described above,¹⁴⁴ proves the point. In Eckhel's version, the first three lines are as follows (fig. 11): "*HISPANIA. Duplex monetae Hispaniensis genus. 1. cum Hispania sui iuris esset. 2. cum Romanis subdita.*" In Zoëga's manuscript, the first three lines read (fig. 12): "*Hispania duplex monetae genus. 1. cum Hispania sui iuris esset. 2. cum Romanis subdita, usq(ue) sub Caligula.*" In the immediately following passage, much of Zoëga's text also seems to be copied more or less directly from Eckhel's, with the exception of, for example, references to Eckhel's 1779 *Catalogus* of the collection¹⁴⁵ or the occasional commentary by the writer himself.¹⁴⁶

Taken all together, we may be certain that Eckhel's pages on the ancient coinage of Spain preserved in volume no. 120 of the archives of the Vienna coin cabinet were among the manuscripts that he made available to Zoëga in 1782, during the visit of the young Danish archaeologist to Vienna. This provides us with a very helpful chronological *terminus ante quem* for an otherwise non-datable manuscript by Eckhel. In this context, it must be remembered that this passage is part of the earliest stage of Eckhel's

¹⁴² See, for example, bifolium no. 1, p. 4: "*secundum Eckhelii explicat(ionem)*".

¹⁴³ NKS 357b fol. IV.3, bifolium no. 44, p. 1.

¹⁴⁴ Kunsthistorisches Museum Vienna, coin cabinet, archives no. 120, p. 3.

¹⁴⁵ The *Catalogus* was inevitably on Zoëga's desk, as he examined the coins.

¹⁴⁶ For example, on bifolium 44, p. 1 Zoëga says: "*In uno [sc. numo] M(usei) C(aesarei) capita sunt iugata ut videtur laureata + Biga lenta (n. 22 inter barbaros relegandum puto, nec non n. 23).*" This passage refers to Eckhel 1779, part 1, pp. 9–10, coins nos. 21–23.

draft today traceable in volume no. 120: it was all stricken out by the author at some point, when he prepared the second draft – which, unfortunately, does not survive for this part of the *Doctrina*. According to the evidence that has now been made available, the second draft of the Greek section must have been written some time after 1782.

The identification of the re-discovered manuscript in the Royal Library of Copenhagen (NKS 357b fol. IV.3) as the notes compiled by Zoëga in Vienna in 1782 is also of considerable value for reasons that are not directly related to the study of the genesis of Eckhel's *Doctrina*. Firstly, simply because the whereabouts – and, indeed, the survival – of this manuscript in Zoëga's hand had been hitherto unknown. For example, in his authoritative account of the history of research in ancient numismatics in Denmark in the late 18th and 19th centuries, Otto Mørkholm mentioned that Zoëga was generously allowed to make a copy of Eckhel's manuscripts, but Mørkholm was apparently unaware of the fact that Zoëga's pages were preserved in the Royal Library.¹⁴⁷ Secondly, it is important to be able to consult Zoëga's text for a better appreciation of an influential excerpt from it that was prepared by the theologian, orientalist, coin collector and numismatist Friedrich Münter in 1786.¹⁴⁸ Münter travelled through Europe from 1784 to 1787. Following in Zoëga's footsteps, he met Eckhel in Vienna and gave an interesting characterisation of him in his diary (although he saw him only briefly);¹⁴⁹ he then travelled on to Italy. In early 1785 he arrived in Rome and immediately went to see Zoëga, with whom, over the following decades, he developed a close friendship in which numismatics and, more specifically, Münter's coin collecting were to play a decisive role.¹⁵⁰

Obviously Zoëga had brought his copy of Eckhel's papers with him to Italy. From 5 September 1786 onwards, Münter made excerpts from this manuscript, as we read in his diary: "weil m(ein) Vater mir nochmals schrieb, mich drauf vorzubereiten, das königl(iche) Cab(inet) ordnen zu können,¹⁵¹ gab mir Zoega s(eine) Abschriften von Eckhels System der Numismatik; ich gieng also gleich zu Hause, u(nd) fieng an dieses zu excerptiren."¹⁵² Until 28–30 September, when he finished the imperial section, Münter regularly mentions working on the manuscript;¹⁵³ in the entry for 19 December 1786 we finally read: "Den ganzen Morgen arbeitete ich an Zoegas Papieren, u(nd) endigte die Abschrift."¹⁵⁴ As is well known,¹⁵⁵ his copy, a manuscript book comprising 212 pages numbered consecutively,¹⁵⁶ is kept in the library of the Copenhagen coin cabinet today. Unlike Zoëga's manuscript, it sports a title-page (fig. 13): "*Iosephi Eckhelii systema rei numariae. Ex apographo Georgii Zoëgae excerptum. Romae MDCCLXXXVI. F(ridericus) M(ünter)*."¹⁵⁷ There can be no doubt that "*Systema rei numariae*" was the title that Zoëga used for his manuscript, too – probably on a lost title-page. As we just saw, Münter wrote in his diary

¹⁴⁷ Mørkholm 1981, p. 128.

¹⁴⁸ On Münter and numismatics, see in general Galster 1959 and Mørkholm 1981, pp. 129–138; on his relationship with Zoëga see Fischer-Hansen 2015. For antiquarian papers by him (*inter alia* one on coins) see Münter 1816, for the catalogue of his extensive coin collection, see *Museum Münterianum* 1836–1839.

¹⁴⁹ Andreasen 1937, vol. 1, pp. 85–86, 109.

¹⁵⁰ Fischer-Hansen 2015, pp. 88–91.

¹⁵¹ At that time, the directorship of the Royal Danish coin collection was still vacant, since Zoëga had finally renounced the offer to take up the position; Münter was a candidate: see Mørkholm 1981, pp. 129–130.

¹⁵² Andreasen 1937, vol. 2, p. 214.

¹⁵³ Andreasen 1937, vol. 2, pp. 215–219.

¹⁵⁴ Andreasen 1937, vol. 2, p. 252. The episode is also mentioned by Galster 1959, p. 35.

¹⁵⁵ See already Mørkholm 1981, pp. 130–131.

¹⁵⁶ Münter neatly divided each page in half by vertically folding the quires and wrote only on the inner halves of the pages, leaving the outer ones, which he used only for subheadings, mostly blank for potential notes and additions.

¹⁵⁷ On the last page, Münter accurately noted the days on which he had started and finished copying the manuscript: "*inchoat(um) Romae IV. Non. Septembris, absolut(um) Romae XI. Kal. Ianuarias exeuntis anni MDCCLXXXVI*". Note the slight discrepancies between the dates given in the diary (for which see the text) and in the manuscript itself: 2 September and 22 December.

that he copied the “Abschriften von Eckhels System der Numismatik”, thus potentially translating the title of Zoëga’s pages. Also, in the above-cited passage of a letter to Esmarch Zoëga himself related that during his stay in Vienna he had not only viewed the coins of the Vienna cabinet, but also made for himself “ein System” for surveying other coin collections quickly and easily.¹⁵⁸

Unsurprisingly, Münter’s copy starts with the Roman imperial coinage, as does Zoëga’s manuscript – hence, according to the conventions of the period, with Julius Caesar. Münter’s manuscript is an excerpt, as stated on the title-page, and not a faithful copy: Münter was clearly selective in his work, at least at times, so that only Zoëga’s manuscript can be used as an immediate source for the status of Eckhel’s work in 1782, not Münter’s. Pages 1–55 of Münter’s manuscript book cover the Roman imperial coinage up to Helena, p. 56 is left blank, and from p. 57 to p. 211 there is a systematic treatment of Greek coins, ordered geographically from Hispania to Zeugitana. The pages on the coinage of Greek kings which follow in Zoëga’s manuscript were not excerpted by Münter; all of the notes that Zoëga made on the contents of numismatic books that he used in Vienna are (understandably) missing as well. It is striking that the excerpts by Münter do not contain any information on Roman Republican coinage – just as Zoëga’s manuscript, from which, however, quires 34–43 are missing today. We do not know what the latter contained; strictly speaking we cannot even be sure that Zoëga compiled any notes on Republican coins in Vienna at all.

Münter’s excerpts have gained a certain prominence because he met Goethe in Rome and told him about a numismatic manuscript in his possession, praising its merits: this must of course be his precious excerpt of Zoëga’s manuscript, summing up the core of Eckhel’s teachings. Without mentioning Eckhel’s name, Goethe – who perhaps did not know anything about the history of this manuscript himself – told Johann Gottfried Herder (1744–1803) about it by letter on 25 January 1787, advised him to check it and to have it copied for Goethe, if it really was as important as Münter claimed:

“Noch eins. Wenn Münter kommt! Er prätendirt ein Manuscript zu haben das die Münzwissenschaft auf scharfe Kennzeichen, wie die Linnaische sind, zurückführt, laß dirs doch zeigen, und wenn es so ist, laß mirs abschreiben. So etwas zu machen ist möglich, gut wenn es gemacht ist und ich brauch es, denn ich muß nun auch über diese Trümmern mich ausbreiten.”¹⁵⁹

Goethe mentioned Münter’s numismatic manuscript again in a passage of his *Italian Journey*, under 20 December 1786 – and again without naming Eckhel, a fact which has understandably created some confusion in scholarship:

“Schöne Münzen hat er [sc. Doktor Münter] gesammelt und besitzt, wie er mir sagte, ein Manuscript, welches die Münzwissenschaft auf scharfe Kennzeichen, wie die Linnéschen sind, zurückführt. Herder erkundigt sich wohl mehr darum, vielleicht wird eine Abschrift erlaubt.”¹⁶⁰

It is perhaps not by chance that Münter, who had distilled the essence of the copious notes made by Zoëga in Vienna in 1782, was the first to compare Linnaeus and Eckhel: in preparing his 1786 excerpt, he was visualising the latter’s great achievement in the shape of a small manuscript book, before Eckhel himself had published his “system”.

* * *

The *Doctrina numorum veterum* was published in eight volumes during the author’s final years. Volume 1, printed in 1792, bears a dedication to Francis II (1768–1835), the last Holy Roman Emperor,

¹⁵⁸ Andreasen 1967, p. 297 (letter no. 188).

¹⁵⁹ Giel 2012, vol. 7, part I, p. 99 (letter no. 58). In his commentary on this passage Giel 2012, vol. 7, part II, p. 233 mistakenly asserts: “Über ein derartiges numismatisches Manuscript Münters ist nichts bekannt.”

¹⁶⁰ Pick 1931, p. 119 cited this passage of the *Italian Journey*, but took it to refer to an unpublished numismatic manuscript authored by Münter himself. Mørholm 1981, p. 130, by contrast, interpreted the passage in Goethe correctly.

who had been crowned on 14 July of that very year. In the four-page text of his dedication, Eckhel also commemorated the Emperor's late father Leopold II, who – as Grand Duke of Tuscany – 19 years earlier had recommended the numismatist to Maria Theresa,¹⁶¹ after Eckhel had worked in the Florence coin cabinet. Thereby Leopold enabled Eckhel's subsequent career in Vienna, starting in March 1774, when he was appointed director of the imperial collection of ancient coins. In the dedication of the *Doctrina*, Eckhel took up grateful remarks about Leopold's patronage that he had made in his first numismatic book, the *Numi veteres anecdoti* of 1775, dedicated to Maria Theresa.¹⁶² By 1792, the wheel had come full circle.

Research on the work's genesis has shown that it must be understood as a project that accompanied Eckhel almost throughout his entire working life in Vienna. The materials Eckhel used may partly be demonstrated to have been compiled from the end of the 1760s or the beginning of the 1770s onwards, for example a momentous notebook on Greek mints (no. 79 of the archives of the Vienna coin cabinet). He must have conceived an all-encompassing work on ancient coinage a short time after publishing the *Numi veteres anecdoti* and seems to have started working on it in parallel with the preparation of the catalogue of ancient coins in the imperial collection, which was printed in 1779. After that year, Eckhel concentrated on his handbook: by 1780, it was clear that it was to be a multi-volume work. In 1782, when Zoëga studied in Vienna, the Danish scholar already had substantial drafts of the Greek and Roman sections in Eckhel's hand to work with; in 1786, the main parts had been completed, and Eckhel published a short book, the *Descriptio numorum Antiochiae Syriae*, in which he announced the project to the world. The general introduction, finally, was drafted in 1791/1792, immediately before volume 1 was printed.

The process of research and writing that led up to the publication had started about twenty years earlier. It is not surprising that during this protracted period the project underwent conceptual and terminological changes. As has emerged from the study of his notebooks, Eckhel originally called his notes on Greek and Roman provincial coinage that were ordered geographically "*Geographia numismatica*". Before 1786, the project is referred to as "*Scientia rei numariae*" (vel sim.) in his letters; neither name made it into print. We know from the *Descriptio numorum Antiochiae Syriae* as well as from Eckhel's correspondence that from 1786 he planned to call his work *Ars critica numaria*. The title *Doctrina numorum veterum* goes back to a somewhat mysterious last-minute change in 1792. By choosing this title, Eckhel drew on – and modified – headlines in a manuscript notebook mainly on ancient gems that he had used over a considerable period of time, presumably from c. the late 1770s or early 1780s onwards:¹⁶³ most importantly "*Doctrina gemmarum veterum*" (this is the double-underlined title on the first page of the notebook: fig. 14), but also "*Doctrina artis veterum*".¹⁶⁴

¹⁶¹ Eckhel 1792–1798, vol. 1 (1792), dedication (on unsigned quire): "*deprecante Augusto parente TVO*".

¹⁶² Eckhel 1775, dedication (on unsigned quire): "*me, deprecante MAGNO ETRVRIAE DVCE, in omnem vitam beati, cum insignem TVVM monetae veteris Thesaurum meae fidei credidisti*".

¹⁶³ Archives of the collection of Greek and Roman antiquities of the Kunsthistorisches Museum, no. 19 (see also note 58 above). This notebook, comprising 364 pp., many of which are blank, must have been started a considerable time before Eckhel published his catalogue of gems and cameos in the imperial collection (Eckhel 1788); some of the notes were made in view of this publication. The latest datable entry on gems is on p. 242, where the second volume of Bracci 1784–1786 is cited. However, the bulk of the notes on gems – to be found mainly in the first part of the manuscript volume (pp. 1–122), apart from a section called "*Catalogus gemmarum veterum*" on pp. 236–287 – seems to have been compiled a little earlier.

¹⁶⁴ Archives of the collection of Greek and Roman antiquities, no. 19, p. 147. The chapter under this headline seems to have been written later than pp. 1ff., also to judge from the style of handwriting. The notebook continued in use (apparently sporadically) until the later 1790s, to which time some notes at the back may be dated: on p. 297, there is an "Auszug aus Böttigers griechische Vasengemälde I. Band 1 Heft" (= Böttiger 1797).

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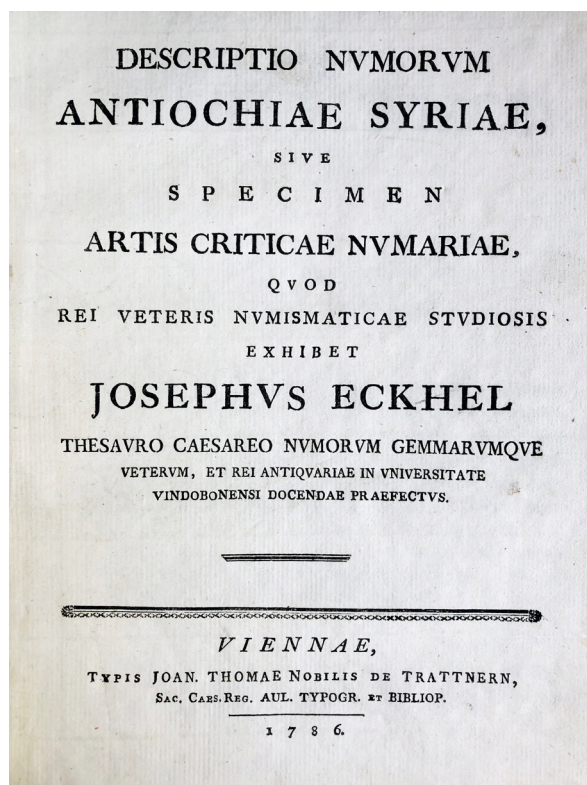


Fig. 1: *Descriptio numorum Antiochiae Syriae* (Eckhel 1786a), title-page. Photo: Author.

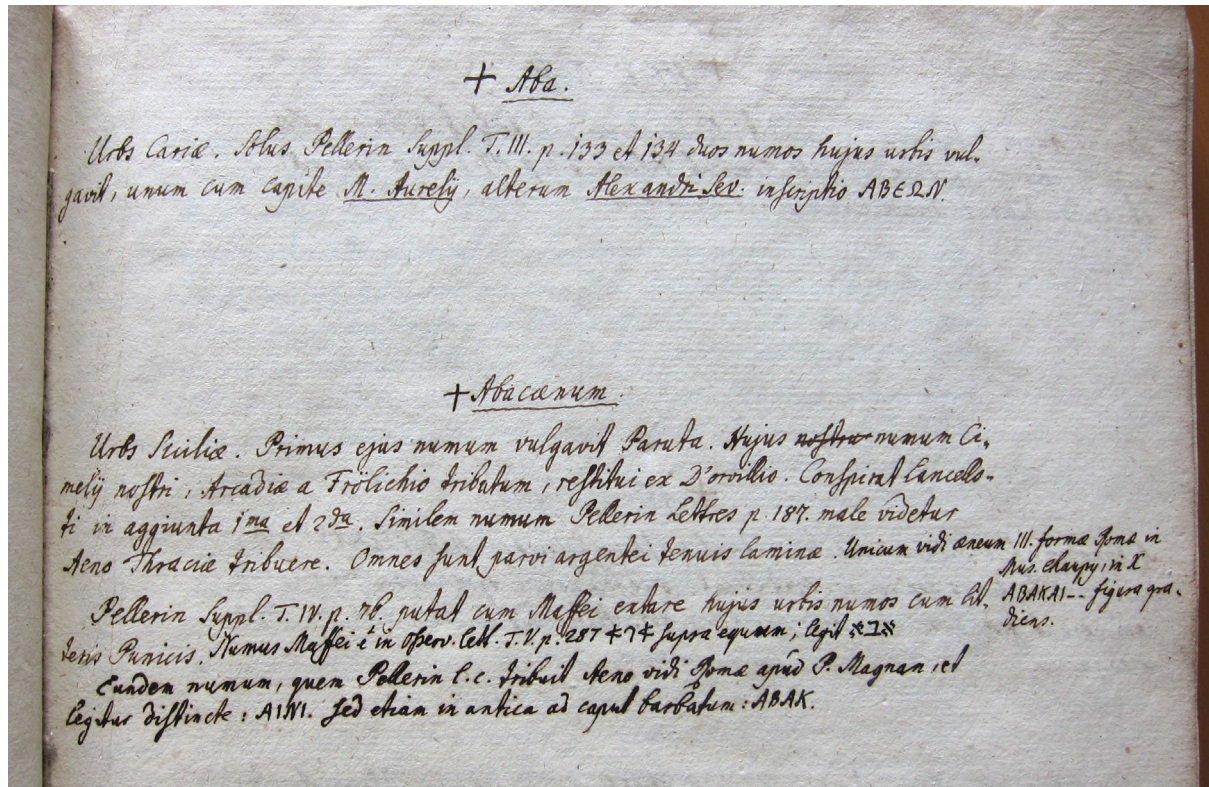


Fig. 2: Eckhel's manuscript notebook on ancient Greek mints, page featuring "Aba" and "Abacaenum". Kunsthistorisches Museum Vienna, coin cabinet, archives no. 79. Photo: Author.

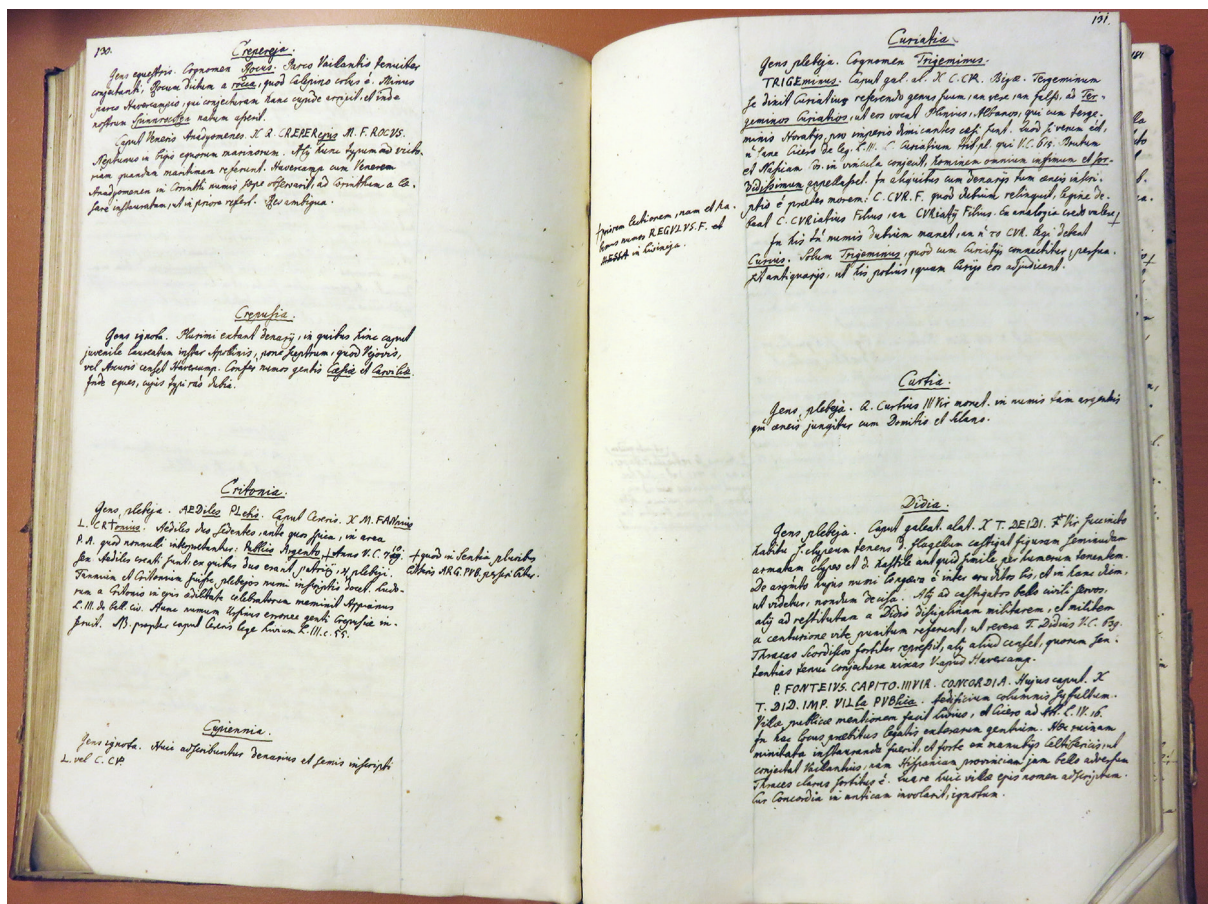


Fig. 3: Eckhel's manuscript notebook on Roman Republican coins, sample pages (130–131). Kunsthistorisches Museum Vienna, coin cabinet, archives no. 80. Photo: Daniela Williams.

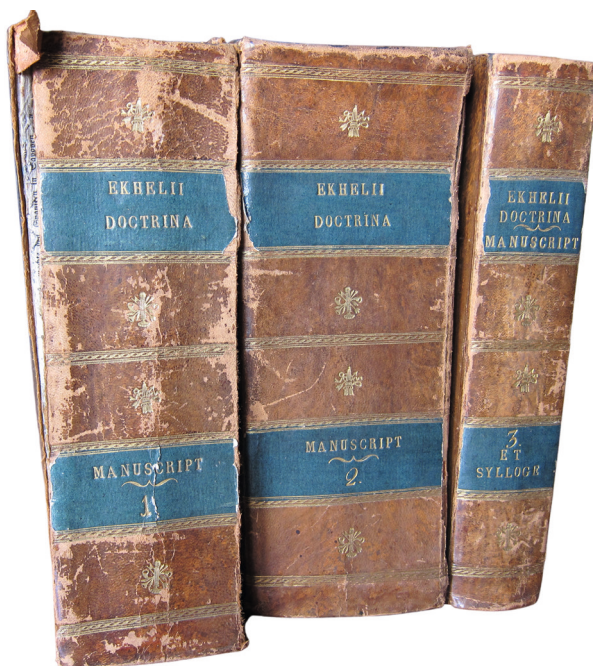


Fig. 4: Volumes no. 120–122 of the archives of the coin cabinet of the Kunsthistorisches Museum Vienna, gathering various manuscripts by Eckhel related to the *Doctrina* as well as other material. Photo: Author.

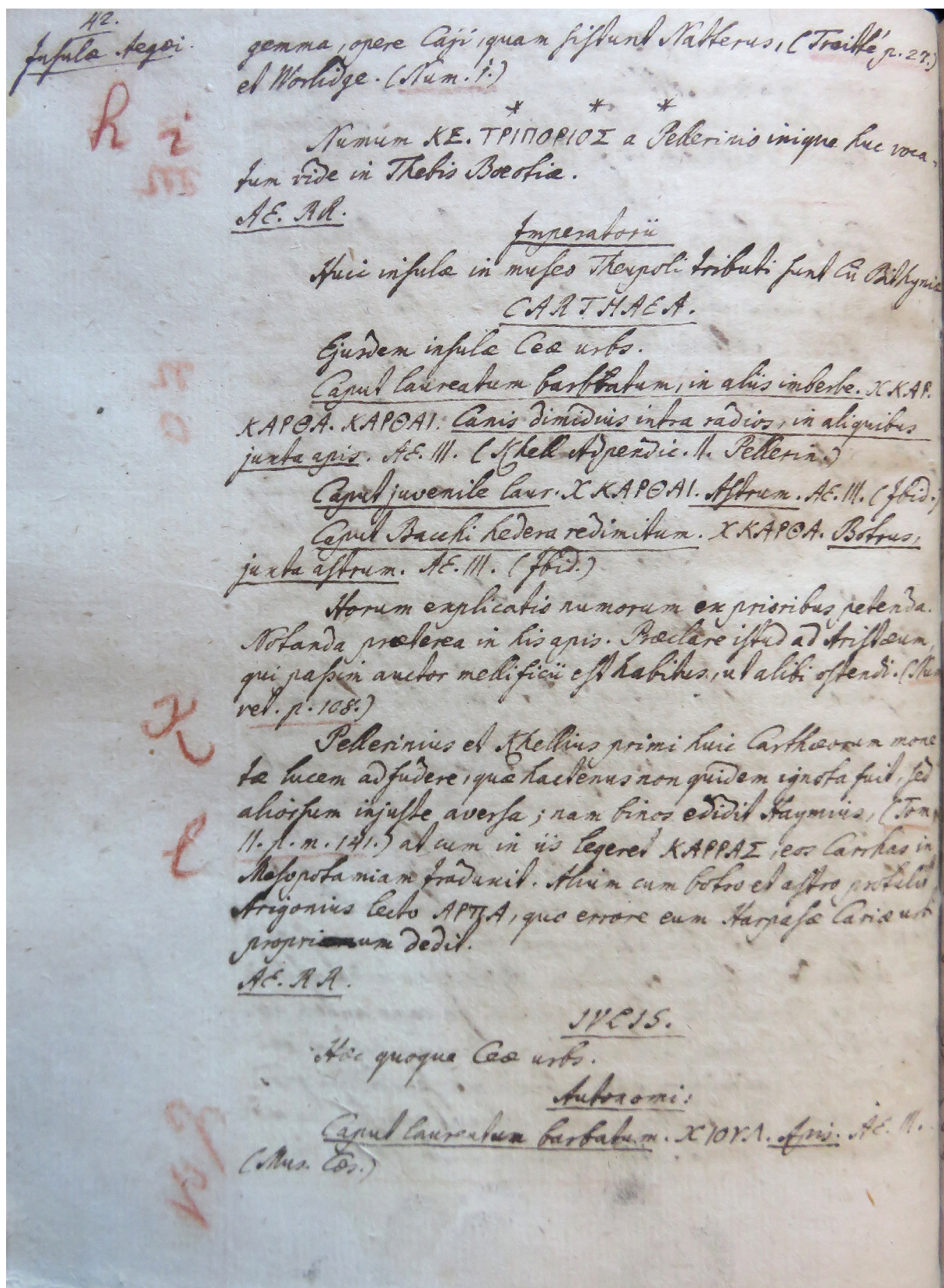


Fig. 5: A page of the final manuscript of the *Doctrina*, with marks by the printer. Kunsthistorisches Museum Vienna, coin cabinet, archives no. 120. Photo: Author.

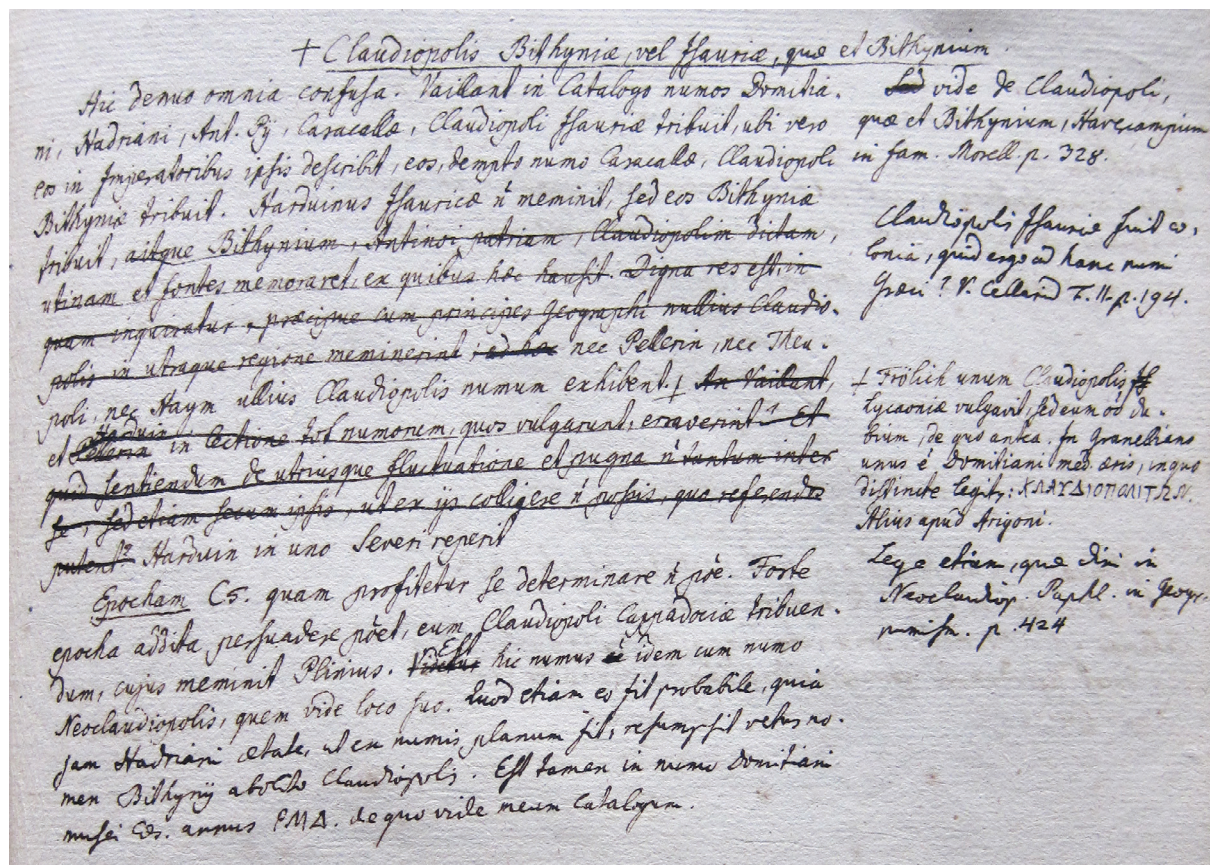


Fig. 6: Eckhel's manuscript notebook on ancient Greek mints, page featuring "Claudiopolis Bithyniae". Kunsthistorisches Museum Vienna, coin cabinet, archives no. 79. Photo: Author.

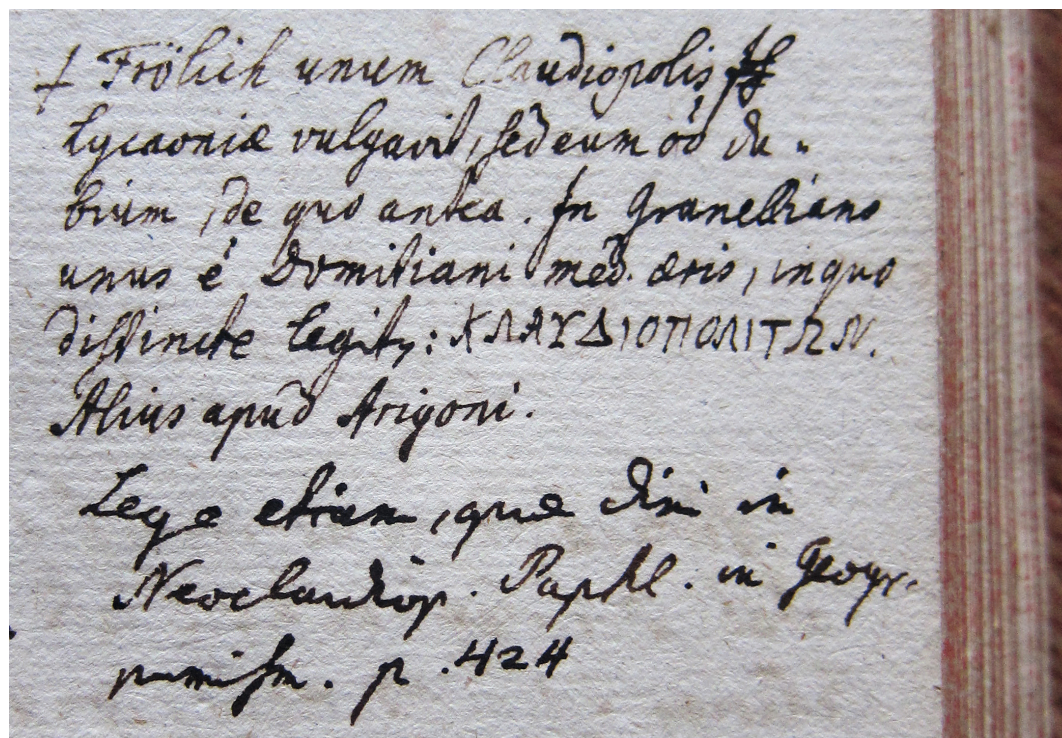


Fig. 6a: Detail of fig. 6, enlarged.

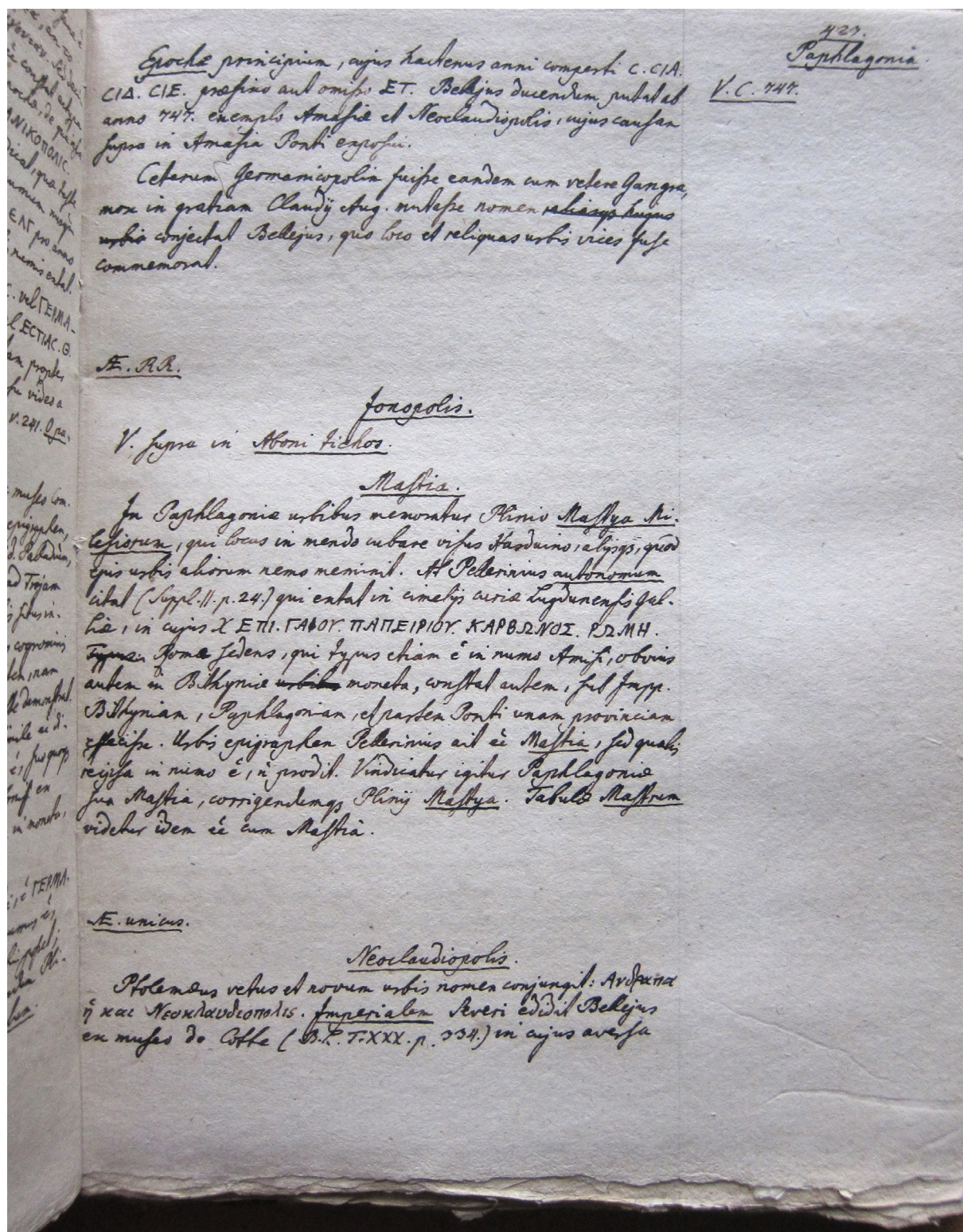


Fig. 7: Passage on the mint of "Neoclaudiopolis Paphlagoniae" in a preparatory manuscript for the *Doctrina* (p. 423). Kunsthistorisches Museum Vienna, coin cabinet, archives no. 120. Photo: Author.

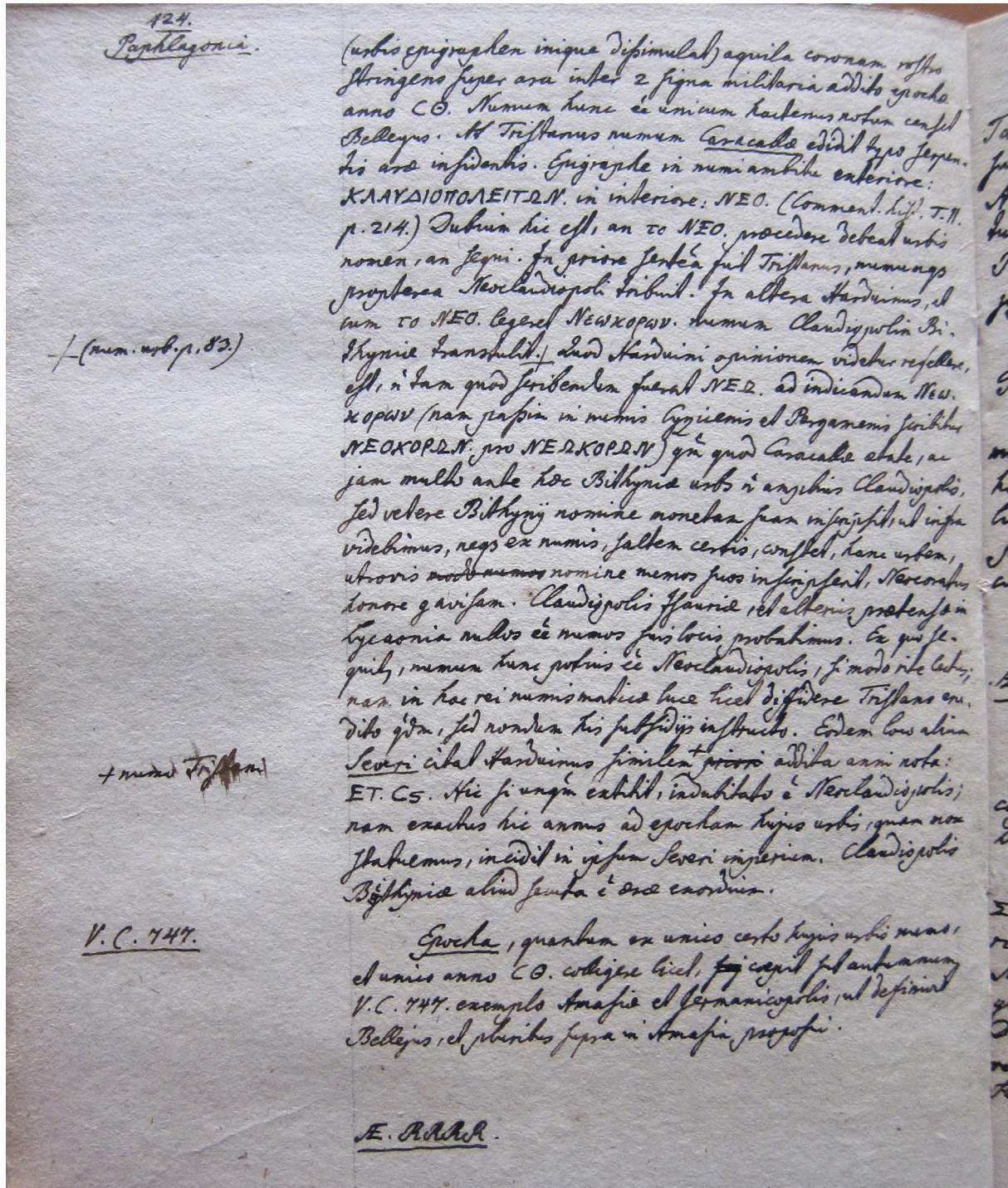


Fig. 8: Passage on the mint of "Neoclaudiopolis Paphlagoniae" in a preparatory manuscript for the *Doctrina* (p. 424). Kunsthistorisches Museum Vienna, coin cabinet, archives no. 120. Photo: Author.

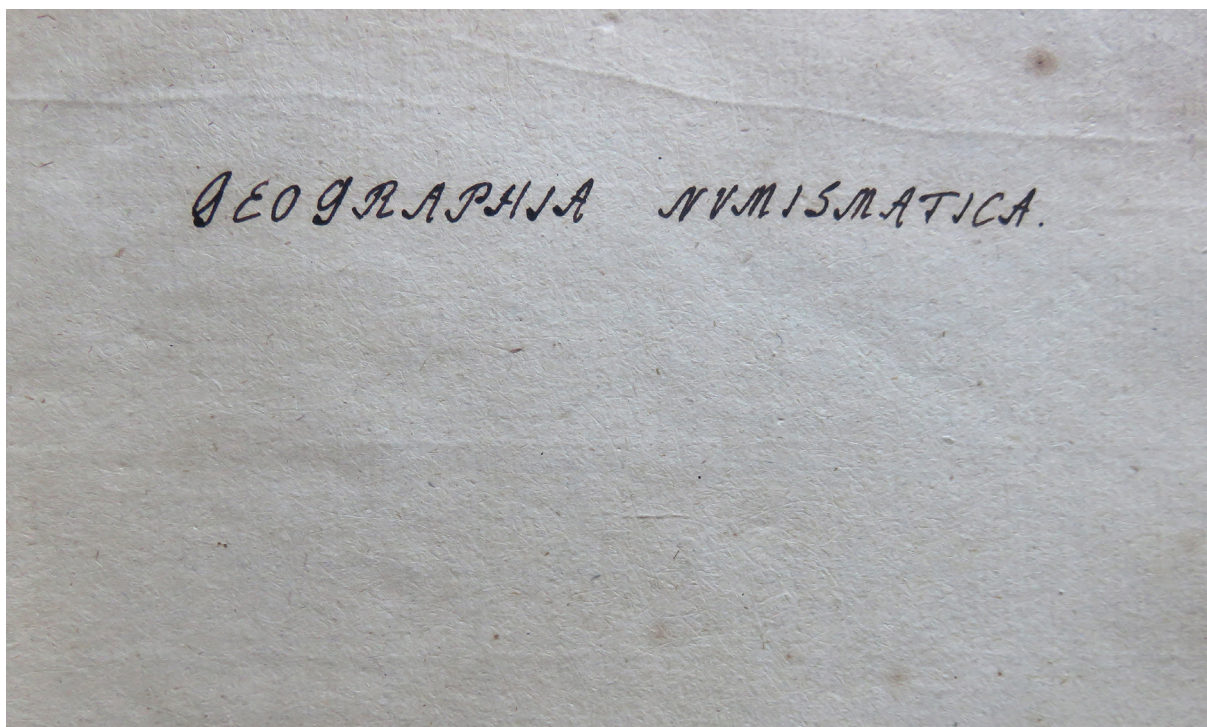


Fig. 9: Manuscript title-page in Eckhel's hand for the "*Geographia numismatica*". Kunsthistorisches Museum Vienna, coin cabinet, archives no. 120. Photo: Author.



Fig. 10: The numismatic notes taken by Zoëga in Vienna in 1782 (overview). Royal Library Copenhagen, NKS 357b fol. IV.3. Photo: Author.

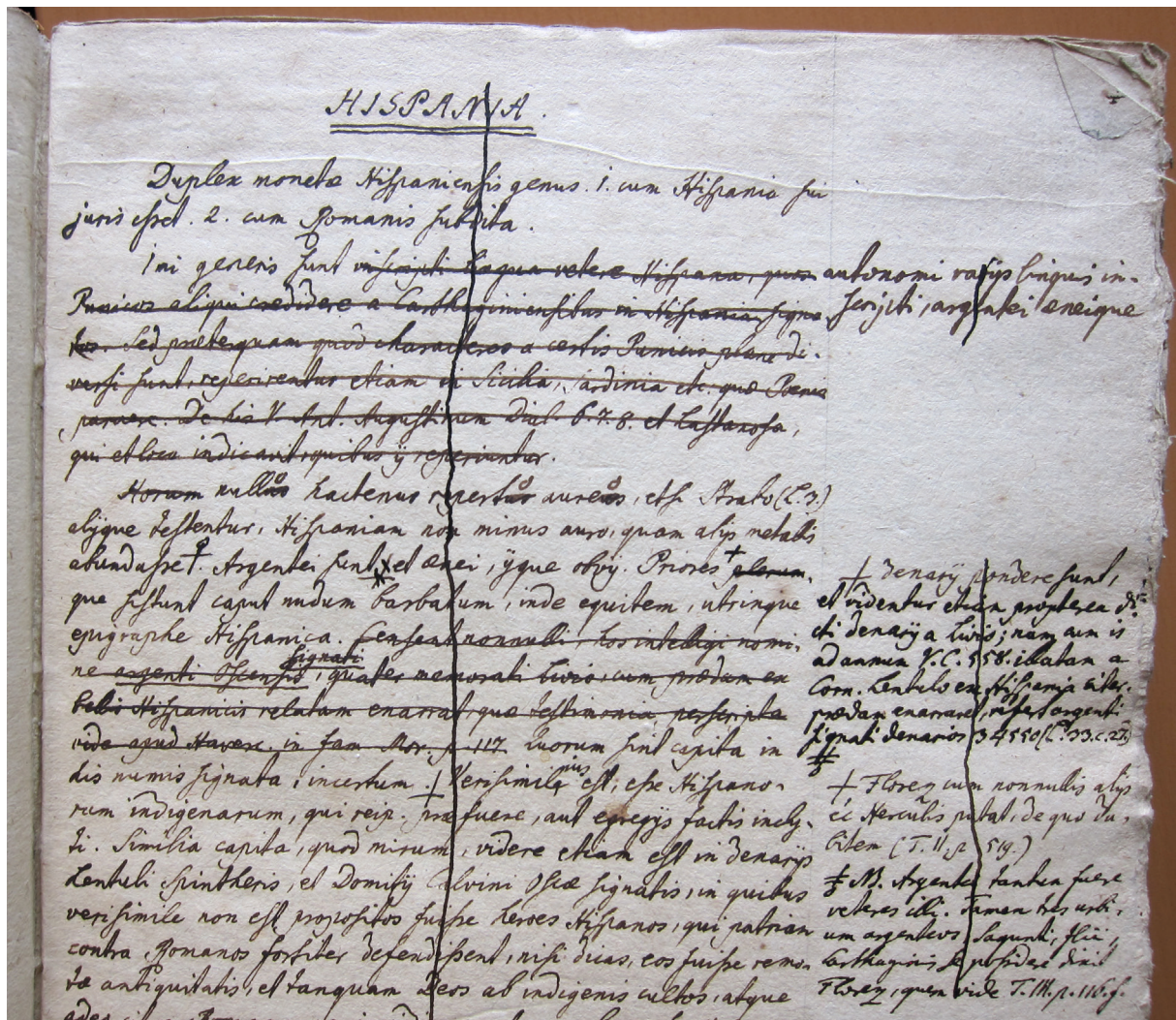


Fig. 11: Introductory passage on the coinage of ancient Spain in a preparatory manuscript for the *Doctrina* (p. 3). Kunsthistorisches Museum Vienna, coin cabinet, archives no. 120. Photo: Author.

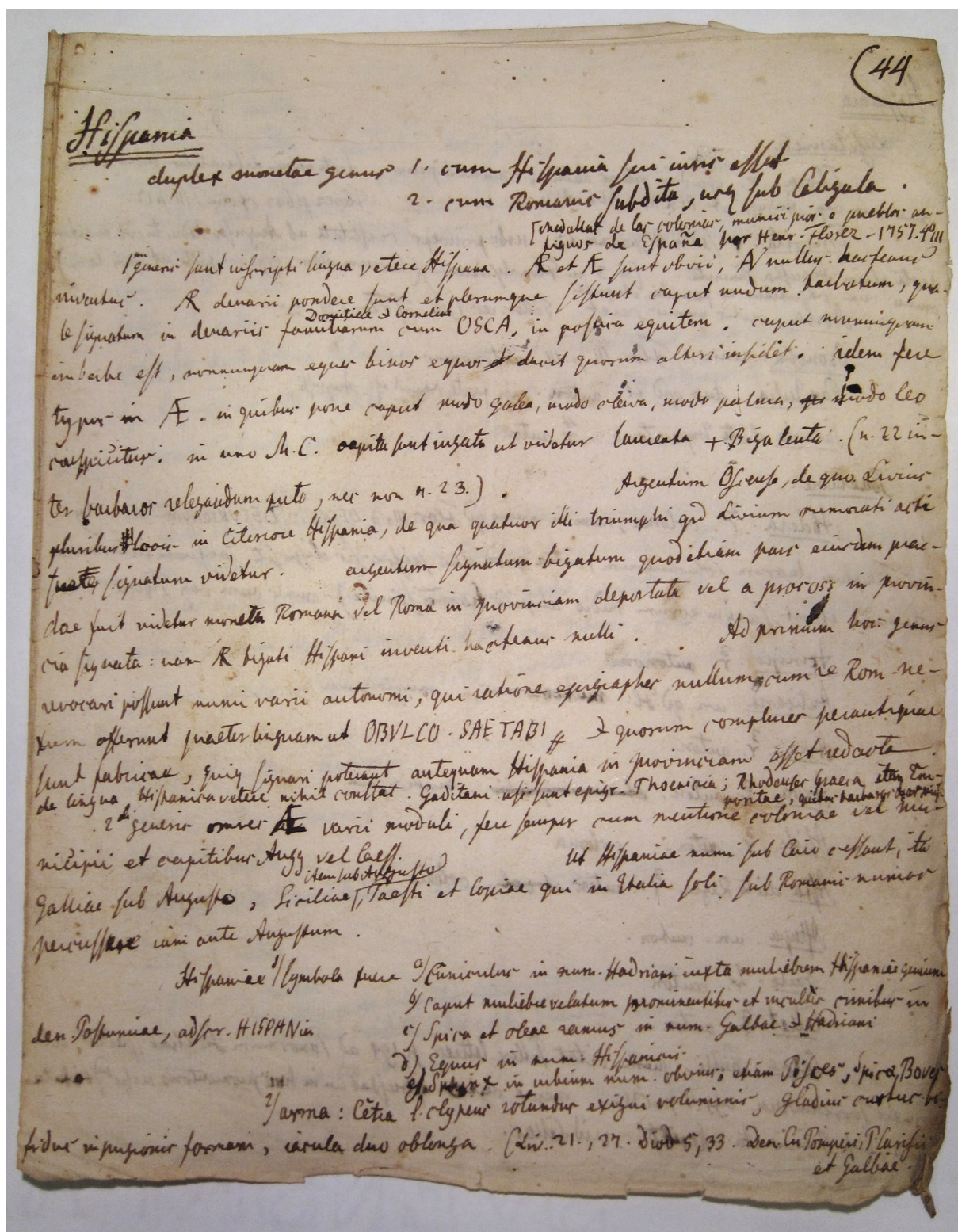


Fig. 12: Introductory passage on the coinage of ancient Spain in the numismatic manuscript compiled by Zoëga in 1782. Royal Library Copenhagen, NKS 357b fol. IV.3, bifolium 44, p. 1. Photo: Author.

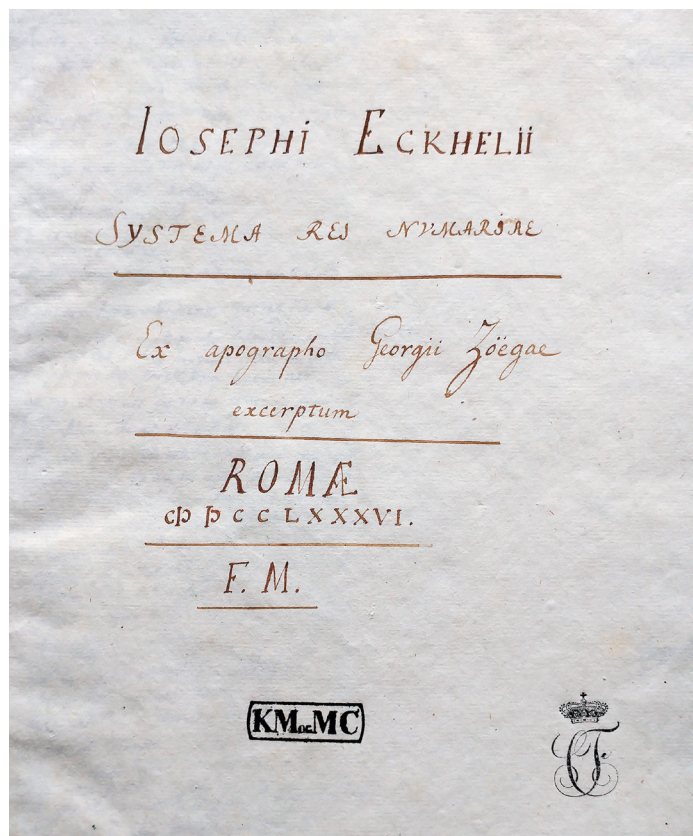


Fig. 13: Title-page of Münter's numismatic manuscript. National Museum Copenhagen, coin cabinet, library. Photo: Helle Horsnæs.

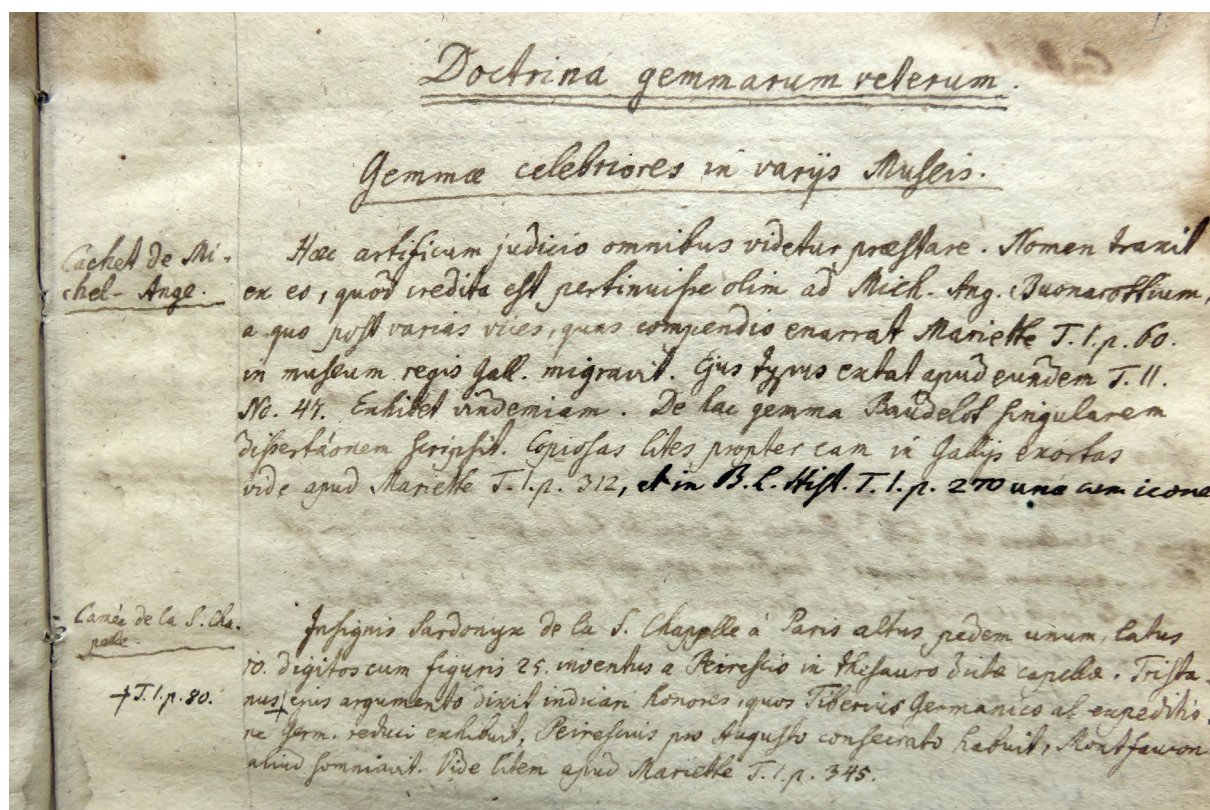


Fig. 14: Eckhel's manuscript notebook on ancient gems and other antiquities, p. 1. Kunsthistorisches Museum, collection of Greek and Roman antiquities, archives no. 19. Photo: Daniela Williams.

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