

**Scientists and artists in the service of Luigi Ferdinando  
Marsigli**

Of the scientists who lived at the turn of the eighteenth century, it was perhaps Luigi Ferdinando Marsigli who had the most colourful personality. A man with a soldierly disposition who wanted to conquer everything, Marsigli was drawn to the most diverse fields of natural sciences. He also had the ability to enlist in his service the best "officers": scientists, artists and engineers whom he entrusted with various schemes in the fields of research and creative work. It is, therefore, not possible to draw a picture of Marsigli's scientific achievements without first studying the work carried out by his associates. It was this consideration that led us to examine Marsigli's human relations through letters written to him.

**We have focused our attention on the letters connected to the edition of „Danubius Pannonico-Mysicus“.** Within this, his German connections will be discussed in more details, while his correspondence with scientists from other countries will also be mentioned briefly, so as to illustrate the broad scale and the meticulous care characterizing the information gathering that preceded and accompanied the writing, and the preparation for publication, of his main work.

**I. The letters written to Marsigli by German scientists and artists**

The majority of the letters presented below were mailed from Nuremberg. Of these letters, first in importance are

the ones sent by *Georg Christoph Eimmart* (1) and *Johann Christoph Müller* (2).

The first reference to the problems surrounding the publication of the *Danube monograph* occur in a letter sent by **Eimmart**, dated *May 10, 1696*. It reveals that Marsigli was looking for good and reliable artists and copperplate engravers for his book. Eimmart was of the opinion that such artists could not be found in the vicinity of Vienna, only in Nuremberg.

He answered three questions:

1. Would it be possible to invite a number of good artists to work in Vienna?

Answer: Although there are four or five eminently suitable persons in Nuremberg, they would not be prepared to travel so far, nor would they tolerate the tirednesses associated with it. There would be nothing to gain by such moves.

2. How much would it cost?

Answer: While the precise figure could not be calculated, it was possible to give some idea through an example: the execution of the 150 plates for von Samuel Puffendorf's work cost 8.000 florins in France.

3. Would it be necessary to have someone to co-ordinate and to supervise the work?

Answer: Yes. He--Eimmart--would be willing to take on this responsibility.

Eimmart's letter dated *April 14, 1698* revealed that **Marsigli had decided to have the illustrations for his *Danubius* book made in Nuremberg** (4), assigning a key role

**in this undertaking to Eimmart.** In his letter dated *May 9, 1698* (5), Eimmart wrote about the number of plates needed, the foreseeable expenses and the problem of the paper for the prints. In his letter dated *May 21*, he enclosed the **printed maps**, along with the picture of a bird, pointing out that if they were paid enough, the artists could make even better prints (6). In his letter dated *June 11*, he enclosed a sample of the paper manufactured locally, at the same time inquiring about the planned size and format of the *Danubius* book. The price of the paper was still unknown to him at the time (7). On *November 21*, he sent an estimate for the volumes "Fishes", "Birds" and "Roman Antiquities" of 2.000 florins overall. He was prevented by unfavourable weather conditions from observing the comet. (8) In the next letter, of *September 3, 1700*, *Sturmius* wrote that he had seen, the *Prodromus* for the *Danubius* in Eimmart's house, adding that apparently only a few more copperplates were needed to be engraved for the work to be complete. He also informed Marsigli that in a separate letter to Eimmart he had encouraged the latter to contact *Schoder* in the matter. (9).

*Letters written in the first half of the year 1701 largely ignore the Danubius* (10). Then in a letter in *June 28*, Eimmart suggested that the great work had begun: he had already started working on the volume *Antiquities* (11). On *July 9* he promised to complete the book soon (12). By *July 23* he had completed the work on the illustrations of "Roman Antiquities"; indeed, he had even finished engraving two copperplates of Hungarian fortifications and

ruins (13). In August Eimmart sent four letters to Marsigli. He was busy engraving the copperplates for the *illustrations of insects*. "Although not at all spectacular, the work is extremely laborious", he complained. He sent the prints of twelve insects, besides sending the "Prodromus" to some Dutch book sellers as well as to Paris (14). Another of his letters reveals that Marsigli was complaining about the omission of the *Trajan bridge* from the volume "Roman Antiquities". Eimmart was apologizing, maintaining that he had never seen the copy for it. **With the exception of the two large maps that he still had to engrave on copperplate for the "Geographical Volume", he kept nothing.** At the beginning of the same letter we find a sentence which somewhat confuses the picture. Eimmart begins by acknowledging the receipt of Marsigli's previous letter in which the general asked him to commission H. *Fleischmann* to engrave the remaining *illustrations of the volume "Fishes"* (15). Unfortunately, the information contained both in this letter and in the ones that followed is insufficient to decide whether he was referring to the pictures or merely to the accompanying text.

On September 10 Eimmart was (16): **asked to obtain the works of Lazius** (17) as Marsigli needed Lazius's maps for the Hungarian place-names.

On September 24, Eimmart received, through *Sturm's* mediation, the volume "Birds", along with a fox's pelt which was Marsigli's present for his daughter (18). At the same time he reported that he had completed the engravings for 54 insects, and expected *Fleischmann* to finish with

the inscriptions soon (19).

For the remaining part of the year *only Eimmart* sent letters to Marsigli from Nuremberg. In a letter dated *October 22* he expressed his gratitude to Marsigli for helping to persuade *Mezzavacca* to publish his astronomical observations in his *Ephemerides*; at the same time he showed modesty in turning down *Manfredi's* words of praise in the preface. Finally he wrote about book rarities (20). On *November 10* he mainly discussed financial matters: he acknowledged the receipt of 100 florins for the engraving of the insects and informed Marsigli about the costs of the 71 engravings for the volume "*Birds*", made up by his own honorarium and by the fees of the grinder. Finally he mentioned rare books, *Dürer* engravings, beside writing a few words about sending copies of *Prodromus* (21).

His letters written in *December* revealed that the relationship between himself and the other engraver, *Fleischmann*, was far from being harmonious. On *December 22* he begged Marsigli not to assume that his attitude towards *Fleischmann* derived from professional jealousy. He promised to send the volumes "*Antiquities*" and "*Fishes*" on *Saturday*, along with all the prints, for which he had completed engraving the inscriptions (22).

As for the year 1702, the sole item of information from Nuremberg comes in a letter written by *Müller* on *January 6, 1703* (23). At *Marsigli's* request, *Müller* sent a copy the contract between *Marsigli* and *Eimmart*:

**"A Copy of the Contract"**

*Today, on July 2, 1702, the undersigned parties have made the following contract:*

*Firstly: Mr. Eimmart agrees to complete, with total dedication, all that remains to be done for the volume "Roman Antiquities" of the Danube monograph. In return, His Excellency General Marsigli hands over 327 florins in payment of fees and in reimbursement for purchasing copperplates.*

*Secondly: Mr. Eimmart similarly agrees to complete the "Geographical Volume"--with the exception of the inscriptions--, for which he receives (inclusive of the price of the copperplates): 650 florins*

*In total: 1803 florins*

*Luigi Ferdinando Marsigli*

*Georg Christoph Eimmart (24)*

The above contract provides the first evidence of the fact that **Marsigli entrusted Eimmart with the engraving of the Geographical Volume's illustrations, with the exception of the inscriptions.** The document also proves that Marsigli visited Nuremberg at the beginning of July 1702.

**In 1703, therefore, we meet correspondent: Johann Christoph Müller.**

Müller's biographers have previously been unable to discover where he stayed and what he was doing in 1702 and 1703, details which became clear from the following letters.

Müller's first letter, discovered in Bologna, was written on August 10 (25): *"Having found myself a convenient place in Mr. Eimmart's house for carrying out my studies and work... My first obligation was to complete a sample of the Danube's sectional maps as soon as possible, so as to*

enable Your Excellence to make any comments on them. Two of these maps have been completed, merely awaiting Mr. Fleischmann to inscribe the place-names on them..."

Müller was, therefore, busy with drawing the maps for the Danube monograph in the given period.

Dated September 8, Marsigli received a letter from a certain Mr. Schoder, whose precise role in the project is unclear. After expressing his pleasure over the information that Marsigli had liked the book on Phosphor, Schoder assured Marsigli that the work (the Danube monograph) was progressing as planned, and would continue to do so, provided that the artists received the money due to them. He also enclosed a list of book titles arranged in thematic groups (26).

Müller also wrote a letter to Marsigli on September 8; **sending two sectional maps of the Danube for comments** (27), „From one of the enclosed sections Mr. Fleischmann's work is missing... The other section is accompanied by a drawing of mine, in which I represented the river somewhat differently for Your Excellence to study and to make your comments known to us, for which I would be most grateful..."

Müller's letter dated October 11 indicates the existence of problems: **despite all his efforts, Eimmart was unable to engrave Müller's carefully drawn sections with the necessary fineness and precision.** He, Müller, provided all the help he could give verbally, but he emphasised, he could not lead Eimmart's hand. He suggested that they try once more, and if the result outcome was unsatisfactory, they should entrust the matter to *Fleischmann* - who it appears

-, has natural skills to engrave the fine and precise lines required for maps (28). Incidentally, this letter contains other rather surprising information. It was known that Müller had drawn the very fine large **border map consisting of 41 sections and one summary sheet** (29). Earlier researchers have however, mistaken the date and purpose of the execution of the maps. Even the latest publication on the subject maintains that Müller drew these maps in 1706 for Eugene of Savoy. Müller's letter makes it clear that fourteen sections had already been completed by October 11, **1702**, and that it was Marsigli, rather than Prince Eugene of Savoy, who commissioned Müller to draw them. On *October 16*, *Eimmart* expressed his regret that **Marsigli did not like the trial prints of the Danube sections**. Having now learned from Müller, however, about Marsigli's ideas and expectations, he would make every effort to execute the engravings to Marsigli's liking (30). *In his letter dated October 18*, *Schoder* criticized *Eimmart* and his inability to engrave the maps, a task requiring *Fleischmann's* unique skills (31).

Meanwhile Müller was busy drawing sections in accordance with Marsigli's taste:

"It was not only the Danube that I drew in accordance with Your Excellency's instructions..., but I also depicted many other things, including the swamps, the forests, the raised river banks, the mountains, as well as the mounds, islands and beaches of sand..." (32).

The month of November brought no major developments in the matter of the Danube monograph. Marsigli must have been preoccupied with the war, as Müller inquired about the

same problem in the seventh successive letter on December 2, all to no avail. Eimmart, too, closed engraving the maps until his samples were approved. And as to the border sections, he needed to know whether in drawing the "Trans-Danubiales sections" (the sections on the left bank of the Danube) he had to start from the point where the River Tisza merged into the Danube. The volume about **Roman Antiquities** also gave him some headaches. Although **he had already completed the drawing of the map**, he was still unsure whether the objects depicted did indeed come from the *village of Orka in the County of Sopron* (33). Little progress was made in December, although Müller pressed Marsigli to respond in three separate letters, while Eimmart did likewise in two.

In 1703 the work was resumed. On January 6 Müller could report that he had completed the first four sections of the Danube. He was confident that they would be to Marsigli's satisfaction. Almost as much time was required to complete the section representing Szigetköz, as it took to finish two border sections... Müller was concerned not only that "time was running out", but also because "the debts were piling up"... He requested more money (34), enclosing a balance sheet, probably drawn up by Eimmart (35):

*"A record of the sums received in 1702 from His Excellency General Count Marsigli in accordance with the contract:*

*for myself*

*On July 21*

*100*

*On September 4*

*200*

of which Mr. Schoder		
and Mr. Müller received		
30 florins each, a total:	60	140
On October 16	200	
of which Mr Schoder received	80	
and Mr. Müller	30	90
On January 30, 1703	500	
of which Mr Schoder received	60	
and Mr Müller received	50	
(for paper)		390
.....		
The sum total received by myself:		720

This document (p.120) was accompanied by a piece of paper, 10 cm x 15 cm, on which Eimmart had noted:

"A list of the illustrations which I, G.C. Eimmart, was asked to produce for the monograph of the Danube, along with the sums paid out for copper plates and fees:

the Geography Volume	290
the Astronomy Volume	330
the Roman Antiquities Volume	327
the Birds Volume	826

furthermore, for the volume containing mixed observations, for Diane and the head of a bull 30

.....  
 In accordance with the contract,  
 a total of 1803

The items completed so far:

<i>the first half of the Birds Volume,</i>	
<i>honorarium plus the cost of</i>	
<i>the copper plates</i>	413
<i>the entire Roman Antiquities Volume</i>	327
.....	
<i>In total:</i>	740"

Eimmart's letter to Marsigli, dated March 3, reveals that he was working on the Astronomy volume. There was no mention of the Danube sections in the letter... (36).

On March 14 Müller sent a statement of the work he had done so far praising the prints he received from Italy, expressing his admiration for the artist's skills (37).

Enclosed in his letter of April 17, we find a statement in German (38):

"A list of the maps which Löffelholz saw completed:

<i>Border sections</i>	28 pieces
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*Bosnia, Serbia, Croatia, Banat,  
Bansag of Temes, Transylvania,  
Moldavia, Wallachia*

<i>Danube sections</i>	18 pieces
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*The general map of the Danube  
The hydrographic map of the Danube"*

On the next page:

"A list of the work I have carried out so far and the contract:

*According to the contract I receive,  
for each border section: 5 florins  
for each province of the*

Hungarian Monarchy: 12 florins

Although I completed three border sections during the time that I needed to complete a single section of the Danube, I still charge for each Danube sections only 6 florins.

The works that I have completed are as follows:

Border sections, a total of 24 pieces.

price: 5 florins/pieces.

The provinces of the Hungarian Monarchy:

Bosnia, Serbia, Croatia, Herzegovina, Bánság of Temes, Transylvania, Moldavia, Wallachia

Price: 12 fl/pieces.

A total of: 96 florins

Danube sections 18 pieces

Price: 6 fl/piece.

A total of: 120 florins

And finally the Trans-Danubian border sections

5 pieces.

Price: 5 fl/piec.

A total of: 25 florins

.....

361 florins"

In his letter written on *Easter Sunday*, *Eimmart* reported that he had completed 54 engravings for the volume "*Roman Antiquities*", and that he was pleased to cooperate with *Manfredi*. Furthermore, the illustrations for the volume "*Minerals*", engraved in *Bologna*, were very much to his liking (39).

*Marsigli*, therefore, employed other artists than the

Nuremberg masters. *On May 12*, both Eimmart (40) and Müller (41) sent letters to Marsigli in the army camp. The former announced that the astronomical illustrations had been completed, requesting money so that the volume "Birds" could also be finished before the end of the year.

Müller's letter was lengthier: at Marsigli's request he had checked every plate of the volume "Roman Antiquities", finding them perfectly in order. Along with other valuable material, these plates had been placed in Löffelholz's house, safe from the perils of war. He also sent the minerals checked and arranged by Mr. Schoder. However, the importance of this letter lies in the following information: 1. **Müller completed not only the border sections, but also--and this was not known before--he had finished drawing the map of the "Lands of the Hungarian Monarchy"**. *We located nine of these beautiful manuscript maps amongst Marsigli's papers. They were attached to the front of a manuscript description of Hungary, arranged nearly ready for print. For some strange reason, this manuscript, which was referred to by the British John Stoye as the "Phantom history of Hungary" (42), included among the lands of the Hungarian crown such countries as Serbia and Bulgaria.*

2. Already before May 12, he had been visited by a certain gentleman named Mr. *Schirndorf* who, on behalf of *Eugene of Savoy*, invited him to Vienna.

3. Müller set down the reasons why he was inclined to accept the offer: **Should Marsigli decide to entrust the engraving of the Danube sections to master Pfeffer of Vienna, who already proved his worth with the work he had**

**done for the Geography volume of the Danubius**, then he, Müller, would be able to supervise the work on the spot, and could even be of assistance to the engraver, if necessary.

Throughout 1704 no letters came from Nuremberg. In 1705 there was only one letter, from a new correspondent, Johann *Heinrich Müller*, brother of Johann Christian Müller, the latter having moved to Vienna (43). J. H. Müller began by referring to an earlier letter, dated January 23, in which he had informed Marsigli of Eimmart's death. In the new situation Marsigli concerned for the safety of his "treasures"--immediately issued orders to pack up his materials and to hand them over to Baron Löffenholtz: *"As you had already paid the sum of 300 florins earlier, and the remaining 485 florins we had received from Baron Löffenholtz on February 14..., we made every effort to hand over to Baron Löffenholtz all your copper plates, along with all other notes and manuscripts, without loss or impairment, which we indeed were able to accomplish on March 19. We fell slightly behind the appointed date, the explanation for which lies in the following: the engraving of some of the texts and a few letters was still to be done, as Eimmart, who saw his death approaching, handed them over to Mr. Fleischmann for completion..."* The inscription was missing from the following plates: the dissection of a sturgeon and mushroom XXI, XXII, XXIII, XXVII, XXVII. Although Fleischmann completed these plates, he was reluctant to hand them over. There was some confusion about the twenty-

five florins, which Löffelholz earlier paid out to Fleischmann for this purpose, but which Fleischmann nevertheless assumed to be in compensation for some other work he had done earlier. Therefore, he was unwilling to hand over the plates until he received guarantees that he would be paid for them separately. For this reason, Müller advanced the ten florins to Fleischmann. With Eimmart already dead and Johann Christian Müller in Vienna, they had no other alternative... In other respects, all that did not need to be engraved they returned in the same condition they had found on receipt. Therefore, they felt that they fully complied with every wish of Marsigli.

So Eimmart was working on the project right until his death; but the extent of his personal contribution is unclear. The considerable sum of three hundred florins plus four hundred and eighty five florins from which we can infer that his contribution was substantial. It is, however, quite obvious that *the work did not stop in 1703 with Joh. Chr. Müller's departure from Nuremberg; his associates continued to work on the Danube monograph right until 1705, and it was only after this that the plates and the manuscripts--at least some of them--were taken to Italy.*

Notes:

1. Georg Christoph Eimmart, the Younger (August 22, 1638-January 5, 1705). Born in Regensburg, he studied copperplate engraving under Jacob von Sandrart and mathematics under Sturmius in Jena. He settled in

Nuremberg in 1660. He was also engaged in astronomy and in the construction of astronomical instruments.

2. Johann Christoph Müller was one of Georg Christoph Eimmart's students in Nuremberg. In 1696, when Marsigli asked him to find someone versed in cartography and astronomy, Eimmart recommended Müller. This was how Müller moved first to Vienna, then followed Marsigli to the military camp, staying in the general's service until 1703.

3. Bibliotheca Universitaria, Bologna, Marsigli Vol. 79. pp. 89-90. G. C. Eimmart; Nuremberg, May 10, 1697, German.

4. *ibid.* Vol. 79. pp. 91-92. G. C. Eimmart; Nuremberg, April 14, 1698, Latin.

5. *ibid.* Vol. 79. pp. 91-92. G. C. Eimmart; Nuremberg, May 9, 1698, German.

6. *ibid.* Vol. 79. pp. 96. G. C. Eimmart; Nuremberg, May 21, 1698, German.

7. *ibid.* Vol. 79. pp. 93. G. C. Eimmart; Nuremberg, June 11, 1698, German.

8. *ibid.* Vol. 79. pp. 95. G. C. Eimmart; Nuremberg, November 21, 1698, German.

9. *ibid.* Vol. 80. p. 8. Sturmius; Altdorf, September 3, 1700, Latin.

10. *ibid.* Vol. 79. pp. 253-254. J.P. Würstbain; Nuremberg?, June 23, 1701, Latin.

11. *ibid.* Vol. 79. p. 203. G. C. Eimmart; Nuremberg, June 23, 1701, German.

12. *ibid.* Vol. 79. p. 204. G. C. Eimmart; Nuremberg, July 9, 1701, German.

13. *ibid.* Vol. 79. p. 205. G. C. Eimmart; July 23, 1701,

German.

14. *ibid.* Vol. 79. p. 206. G. C. Eimmart; August 15, 1701, German; also, *ibid.* p. 207. August 27, 1701, also German.

15. *ibid.* Vol. 79. G. C. Eimmart; Nuremberg, August 29, 1701, German.

16. *ibid.* Vol. 79. p. 209. G. C. Eimmart; Nuremberg, September 10, 1701, German.

17. Consisting of ten sheets, the map "Descriptio Hungariae" was produced by Wolfgang Lazius in 1556, likewise a smaller map of Hungary, entitled "Kriegsschauplatz Ungarns 1556".

18. Three years later Johann Christoph Müller's brother, Johann Heinrich Müller engaged to marry Eimmart's daughter.

19. *ibid.* Vol. 79. p. 200. G. C. Eimmart; Nuremberg, September 24, 1701, German.

20. *ibid.* Vol. 79. p. 211. G. C. Eimmart; Nuremberg, October 22, 1701, German.

21. *ibid.* Vol. 79. p. 214. G. C. Eimmart; Nuremberg, December 12, 1701, German.

22. *ibid.* Vol. 79. p. 215. G. C. Eimmart; Nuremberg, December 22, 1701, German.

23. *ibid.* Vol. 82. pp. 52-53. J. C. Müller; Nuremberg, January 6, 1703, Latin and German.

24. *ibid.* Vol. 82. pp. 248-249. Joh. Paul Würtsbain; Nuremberg, September 7, 1702, Latin.

25. *ibid.* Vol. 80. B. 90. letter, J. C. Müller; Nuremberg, August 10, 1702, Latin.

26. *ibid.* Vol. 82. pp. 252-253. Schoder; Nuremberg, September 8, 1702, Latin.

27. *ibid.* Vol. 82. p. 261. J. C. Müller; Nuremberg, September 8, 1702, Latin.
28. *ibid.* Vol. 80. B. p. 112-115. Joh. Chr. Müller; Nuremberg, October 11, 1702, in Latin.
29. The map designating the border between the Austrian Monarchy and the Ottoman Empire in accordance with the Treaty of Karlócza.
30. *ibid.* Vol. 82. B.p. 136. G. C. Müller; Nuremberg, October 13, 1702, Latin.
31. *ibid.* Vol. 80. pp. 127-134. Schoder; Nuremberg, October 18, 1702, Latin.
32. *ibid.* Vol. 80. B.p. 136. J. C. Müller; Nuremberg, October 20, 1702, Latin.
33. *ibid.* Vol. 80. B. pp. 70-71. J. C. Müller; Nuremberg, November 7, 1702, Latin. According to this, therefore, the map (maps?) of Volume II on Roman Antiquities were also drawn by Müller, and engraved by Eimmart.
34. *ibid.* Vol. 82. pp. 52-53. J. C. Müller; Nuremberg, January 6, 1703, Latin.
35. Found this with the contract quoted in Note 23.
36. *ibid.* Vol. 122. letter 29, G. Chr. Eimmart; March 3, 1703, German.
37. *ibid.* Vol. 82. pp. 138-139. J. C. Müller; Nuremberg, March 14, 1703, Latin.
38. *ibid.* Vol. 82. pp. 174-177. J. C. Müller; Nuremberg, April 17, 1703, Latin and German.
39. *ibid.* Vol. 82. letter 61, G. C. Eimmart; Nuremberg, Easter Day 1703, Latin.
40. *ibid.* Vol. 80. B.p. 163. G. C. Eimmart; Nuremberg, May 12, 1703, Latin.

41. *ibid.* Vol. 80. B.pp. 164-165. J. C. Müller; Nuremberg, May 12, 1703, Latin.

42. *ibid.* Stoye, John: Marsigli's Europe 1680-1730. The Life and Times of Luigi Ferdinando Marsigli, Soldier and Virtuoso. Yale University Press, New Haven & London 1994; Marsigli's book's in Vol. 82.

43. *ibid.* Vol. 80. C. pp. 33-34. Johann Heinrich Müller (the brother of J. C. Müller); Nuremberg, March 19, 1705, Latin