

# The Terminology of Silks in Texts of the Roman Empire: Qualities, Origins, Products, and Uses

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At the beginning of the Roman imperial period, moralizing authors criticized a material from the East that quickly gained popularity among the elites: silk. During Late Antiquity, the trade, production, and use of purple-dyed silks increasingly became the privilege of the emperors. While literature, court poetry, and laws give insights into the discourses surrounding silk, they are rather unspecific concerning silk qualities. This contribution analyzes the scattered descriptions of silks in Greek and Latin texts in a diachronic perspective, with a focus on the 1<sup>st</sup> cent. BCE to the 4th cent. CE, paying particular attention to the terminology, products, origins, and qualities of silk. The aim is to build a framework for comparisons with archaeological silk finds and other textile terminologies along the Silk Roads. Here, the silk finds from the oasis city of Palmyra/Tadmor in modern-day Syria, dating from the 1st cent. BCE to the 2nd cent. CE, will be used as a case study for the early imperial period. Taking these silk finds as a comparison, it will be shown that Greek and Latin terminology does not match the variety of silks known in the Mediterranean. Rather, linguistic differentiations focus on the forms in which silk reached the Mediterranean, as skeins, yarns, and fabrics, as well as on the different kinds of silks that were produced in the West, namely pure silk and half-silken fabrics, checkered “*scutlata*” damasks, purple-dyed, and gold-embellished silks. In contrast, silks from the East were subsumed under the term for “silks from the silk people” or simply “silks”. Moreover, ancient authors do not use the terms in the same way. These findings show the limitations of Western silk terminology and the importance of combining archaeological and written sources.

**Keywords:** Silk; Textiles; Terminology; Qualities; Archaeological finds

## Introduction

Towards the end of the 1<sup>st</sup> century BCE, Greek and Latin texts increasingly referred to a new textile material that quickly gained popularity among Roman women and men, and even some of the emperors who did not care about traditional Roman clothing that was usually made of wool or linen: silk. Moralizing authors complained that silk clothing inappropriately revealed the bodies of their wearers, especially married women. Moreover, they saw silk - that needed to be imported “from people unknown even to trade” - as a threat to the Roman economy because it was very expensive.<sup>1</sup> A close reading of laws and court poetry, however, shows that these negative discourses presented only one side: Almost from the beginning of the imperial period, silk served as an important means of self-representation for the highly competitive Roman elites, including Roman men.<sup>2</sup> While in the early years of the Roman imperial period only “bad” emperors were purportedly interested in silk, the emperors of Late Antiquity increasingly tried to monopolize the silk trade and its manufacture as well as the use of the most precious silks. Thus, the purple-dyed silken mantle even became the symbol of imperial rule.<sup>3</sup>

In contrast, information about the characteristics, qualities, origins, and forms of silks is much scarcer and often only indirectly attested to in the written sources. The following analysis seeks to gather the scattered evidence in Greek and Latin texts with a focus on the 1<sup>st</sup> century BCE to the 4th century CE in order to build a framework for comparisons with archaeological silk finds and silk terminologies in other languages along the Silk Roads, which in turn can shed light on the origin, transmission, and exchange of silks in Antiquity.<sup>4</sup> The written sources are treated thematically, according to their information about different kinds of silks, their colors, patterns, and other decoration.

In order to gather an impression of the differences between texts and archaeological textiles in the early imperial period, the excellently preserved and thoroughly published silk finds of the Syrian oasis city Palmyra/Tadmor will be used for comparison.<sup>5</sup> Palmyra yielded over 2000 textile fragments, which belonged to over 500 different fabrics. Around 100 of them were made of silk. They were found in seven tower tombs of Palmyra’s West necropolis and date from the 1st cent. BCE to the 2nd cent. CE.<sup>6</sup> The majority of them were cut into pieces and used as mummy wraps.<sup>7</sup> Their materials consist both of fibers that were

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<sup>1</sup> Seneca, *de Beneficiis* 7,9,5-9: *Video sericas vestes, si vestes vocandae sunt, in quibus nihil est, quo defendi aut corpus aut denique pudor possit, quibus sumptis parum liquido nudam se non esse iurabit. Hae ingenti summa ab ignotis etiam ad commercium gentibus accersuntur, ut matronae nostrae ne adulteris quidem plus sui in cubiculo, quam in publico ostendant.*

<sup>2</sup> Tacitus, *Annales* 2,33,1.

<sup>3</sup> Hildebrandt. “Seide als Prestige gut.”

<sup>4</sup> For modern terminology, see, e.g., Hyllested. “Word Migration on the Silk Road.”

<sup>5</sup> The finds have been published by Schmidt-Colinet and Stauffer, *Die Textilien aus Palmyra*. See now also Evers, *Worlds Apart Trading Together*, 62-63. It is beyond the scope of this article to provide a survey of archaeological silk fabrics in the Mediterranean until Late Antiquity.

<sup>6</sup> Schmidt-Colinet and Stauffer, *Textilien*, esp. 1-2. 4-5; Evers, *Worlds Apart* 62.

<sup>7</sup> Schmidt-Colinet and Stauffer, *Textilien*, 5. 56-57. In a rare case, parts of silk clothing were found folded next to

traditionally used in the Eastern Mediterranean, like flax, hemp, wool and other animal fibers, and imported fibers like silk, wild silk, and cotton.<sup>8</sup> The silks were mostly made of cultivated Chinese mulberry silk, called *bombyx mori*, and a smaller group of wild silks from uncultivated wild silk worm species.<sup>9</sup> Because these textiles were protected from light, many of them have preserved their original splendid colors.<sup>10</sup> The most colorful fabrics were made of silk and wool and used for the outer layers of the mummy wraps, especially in the area of the head, hands, and feet.<sup>11</sup> Because they were cut into pieces, it is usually difficult to reconstruct their original shape.<sup>12</sup> Some of them seem to have been cut in strips even before they reached Palmyra, which suggests a previous use as a decorative border on clothing.<sup>13</sup> A few larger textiles seem to have been used as a kind of shroud.<sup>14</sup> It is important to keep in mind that these textiles come from a funerary context and represent the wealth of the richest families at Palmyra whose clothing styles encompass both Roman and Parthian traditions.<sup>15</sup> They show which kinds of silk fabrics were available in the Mediterranean, but it has to be proven on a case-by-case basis which of these silks were actually used in other regions and contexts in the ancient Mediterranean.

## The Terminology of Silk

Ancient Greek and Latin texts know three terms for silk: *bombycinum* (or in the plural *bombycina*), *sericum* (or in the plural *serica*), and *metaxa*, all of which are still used in Late Antiquity.<sup>16</sup> *Bombycinum* refers etymologically to the insect that produces silk, called *bombyx*. The earliest evidence for the use of *bombycina* is usually assumed to be a passage in Aristotle's *Historia Animalium* that describes the lifecycle of a silk worm and attributes the invention of silk production to a woman on the Greek island of Cos, thus standing in a long tradition of Greek writers that attempt to find the "first inventor" of craft techniques.<sup>17</sup> The problem with this passage is that it has no securely dated parallels until the mention of head and face coverings made of *bombykina* in an inscription from a sanctuary in Miletus in modern-day

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the mummy: Schmidt-Colinet and Stauffer, *Textilien*, 5 cat. 487.

<sup>8</sup> Schmidt-Colinet and Stauffer, *Textilien*, 8.

<sup>9</sup> Schmidt-Colinet and Stauffer, *Textilien*, 8. 12-13.

<sup>10</sup> Schmidt-Colinet and Stauffer, *Textilien*, 5.

<sup>11</sup> Schmidt-Colinet and Stauffer, *Textilien*, 5. 18. 57.

<sup>12</sup> Schmidt-Colinet and Stauffer, *Textilien*, 36.

<sup>13</sup> Schmidt-Colinet and Stauffer, *Textilien*, 50.

<sup>14</sup> Schmidt-Colinet and Stauffer, *Textilien*, 5.

<sup>15</sup> Schmidt-Colinet and Stauffer, *Textilien*, 18. 49-50.

<sup>16</sup> Variations in spelling occur. The term *Coae vestes*, "garments from the Greek island of Cos", seems to have been popular among Latin poets in the 1<sup>st</sup> centuries BCE and CE respectively who do not specify the material and will not be included in this discussion. There is no evidence for the unravelling of Chinese silks in the Mediterranean. See also Hildebrandt, "Silk Production and Trade," 34-37, 39.

<sup>17</sup> Aristoteles, *Historia Animalium* 5,19 (551b 10-15); Thraede, "Das Lob des Erfinders."

Turkey that is dated to the end of the 2<sup>nd</sup> or the beginning of the 1<sup>st</sup> century BCE.<sup>18</sup> It is thus safe to assume that this kind of silk reached the Mediterranean at least during the Hellenistic period. The term was more frequently used from the last third of the 1<sup>st</sup> century BCE on and might have originally referred to wild silks since it is always attributed to insects.<sup>19</sup>

Usually, when we think of silk, we think of the white, shiny, even threads produced by the cultivated Chinese silk worm that feeds on white mulberry leaves, called *bombyx mori*<sup>20</sup> but numerous other silk moth species all over the world also produce silk. These species are usually not cultivated and live in the wild.<sup>21</sup> Their products are called wild silk or tussah. Wild silk threads are uneven in comparison with cultivated mulberry silk and the fabrics made of them are coarser and less shiny.<sup>22</sup> Because the moth is not killed before it hatches from the cocoon, it breaks through the long silk thread that is wound around the cocoon. Therefore, wild silk needs to be spun and was in Palmyra used for simpler, monochrome or undyed silk fabrics.<sup>23</sup>

Cultivated silk might have given rise to another term for silk in Greek and Latin texts that became popular around the same time as *bombycinum* in the last third of the 1<sup>st</sup> century BCE: *sericum*, that is probably related to the Chinese word for silk and their producers and traders in the East, the *Seres*, which literally means the “silk people”.<sup>24</sup> *Sericum* is until Late Antiquity likened to or confused with plant fibers like linen or “tree-wool” (probably cotton), which shows that its origin was as mysterious to Roman authors as the people who produced it.<sup>25</sup> The plural form *serica* denotes both fabrics and garments. Silk yarns are sometimes specified by the word for “yarn” or “thread”, “*nema*”.<sup>26</sup>

This period coincides with the conquest of Egypt by the Romans in 30 BCE that gave access to the important maritime trade routes to India through the Red Sea and the Western Indian Ocean that are described in a trader’s handbook from the 1<sup>st</sup> century CE, the *Periplus Maris Erythraei*, the “Circumnavigation of the Red Sea”.<sup>27</sup> From the 2<sup>nd</sup> century CE on, a third term for silk becomes more frequent: *metaxa*. It has been suggested that it indicates wild silk, but rather, it seems to have referred to silk skeins, i.e., some form of loosely coiled strings of silk, made from the silk threads gathered from the cocoons. These skeins were practical for the transport of the raw material that could be further processed at its destination through dyeing, plying, or spinning.<sup>28</sup>

<sup>18</sup> Herrmann, Günther and Ehrhardt, *Inscriptionen von Milet*, 213–215 no. 1357.

<sup>19</sup> Hildebrandt, *Silk Production*, 35–36.

<sup>20</sup> Schmidt-Colinet and Stauffer, *Textilien*, 8. 12–13.

<sup>21</sup> Peigler, “Wild Silks of the World.”

<sup>22</sup> Schmidt-Colinet and Stauffer, *Textilien*, 13.

<sup>23</sup> Schmidt-Colinet and Stauffer, *Textilien*, 12–13.

<sup>24</sup> Hildebrandt, *Silk Production*, 34.

<sup>25</sup> Hildebrandt, *Silk Production*, 35. See also below.

<sup>26</sup> See, e.g., the *Periplus Maris Erythraei* 39,5–6; 49,28–31. For a translation, see Casson, *The Periplus Maris Erythraei*. Schmidt-Colinet and Stauffer, *Textilien*, cat. 219 and 455, 53 are cases where fabrics were woven in the West with imported silk yarn.

<sup>27</sup> Egypt was an important transshipment point for the 1st century CE silk trade with India: *Periplus Maris Erythraei* 39; 49. See also McLaughlin, *Rome and the Distant East*, esp. chap. 2.

<sup>28</sup> Hildebrandt, *Silk Production*, 36.

From the 3<sup>rd</sup> century CE on, we also find distinctions between half-silken (*subserica*) and pure silk fabrics (*holoserica*). While *holosericum* seems to have originated in the Greek East, possibly coined by traders at the Western ends of the Silk Roads, the etymology of *subsericum* points to a Latin origin, which might be related to the luxury discourses around silken textiles for which half-silken garments were regarded as a compromise.<sup>29</sup> While ancient texts usually do not specify which materials were used for mixed silk fabrics (with the exception of the early medieval author Isidorus of Seville who mentions silk as weft and linen as a warp thread<sup>30</sup>), nine textile finds from Palmyra show combinations of silk and wool, silk and flax, and even silk and cotton.<sup>31</sup>

## Origins of Silk

Ancient texts claim that both *metaxa* and *serica* were produced by the *Seres*, who are often translated as “Chinese” but are literally the “silk people” at the Eastern ends of the Silk Roads, which could refer to any people dealing with silk.<sup>32</sup> The *Periplus Maris Erythraei* mentions an unknown country to the North of India, *Thina* (that probably denotes the Han-Chinese Empire), from where in the 1<sup>st</sup> century CE *serica* were traded to India and then further to the West.<sup>33</sup> From the 2<sup>nd</sup> century on, the origin of *serica* is increasingly attributed also to India.<sup>34</sup> While *bombycina* are also attributed to the *Seres* by ancient authors, they could as well be located on the Greek island of Cos, in Arabia, Assyria, Ethiopia, and India.<sup>35</sup> The texts do usually not distinguish between the regions of production and the places of trade, which is exacerbated by the fact that ancient authors did not always use geographical attributions correctly.<sup>36</sup>

<sup>29</sup> Hildebrandt, *Silk Production*, 39.

<sup>30</sup> Isidorus Hispalensis, *Etymologiae* 19,22,14: *Holoserica tota serica; ὄλον enim totum. Tramoserica stamine lineo, trama ex serico.*

<sup>31</sup> Evers, *Worlds Apart*, 63 with fn. 461; Schmidt-Colinet and Stauffer, *Textilien*, 10-13; examples for *subserica*: cat. 224 (cultivated silk-cotton), cat. 254 (wild silk and cotton), cat. 320–321, 454, 489–491 (cultivated silk-wool and/or other very fine animal fiber), cat. 455 (cultivated silk-flax).

<sup>32</sup> For example Hesychius s.v. Σῆρες· ζῶα νήθοντα μέταξαν. ἢ ὄνομα ἔθνους, ὅθεν ἔρχεται καὶ τὸ ὀλοσήρικον; Aelius Herodianus, *Partitiones* p. 125,10: σῆρ, ὁ σκώληξ, καὶ κλίνεται σηρός· σηρικὸν ὕφασμα, τὸ μεταξωτὸν; Photius, *Lexicon*, s.v. Σῆρες· ἔθνος ἔνθα ἡ μέταξα γίνεται· ἐξ οὗ καὶ Σηρικὰ τὰ ἐν μετάρης ὕφασμένα λέγεται. Hildebrandt, *Silk Production*, 34.

<sup>33</sup> *Periplus Maris Erythraei* 64. See also McLaughlin, *Rome*, 131-133.

<sup>34</sup> Aelius Herodianus et Ps.-Herodianus, *De Prosodia Catholica* 3,1 p. 398 l. 1: Σῆρ ἔθνος Ἰνδικόν, ὅθεν σηρικὰ τὰ πολυτελῆ ἱμάτια. Clemens Alexandrinus, *Paedagogus* 2,10bis,107,3-4: Εἰ δὲ συμπεριφέρεσθαι χρῆ, ὀλίγον ἐνδοτέον αὐταῖς μαλακωτέροις χρῆσθαι τοῖς ὑφάσμασιν μόνον τὰς μεμωρημένας λεπτοουργίας καὶ τὰς ἐν ταῖς ὑφαῖς περιέργους πλοκάς ἐμποδῶν μεθιστάντας, νῆμα χρυσοῦ καὶ σῆρας Ἰνδικούς καὶ τοὺς περιέργους βόμβυκας χαίρειν ἔῶντας.

<sup>35</sup> Propertius, *Elegiae* 2,3,15 (*Arabia*); Plinius maior, *Naturalis Historia* 11,27,77; 11,25,75 (*Cos* and *Assyria*); Gregorius Nyssenus, *In Ecclesiasten, Homily III* 326,18 [p.327] (*Seres*); Servius, *Commentarius in Vergilii Georgica* 2,121: *apud Aethiopiā, Indos et Seras sunt quidam in arboribus vermes et bombyces appellantur, qui in araneorum morem tenuissima fila deducunt, unde est sericum: nam lanam arboream non possumus accipere, quae ubique procreator.*

<sup>36</sup> See, e.g., Schneider, *L'Éthiopie et l'Inde*.

It is therefore necessary to turn to archaeological finds, which suggest that both China and India produced silk at least from the 3<sup>rd</sup> millennium BCE on, India probably wild silks and China mainly cultivated *bombyx mori* silk.<sup>37</sup>

A majority of the Palmyrene silks (80%) was made of *bombyx mori* silk and originated in China.<sup>38</sup> Among these Chinese silks, we find three kinds that differ in technique, color, and iconography. As is typical for Chinese silks, the warp dominates the pattern, not the weft like in Western fabrics.<sup>39</sup> The biggest group consists of monochrome warp-faced tabbies made of densely woven fine mulberry silk threads (fig. 1).<sup>40</sup> The second group consists of so-called Han-damasks, i.e., warp-faced monochrome tabbies with warp floats and patterns that are visible from a certain angle and display typical Chinese elements like masks, jade rings, and lozenges (fig. 2).<sup>41</sup> The third, even smaller group consists of warp-faced compound tabbies, so-called *jin* silks. The silks of this group are the most elaborate fabrics of their time and could probably rarely be bought.<sup>42</sup> Some even display woven Chinese characters (fig. 3).<sup>43</sup> Finally, one outstanding silk, a warp-faced compound tabby with a motif of men harvesting grapes and animals under vines combines a typical Eastern weaving technique with Western motifs. It seems that its weaver was not very familiar with the weaving technology, which suggests that it was produced outside of China (fig. 4).<sup>44</sup>

Six of the silks found in Palmyra consisted of wild silk that might have originated in India (fig. 5).<sup>45</sup>

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<sup>37</sup> Kenoyer, "Textiles and Trade in South Asia," esp. 18-20, 23.

<sup>38</sup> Evers, *Worlds Apart*, 63; Schmidt-Colinet and Stauffer, *Textilien*, esp. 12–13, 26–28, with the typical examples for Chinese weaving techniques and patterns, including Chinese characters: cat.no. 223 (warp-faced compound tabby), 240, 521, and for parallels in Xinjiang cat.no. 449 and 450. See also Żuchowska, "From China to Palmyra."

<sup>39</sup> Schmidt-Colinet and Stauffer, *Textilien*, 26.

<sup>40</sup> Schmidt-Colinet and Stauffer, *Textilien*, 27; see, e.g., cat. 447.

<sup>41</sup> Schmidt-Colinet and Stauffer, *Textilien*, 27 and cat. 15. 315-318. 449-452.

<sup>42</sup> Schmidt-Colinet and Stauffer, *Textilien*, 27-28.

<sup>43</sup> Schmidt-Colinet and Stauffer, *Textilien*: cat. 223 and 521.

<sup>44</sup> Schmidt-Colinet and Stauffer, *Textilien*, 28. 47-48. 145-146 and cat. 240; see also Żuchowska, "Transferring Patterns Along the Silk Road."

<sup>45</sup> Evers, *Worlds Apart*, 63 with fn. 463; Schmidt-Colinet and Stauffer, *Textilien*: cat. 254, 305, 308, 312, 313, 314.

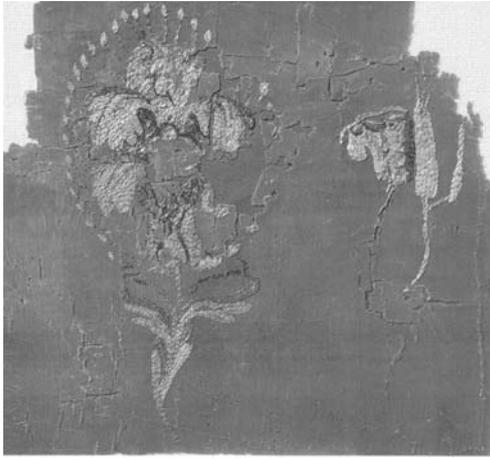


Figure 1. Warp-faced silk tabby from Palmyra with embroidered flowers.  
© A. Schmidt-Colinet, cat. no. 447, pl. VII d.

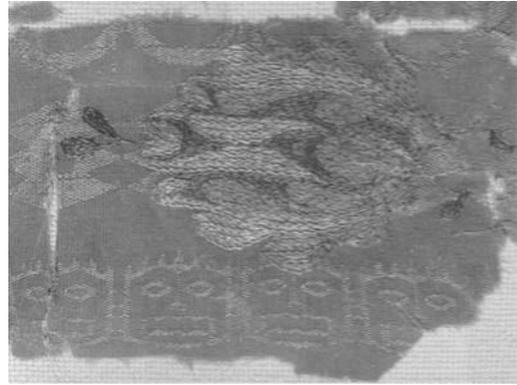


Figure 2. So-called "Han-damask" from Palmyra with masks, lozenges, jade rings, and flowers.  
© A. Schmidt-Colinet, cat. no. 451, pl. VII e.



Figure 3. Warp-faced compound tabby from Palmyra with jade rings, dragons, stylized figures, flowers, and Chinese characters.  
© A. Schmidt-Colinet, cat. no. 223, pl. VIII a.

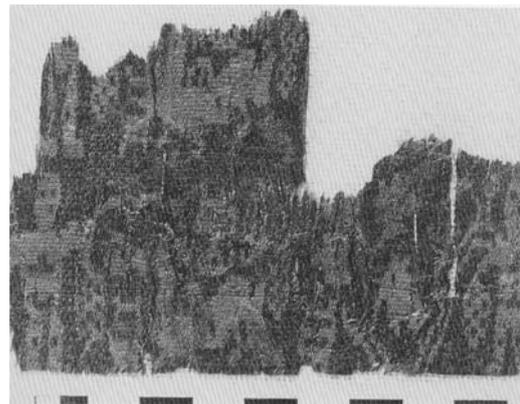


Figure 4. Silk with Chinese weaving technique and "Western-style" pattern from Palmyra.  
© A. Schmidt-Colinet, cat. no. 240 pl. 96 a.

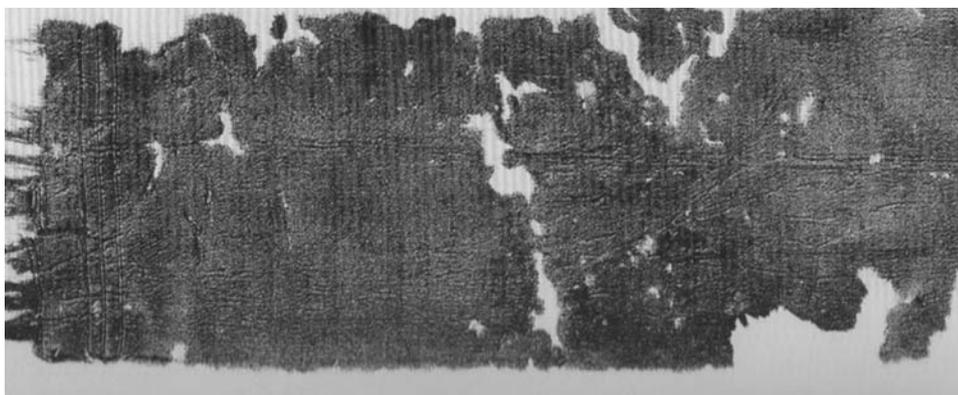


Figure 5. Wild silk fabric from Palmyra. © A. Schmidt-Colinet, cat. no. 305 pl. 76 b.

Furthermore, ancient Indian texts distinguish between native wild silks and imported silk from China or Central Asia.<sup>46</sup> Chinese silk terminology even distinguishes between a wealth of different weaving techniques such as, among others, plain, coarse, and twill-patterned tabby weaves along with damasks, gauzes, crepe, taqueté, and incised silk or silk tapestry, as well as polychrome silks.<sup>47</sup> Next to cultivated *bombyx mori* silk, China might have also produced wild tussah silk.<sup>48</sup> Although it has been claimed that there was indigenous (wild) silk production in the Mediterranean from the 4<sup>th</sup> century BCE on, there is currently not enough written or archaeological evidence to prove it.<sup>49</sup> Rather, it seems that silk cultivation only reached the Mediterranean in the 6<sup>th</sup> century CE (which would also explain the persistent confusion of *serica* with textile products made of plant fibres), when, according to the author Procopius, silk worm eggs and the knowledge of sericulture were smuggled into Byzantium by monks from the East.<sup>50</sup>

### Qualities of Silk

The only explicit reference to different kinds of silk qualities is found in a poem of the 1<sup>st</sup>-century poet Martial who lists “first quality silk” (in Latin: *prima serica*) among precious gifts for a girlfriend.<sup>51</sup> However, it remains unclear which criteria were applied to distinguish between silk qualities. The color, fineness, and evenness of the thread that impacted the appearance of the woven fabric might have played a role, which could be connected to the differences between wild and cultivated silk fibres, the former usually resulting in coarser and less shiny fabrics than the use of the latter. However, the differences between wild and cultivated silk were probably referred to by the terms *bombycina* and *serica*, as already argued.<sup>52</sup> This hypothesis is corroborated by the fact that authors like Apuleius and Clement of Alexandria, who wrote in the 2<sup>nd</sup> century CE, used *bombycina* and *serica* in parallel.<sup>53</sup> Also, legal

<sup>46</sup> Kenoyer, *Textiles* 22: *kauseya*-silk and *Cīna-patta*-silk.

<sup>47</sup> Hao, “Sericulture and Silk Weaving” 65.

<sup>48</sup> Kenoyer, *Textiles*, 23.

<sup>49</sup> Hildebrandt, *Silk Production*, 35-36; Bender Jørgensen, “The Question of Prehistoric Silks in Europe.”

<sup>50</sup> Procopius, *Bellum Gothicum* 4,17,1-8 (= *History of the Wars* 8,17,1-8).

<sup>51</sup> Martialis, *Epigrammata* 11,27,11. The term *prima* has parallels in other poems of Martial, e.g. when he talks about gems (Martialis, *Epigrammata* 12,66,5). We also find it in Diocletian’s Edict of Maximum Prices where it is used to distinguish qualities of skins (*Edictum Diocletiani de pretiis rerum venalium* 8,1a. 8,2. 8,6a. 8,23a). Similarly, the 1<sup>st</sup> century author Pliny distinguishes different qualities of incense by classifying them as “best”, “second” and “third” (Plinius, *Naturalis Historia* 12,32,65). See also Evers, *Worlds Apart*, 70, for different price categories for pepper, frankincense and myrrh.

<sup>52</sup> The difference between cultivated and wild silk threads becomes clearly visible under the microscope: Schmidt-Colinet and Stauffer, *Textilien*, pl. 102 g and h.

<sup>53</sup> Apuleius, *Metamorphoses* 8,27,1-3; Clemens Alexandrinus, *Paedagogus* 2,10bis,107,3-4: Εἰ δὲ συμπεριφέρεσθαι χρῆ, ὀλίγον ἐνδοτέον αὐταῖς μαλακωτέροις χρῆσθαι τοῖς ὑφάσμασιν μόνον τὰς μεμωρημένας λεπτοουργίας καὶ τὰς ἐν ταῖς ὑφαῖς περιέρχους πλοκάς ἐμποδῶν μεθιστάντας, νῆμα χρυσοῦ καὶ σῆρας Ἰνδικοῦς καὶ τοὺς περιέρχους βόμβυκα καὶ χαιρεῖν ἐῶντας

texts about garments distinguished between those that consisted of wool and linen and those made of *serica* and *bombycina*.<sup>54</sup> None of them gives an explanation concerning the difference between the two materials though. It is also possible that Martial, since he mentions only *serica*, refers to different silk qualities gathered from one and the same cocoon, like the short threads from its outside and inside that can be spun into yarns of lesser quality as opposed to the high-quality, long thread from its middle part that can be unreeled if the moth has not hatched and broken through it. Yet another possibility is that plant fibers were mistaken for silk and regarded as “lesser quality silk”. For example, in his description of India, the ancient geographer Strabo writes that “wool from trees” was used to weave fine fabrics and to pad saddles, and that *serika* (in the Greek spelling) are of the same kind, namely a certain kind of bark named *bysos*,<sup>55</sup> a Greek term for linen and cotton.

## Weaving Techniques and Different Kinds of Silk Fabrics

While it is not possible to determine what ancient authors meant when they spoke about different silk qualities, we are on safer ground with regard to their descriptions of silk fabrics. Many early texts, starting from the second half of the 1<sup>st</sup> century BCE, address the revealing qualities of silks. A prime example is a text by the philosopher Seneca in which he lets the philosopher Demetrius criticize the Roman matrons’ predilection for *serica* garments that revealed as much of their bodies in public as to their assumed paramours in the bedroom.<sup>56</sup> This quality is also typical for *bombycina*: The 2<sup>nd</sup> cent. author Apuleius describes a beautiful young woman in a mantle that reveals her body contours, either because wind is lifting it away from her or pressing it against her and delineating her forms.<sup>57</sup> Apuleius’ description suggests that the material was so delicate and soft that it could be lifted by a breeze or cling tightly to its wearer. Such light silks are probably also the target of the already mentioned Christian author Clement of Alexandria who admonishes women to abstain from wearing very thin or elaborately woven fabrics as well as fabrics with gold threads, Indian silks (*seras Indikous*), and sumptuous *bombyx*-silks (*bombykas*).<sup>58</sup> None of the authors explains, however, whether the revealing effect of these silks is to be attributed to their diaphanous quality or their conformability to the body. We can assume that fine, high-quality silks were also

<sup>54</sup> *Digesta* 34,2,23,1.

<sup>55</sup> Strabo 15,1,20.

<sup>56</sup> Seneca, *de Beneficiis* 7,9,5-9.

<sup>57</sup> Apuleius, *Metamorphoses* 10,31,1-3: *Super has introcessit alia, visendo decore praepollens, gratia coloris ambrosei designans Venerem, qualis fuit Venus, cum fuit virgo, nudo et intecto corpore perfectam formositatem professa, nisi quod tenui pallio bombycino inumbrabat spectabilem pubem. Quam quidem laciniam curiosulus ventus satis amanter nunc lascivens reflabat, ut dimota pateret flos aetatulae, nunc luxurians aspirabat, ut adhaerens pressule membrorum voluptatem graphice liniaret. Ipse autem color deae diversus in speciem: corpus candidum, quod caelo debeat, amictus caeruleus, quod mari remeat.*

<sup>58</sup> Clemens Alexandrinus, *Paedagogus* 2,10bis,107,3: Εἰ δὲ συμπεριφέρεσθαι χρῆ, ὀλίγον ἐνδοτέον αὐταῖς μαλακωτέροις χρῆσθαι τοῖς ὑφάσμασιν μόνον τὰς μεμωρημένας λεπτοουργίας καὶ τὰς ἐν ταῖς ὑφαῖς περιέρχους πλοκάς ἐκποδῶν μεθιστάντας, νῆμα χρυσοῦ καὶ σῆρας Ἰνδικοῦς καὶ τοὺς περιέρχους βόμβυκας χαίρειν ἐῶντας.

highlighting the body contours of their wearers through their shine. The Augustan poet Ovid, for example, likens the long, exquisite hair of a lover to the silk fabrics of the *Seres*, evoking notions of lightness, delicateness, and shine.<sup>59</sup>

In the 1<sup>st</sup> century CE, Plutarch is describing an object that is at the same time light (*lepton* in Greek) and thick (*pyknon* in Greek), like *serika* and *byssina*-fabrics (here we see again how closely interlinked silk and fine plant fibers were in the perception of ancient authors).<sup>60</sup> It is possible that these silks consisted of a densely woven tabby made of delicate and shiny *bombyx mori*-threads.

Another possibility is that the revealing silk dresses consisted of loosely woven, gauze-like fabrics that allowed views of the body underneath. In Palmyra, half-silken, very fine fabrics have been found that could have provided such an effect (fig. 6).<sup>61</sup> The poet Lucan might have had these fabrics in mind when he wrote about the white breasts of the Egyptian Queen Cleopatra that shimmered through her silken garment as well as Pliny the Elder who claimed that the bodies of the Roman matrons shone through their silk dresses.<sup>62</sup> We also know of wall paintings from the cities that, after the volcanic eruption of Mount Vesuvius in 79 CE, were buried under its ashes. One such painting from Herculaneum shows a woman in a translucent dress that at first glance gives the impression that she was half-naked (her lower body is covered by a mantle), were it not for the folds of her garment that gather around her elbows.<sup>63</sup> However, we do not know how much of this transparency is due to artistic license, or even which material the artist wanted to depict.

It is also difficult to assess whether these very thin silks were used throughout antiquity. A passage in the *Historia Augusta* (probably written in the 4<sup>th</sup> century CE) claims that the emperor Commodus, who lived in the second half of the 2<sup>nd</sup> century CE, appeared in public in a silken garment that revealed, for all to see, details of his groin, which was considered highly inappropriate.<sup>64</sup> It is impossible to say though whether the author described a historical event or wanted to assassinate the emperor's character. We have, however, evidence that light silks were valued despite their possible transparency. The philosopher Demetrius purportedly criticized that silk garments, music, and masks were able to distract from a badly executed dance performance, which indirectly testifies to the aesthetic properties of fluttering, fine silk garments that must have been an integral part of the dance.<sup>65</sup> Moreover, silks were

<sup>59</sup> Ovidius, *Amores* 1,14,5-8: *Quid, quod erant tenues, et quos ornare timeres, / vela colorati qualia Seres habeant, / vel pede quod gracili deducit aranea filum, / cum leve deserta sub trabe nectit opus?*

<sup>60</sup> Plutarchus, *de Pythiae Oraculis* 4, 396 B 7: ὃ ζένε, κωλύει ταῦτόν εἶναι καὶ λεπτόν καὶ πυκνόν, ὥσπερ τὰ σηρικὰ καὶ τὰ βύσσινά τῶν ὑφασμάτων, ἐφ' ὧν καὶ Ὀμηρος εἶπε.

<sup>61</sup> Schmidt-Colinet and Stauffer, *Textilien*, cat.no. 489-490 with pl. 74c (silk and wool).

<sup>62</sup> Lucanus, *Bellum Civile* 10,137-143 uses the verb *perlucent*. Plinius maior, *Naturalis Historia* 6,20,54 uses the verb *tralucent*.

<sup>63</sup> Museo Archeologico Nazionale di Napoli, inv. 9024. [https://commons.wikimedia.org/wiki/File:Herculaneum\\_Fresco\\_001.jpg](https://commons.wikimedia.org/wiki/File:Herculaneum_Fresco_001.jpg).

<sup>64</sup> Scriptores Historiae Augustae, *Commodus* 13,1: *vitio etiam inter inguina prominenti, ita ut eius tumorem per sericas vestes populus Romanus agnosceret.*

<sup>65</sup> Lucianus, *de Saltatione* 63.

appreciated for their temperature-balancing properties. As such, Pliny the Elder complains that men preferred to wear *bombyx*-silk garments because of their lightness in summer.<sup>66</sup> The popularity of silk also incited the Roman senate in 16 CE, during the reign of the emperor Tiberius, to stipulate that men should not be “disgraced” by wearing silk garments.<sup>67</sup> This restriction was probably not very successful, because the rhetoric teacher Quintilian writes in the 2nd half of the 1st century CE that he was willing to make concessions with regard to the material of the traditional garment for male Roman citizens, the *toga*, but to a degree: While it was not necessary that the toga consisted of a coarse fabric (probably wool), it should also not be made of silk.<sup>68</sup> We can only guess how many Roman citizens infuriated the moralists by wearing the traditional garment in a silken version.

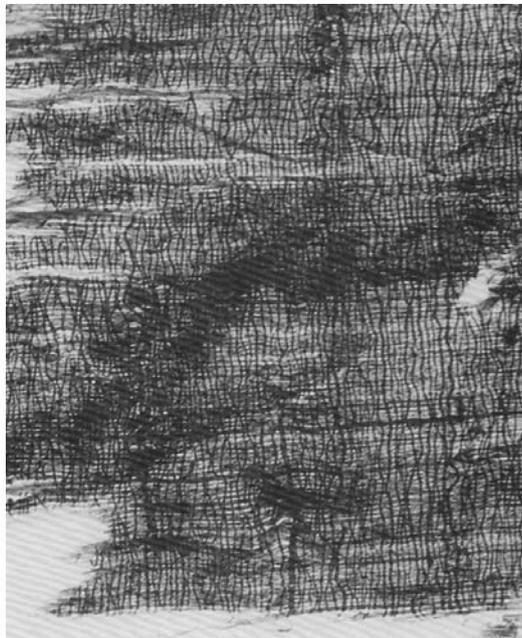


Figure 6. Half-silken gauze fabric from Palmyra. © A. Schmidt-Colinet, cat.no. 490, pl. 74c.

Quintilian is an exception among the earlier authors that write about silk clothes, in that he mentions the (possible) shape of the silk garment. Usually, early texts only speak of *serica* or *bombycina*, which could refer to silk fabrics or garments of different qualities and shapes. In Late Antiquity, texts become more specific both with regards to the kinds of silks used and the garments made of them. In the emperor Diocletian’s Edict on Maximum Prices, dated to the year 301 CE, we find several references to silk garments, the maximum price of which varies according to whether they were made of pure silk or only half silk. Among the silk clothes

<sup>66</sup> Plinius, *Naturalis Historia* 11,27,78: *nec puduit has vestes usurpare etiam viros levitatem propter aestivam: in tantum a lorica gerenda discessere mores ut oneri sit etiam vestis.*

<sup>67</sup> Tacitus, *Annales* 2,33,1: *ne vestis Serica viros foedaret*

<sup>68</sup> Quintilianus, *Institutio Oratoria* 12,10,47: *Do tempori, ne hirta toga sit, non ut serica.*

are a long garment with sleeves (*strictoria*) in half-silk or pure silk quality, a tunic with sleeves and *hypoblatta*-purple stripes made of half-silk fabric (*dalmatica*), and a hooded garment with sleeves (*dalmaticomafortium*) made either of half-silk or pure silk fabrics with different qualities of purple stripes.<sup>69</sup> We even learn about the weaving techniques that were used for silks: one passage in the Edict talks about the wages for silk weavers and distinguishes between those with a lower wage, who probably produced tabby weaves, and those with a higher wage, who wove *scut(u)lata* silks that have been identified as damasks with a geometric pattern.<sup>70</sup> We also learn about tapestry weavers (*plumarii*) and *barbaricarii* who embellished silks, the latter with gold thread, and about spinners who spun (probably woolen) purple threads, probably for weaving into silken fabrics.<sup>71</sup> At Palmyra, a precious mulberry silk tunic from the tomb of Elahbel, dated to 103 CE and woven in damask technique, had inwoven stripes made of purple-dyed silk. It is one example of Palmyrene checkered silk damasks that were possibly woven in Syria, using imported *bombyx mori* silk yarns (fig. 7).<sup>72</sup> The other example is a green checkered damask that was probably woven earlier than the tunic because it shows numerous weaving mistakes (fig. 8).<sup>73</sup> These silk fabrics are probably made of a more solid quality than the revealing silks of the early imperial period.



Figure 7. Silk damask tunic with purple wool stripe.

© A. Schmidt-Colinet, cat.no. 453 pl. 79 c.

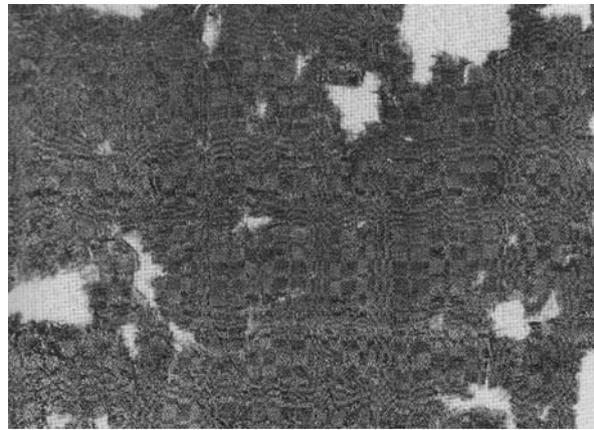


Figure 8. Silk damask with weaving mistakes.

© A. Schmidt-Colinet, cat.no. 319, pl. 80 a.

<sup>69</sup> *Edictum Diocletiani* 20, 1a.2; 19,10.18; 22, 9.14 (*strictoria*), 19,8; 22, 8.12 (*dalmatica*), 19,12-17; 22.11.13 (*dalmaticomafortium*).

<sup>70</sup> *Edictum Diocletiani* 20,11. Wild, “The Textile Term *Scutulatus*”; Wild, “The Roman Horizontal Loom”; Wild, “Textile Technology.”

<sup>71</sup> *Edictum Diocletiani* 20,1-2. 20,7. 24,14-15. Wild and Droß-Krüpe, 301-320; Gleba, “*Auratae vestes*: Gold Textiles,” esp. 63.

<sup>72</sup> Schmidt-Colinet and Stauffer, *Textilien*, cat. 453, 13. 22-23. 35. 159. 178; Evers, *Worlds Apart*, 63.

<sup>73</sup> Schmidt-Colinet and Stauffer, *Textilien*, cat. 319, esp. 23. 53.

This assumption is corroborated by passages in the *Historia Augusta* where silk garments are given to subordinates by the emperors. An example is the later emperor Claudius (Gothicus) who received, among many other garments, a half-silken white garment with purple-dye from the emperor Valerian.<sup>74</sup> Also, Valerian's son Gallienus tried to win Claudius over by sending him numerous gifts that included a white half-silken dress.<sup>75</sup> Since it would not make sense to assume that the emperors dealt out clothes that disgraced their wearers, we can rule out diaphanous fabrics. These *subserica* might have been less revealing because they combined the silk thread with cotton, flax, linen, or wool as mentioned above. Also, it can be assumed that they were perceived as less luxurious and less inappropriate because they combined traditional textile materials with silk.<sup>76</sup> The forms and uses of the garments might have influenced the choice of silk yarn qualities and the weaving techniques employed.<sup>77</sup> However, given the highly politically charged discourses surrounding the use of silk during antiquity and the excellent qualities of very fine wool and linen yarns available,<sup>78</sup> choosing silk over those materials was a conscious status statement.

## Colours

Several texts prove that silks could be dyed. Most frequently, they mention purple that was typical for royal garments.<sup>79</sup> Cleopatra's silken dress in Lucan's description was purple-dyed.<sup>80</sup> In his novel, the author Heliodorus lets ambassadors of the *Seres* bring silk garments as gifts to a king. One of these garments is purple-dyed (*phoinikobaphés* in Greek) and one either "very white" or "very shiny" (*leukotatos*), which would point to *bombyx mori* silk.<sup>81</sup> The "Phoenician" color refers to the famous purple dye facilities in the Eastern Mediterranean and the author probably thought of imported silk yarns that were dyed there, like the purple-

<sup>74</sup> *Scriptores Historiae Augustae, Claudius* 14,8: *albam subsericam unam cum purpura Girbitana*; Harlow, "Dress in the *Historia Augusta*," 150.

<sup>75</sup> *Scriptores Historiae Augustae, Claudius* 17,6: *albam subsericam*.

<sup>76</sup> This is supported by the comment that the "bad" emperor Heliogabalus used dresses made of pure silk although half-silken ones were already in use before his time: *Scriptores Historiae Augustae, Heliogabalus* 26,1: *Primus Romanorum holoserica veste usus fertur, cum iam subsericae in usu essent*.

<sup>77</sup> A comprehensive catalogue and analysis of the extant silk finds is still a *desideratum*. The question whether, and if, to which degree the spread of new weaving and/or spinning technologies or the adaptation of techniques developed for traditional fine fibres like wool and linen might have had an impact on the kinds of silk fabrics available in the Mediterranean exceeds the scope of this paper. It seems, however, that silk increasingly substituted fine wool in Palmyra: Schmidt-Colinet and Stauffer, *Textilien*, 2. 51.

<sup>78</sup> Schmidt-Colinet and Stauffer, *Textilien*, 8-11.

<sup>79</sup> Reinhold, *History of Purple as a Status Symbol*; Steigerwald, "Das kaiserliche Purpurprivileg."

<sup>80</sup> Lucanus, *Bellum Civile* 10,137-143. In a similar vein, the author Apuleius uses the contrast between a light body and a purple silk garment to enhance the revealing qualities of silk: Apuleius, *Metamorphoses* 10,31,1-2.

<sup>81</sup> Heliodorus, *Aethiopica* 10,25,2: Μετὰ τοῦτον οἱ Σηρῶν προσήγοντο πρεσβευταί, τῶν παρ' αὐτοῖς ἀραχνίων νήματά τε καὶ ὑφάσματα τὴν μὲν φοινικοβαφῆ τὴν δὲ λευκοτάτην ἐσθῆτα προσκομίζοντες.

dyed silk skeins that are mentioned in Diocletian's Edict on Maximum Prices.<sup>82</sup> In one of the "Western-style" silks of Palmyra, the warp thread consists of purple-dyed *bombyx mori* silk yarn.<sup>83</sup> Depending on the purple quality, these silks could be extremely expensive. Diocletian's Edict of Maximum Prices shows that *blatta*-purple-dyed silk yarn was nearly 13 times more expensive than undyed silk yarn.<sup>84</sup>

## Purple and Gold Silks

Late Antique texts increasingly mention purple-dyed silks and also silks that were embroidered or interwoven with gold threads.<sup>85</sup> The splendid combination of gold threads and purple silk, often damask, is also amply attested to in archaeological fabrics.<sup>86</sup> Many of the gold threads that have been found in excavations had a silken core.<sup>87</sup> Already the 2<sup>nd</sup>-century author Apuleius wrote about thieves who stole fabrics of silk and gold.<sup>88</sup> In the 3<sup>rd</sup> century CE, the Christian author Cyprian criticized luxurious silk garments that are interwoven with gold and hyacinth-purple threads.<sup>89</sup> In the 4<sup>th</sup> century CE, Gregory of Nyssa followed suit by arguing against the use of luxurious garments among which he counted the gold-embellished and purple-dyed silks (*bómbykes*) of the *Seres*.<sup>90</sup> Also in the 4<sup>th</sup> or early 5<sup>th</sup> century, the writer Prudentius tried to convince Christian believers to renounce luxuries like gems, *bombyx*-silks, and purple (that, he argues, they have to give up in death anyway).<sup>91</sup>

The criticism of the Christian authors reveals a similar dichotomy between discourse and praxis, like the pagan texts, and shows that the use of purple-dyed and gold-embellished silks must have been quite widespread among the elites.<sup>92</sup> This must also have been true for the emperors and their families, even though moralizing literature in the 4<sup>th</sup> century CE still

<sup>82</sup> *Edictum Diocletiani* 24,13.

<sup>83</sup> Schmidt-Colinet and Stauffer, *Textilien*, cat.no. 429; Evers, *Worlds Apart*, 77 Anm. 355.

<sup>84</sup> Hildebrandt, *Silk Production*, 38; Steigerwald, "Die Purpursorten im Preisedikt Diokletians."

<sup>85</sup> Gleba, *Auratae vestes*.

<sup>86</sup> Gleba, *Auratae vestes*; Wild, "Luxury? The North-West End."

<sup>87</sup> Claudian in his *Panegyric to Probinus and Olybrius* (*Panegyricus dictus Probino et Olybrio consulibus* 177-182) describes how Probia draws out silk and gold threads of equal length and intertwines them into a golden cord: Gleba, *Auratae vestes*, 63.

<sup>88</sup> Apuleius, *Metamorphoses* 4,8,2: *vestisque sericae et intextae filis aureis*.

<sup>89</sup> Cyprianus, *de Habitu Virginum* 13: *serica contexta cum auro et hyacintho*.

<sup>90</sup> Gregorius Nyssenus, *In Ecclesiasten, Homily* III 326,18 [p.327]: τὴν τε τοῦ ἱματίου σκέπην πρὸς τὸν αὐτὸν βλέπων σκοπὸν κατασκευάσει, ὡς ἂν τὸ γυμνὸν ἐπικαλυφθεῖ τοῦ σώματος, οὐ πορφυρευτάς τινας καὶ κοκκοβάφους ἀναζητῶν οὐδὲ τοὺς ῥαδιουργοῦντας εἰς νῆμα τοῦ χρυσοῦ τὴν φύσιν, οὐδὲ τοὺς ἐκ Σηρῶν βόμβυκας περιεραζόμενος καὶ τὸ ἐξ αὐτῶν νῆμα διὰ τῆς ὑφαντικῆς περιεργίας ἐσθῆτα ποιῶν πρὸς χρυσοῦν καὶ πορφύραν συγκεκραμένον.

<sup>91</sup> Prudentius, *Liber Peristefanon* 10, 511-515: *Aurum regestum nonne carni acquiritur? / inclusa vestis, gemma, bombyx, purpura / in carnis usum mille quaeruntur dolis, / luxus vorandi carnis arvinam fovet, / carnis voluptas omne per nefas ruit*.

<sup>92</sup> The topic will be treated more in depth in Hildebrandt, "Christian Discourses about Silks in Antiquity."

condemns the use of silks.<sup>93</sup> We hear, for example, that among the garments of the emperor Commodus that were sold after his death were silk garments interwoven with gold threads<sup>94</sup> and, likewise, that the emperor Marcus Aurelius sold his wife's silken and golden clothes.<sup>95</sup> The emperor Aurelian purportedly denied his wife the use of a *blatta*-purple-dyed mantle because he could not approve of a garment that was "worth its weight in gold."<sup>96</sup> In contrast, in the year 398 CE, the court poet Claudian praised the child emperor Honorius' purple-dyed silken robe that he wore on the occasion of his 4<sup>th</sup> consulate and that was embellished with gold threads and precious stones, a so-called *trabea*.<sup>97</sup> The silk fabric must have been heavy enough to bear the weight of the stones, which, even though the poet does not elaborate, shows that this kind of silk differed considerably from the early silks.

Not only did the silk fabrics change (or at least become available in many different qualities), also the way in which they were judged changed. If we leave moralizing authors behind and look at the legislation, we can see that the emperors increasingly tried to monopolize the trade and production of silk and also the use of purple-dyed silks.<sup>98</sup> The first of the laws regarding silk was issued by Valentinian and Valens in the year 369 CE. It forbade weaving decorative borders of silk interwoven with gold or garments that were decorated with these borders (*paragaudae*) for private persons of both sexes. The production of these textiles was to be the exclusive right of the imperial workshops.<sup>99</sup> Another law that was issued in 384 CE during the reign of Valentinian, Theodosius, and Arcadius stipulates that no private person was to donate silk garments as a gift during games.<sup>100</sup> It seems that half-silken clothes did not violate the monopoly of the emperors, since we know of a letter, dated to 393 CE, from the former consul Symmachus to the *vicarius Africae*, Magnillus, in which he talks about half-silken dresses (we do not learn in which shape they came) that he wished to procure for distribution at the games that marked the beginning of his son's new office as *quaestor*.<sup>101</sup> Yet another law that was issued during the reign of Valentinian, Theodosius, and Arcadius, between 384 and 392 CE, forbade every private citizen to dye wool and silk with the highly precious *blatta*-purple. Also, the sale of purple-dyed silks was

<sup>93</sup> Harlow, *Dress*.

<sup>94</sup> *Scriptores Historiae Augustae, Pertinax*, 8,2: *vestis subtegmine serico aureis filis insigni opere*.

<sup>95</sup> *Scriptores Historiae Augustae, Marcus Aurelius* 17,4: *vestem uxoriam sericam et auratam*.

<sup>96</sup> *Scriptores Historiae Augustae, Aurelianus* 45,3–5: *ut unico pallio blatteo serico uteretur*.

<sup>97</sup> Claudius Claudianus, *Panegyricus dictus Honorio Augusto Quarto Consuli* 8,600: *tribuere colorem / Phoenices, Seres subtegmina, pondus Hydaspes*. Even though the term "subtegminda" could allude to a half-silken dress, it seems more probable that it is a poetic *pars-pro-toto* and that the garment was actually of pure silk. See also Hildebrandt, "Das Gewand des Honorius in der Dichtung Claudians."

<sup>98</sup> For a compilation see Nardi, "La seta nella normativa."

<sup>99</sup> *Codex Theodosianus* 10,21,1: *Auratas ac sericas paragandas auro intextas tam viriles quam muliebres privatis usibus contexere conficereque prohibemus et in gynaeceis tantum nostris fieri praecipimus*.

<sup>100</sup> *Codex Theodosianus* 15,9,1: *Nulli privatorum liceat holosericam vestem sub qualibet editione largiri*.

<sup>101</sup> Symmachus, *Epistulae* 5,20,2: *Et tamen obeunda nec procul locatus omittis: nam et vestes subsericas quas homines mei post inlationem pretii retentabant et instructum reliquum munerarium praemiorum tuus coegit instinctus*. Paola Rivolta Tibergera, *Commentario storico al libro V dell'Epistolario di Quinto Aurelio Simmaco* (Pisa 1992) 123-125 and 31 with fn. 35.

not allowed and anyone disrespecting the law had to expect the loss of all their assets and even capital punishment.<sup>102</sup> It has been argued that this law only forbade private citizens to produce and sell such silks, not to buy and use them.<sup>103</sup> In any case, it seems that it was already difficult enough to control silk production and trade since a law that was promulgated between 393 and 395 CE by Theodosius, Arcadius, and Honorius forbade independent dyers to imitate imperial purple on wool and silk and, again, violations were punishable by death.<sup>104</sup> Apparently, the previous law had inspired creative attempts to achieve the precious purple color with other dyestuffs. Moreover, between 384 and 392 CE, Valentinian, Theodosius, and Arcadius stipulated that only the *comes commerciorum*, the official who oversaw the trade at the frontiers of the empire, was allowed to buy silk from the “barbarians”, which forbade the silk trade for everyone else.<sup>105</sup>

While these laws primarily sought to monopolize the production and trade of (certain kinds of) silks, the emperors also increasingly tried to monopolize their use. A law from the year 393 CE, issued under Theodosius, Arcadius, and Honorius, targeted the apparel of a certain kind of actress, the *mimae*. They were not allowed to wear jewels, silken garments interwoven or embellished with gold, or silks embroidered or embellished in a certain way that probably created a relief effect (*sigillatis sericis*).<sup>106</sup> If we compare these silks with Honorius’ elaborate robe, it seems that the law was issued in order to reserve purple-dyed silks embellished with gems and gold exclusively for the use of the emperors.<sup>107</sup>

However, the actresses were obviously allowed to use *scutlata*-damask silks and silk garments dyed in various colors. A multicolored silk wreath is already mentioned by the elder Pliny.<sup>108</sup> Another reference comes from the author Dionysios Periegetes who, in the 2<sup>nd</sup> century CE, compares the “skillfully made garments” (*polydaidala heimata*) of the *Seres* with flowers on a meadow.<sup>109</sup> The comparison of textiles with flowers was common, as also Cassius Dio shows. He writes that friends and followers of the emperor Caligula wore “flower-like” garments during a festive event in the Gulf of Naples.<sup>110</sup> In the 5th century CE, an Armenian author compares a meadow of blooming flowers with colorful fabrics that are

<sup>102</sup> *Codex Iustinianus* 4,40,1: *Fucandae atque distrabendae purpurae vel in serico vel in lana, quae blatta vel oxyblatta atque hyacinthina dicitur, facultatem nullus possit habere privatus.*

<sup>103</sup> Steigerwald, *Kaiserliche Purpurprivileg*, 219-220.

<sup>104</sup> *Codex Iustinianus* 11,9,3: *Vellera adulterino colore fucata in speciem sacri muricis tingere non sinimus nec tinctum cum rhodino prius sericum alio postea colore fucari, cum de albo omnium colorum tingendi copia non negetur: nam capitalem poenam illicita temptantes suscipient;* Steigerwald, *Kaiserliche Purpurprivileg*, 221-222, esp. 222 with fn. 105: These prohibitions seem to have been inoperative latest by 430 CE since they were not part of the *Codex Theodosianus*.

<sup>105</sup> *Codex Iustinianus* 4,40,2: *Comparandi serici a barbaris facultatem omnibus, sicut iam praeceptum est, praeter comitem commerciorum etiam nunc iubemus auferri.*

<sup>106</sup> *Codex Theodosianus* 15,7,11: *Nulla mima gemmis, nulla sigillatis sericis aut textis utatur auratis. ... Uti sane isdem scutlatis et variis coloribus sericis auroque sine gemmis collo brachiis cingulo non vetamus.*

<sup>107</sup> Hildebrandt, *Gewand*.

<sup>108</sup> Plinius, *Naturalis Historia* 21,8,11: *veste serica versicolori.*

<sup>109</sup> Dionysius Periegeta 752-757: εἴματα πολυδαίδαλα ... εἰδόμενα χροτῆ λειμωνίδος ἄνθεσι ποιῆς.

<sup>110</sup> Dio Cassius 59,17,6: ἐν ἐσθῆσιν ἀνθιναῖς.

carelessly strewn around on the ground.<sup>111</sup> None of the texts explains what these colorful fabrics in general, and the silks in particular, looked like and what inspired the comparison: were they monochrome silks in “flower colors”, or polychrome silks, woven in tapestry technique or with a repeated pattern,<sup>112</sup> or embroidered, maybe even with flower motifs<sup>113</sup>? Did they display Chinese motifs, like some of the polychrome silks found in Palmyra (see, e.g., fig. 3), or were they modified on their way from East to the West, like a Palmyrene *bombyx mori* silk with embroidery details that were possibly added in India or Persia (see, e.g., fig. 1)?<sup>114</sup> We do not know.

While colorful silks could still be purchased by persons that did not belong to the imperial family and court, in 424 CE the use of the sought-after purple-dyed silks was severely curtailed by the emperor Theodosius. He forbade both men and women of any order, profession, and origin to own or produce purple-dyed silken mantles and tunics which he reserved for his own use and that of his household. Moreover, all privately owned purple-dyed garments were to be delivered to the emperor.<sup>115</sup> Only 12 years later, in 436 CE, another law issued under Theodosius and Valentinian describes a case of treason in which nearly 300 Roman pounds of silk had been purple-dyed in clandestine operations. A part of the purple dyestuff had been sold and witnesses had been tortured to confess how much of the privately- and state-owned silk respectively had been dyed with state-owned purple.<sup>116</sup> Although it seems to have been difficult to enforce the imperial silk monopolies, the laws give the impression that all violations were rigorously pursued. The initially highly criticized exotic material had become part of the imperial representation.

## Summary

It could be shown that while Greek and Latin silk terminology distinguishes between wild and cultivated silk, the forms in which the raw material reached the West (skein, yarn, and fabric) and the different weaving techniques, colors, and embellishments do not match the variety of

<sup>111</sup> Dalby, *Empire of Pleasures*, 185 with reference to Lazar Parpeci, *Historia* 7.

<sup>112</sup> See, e.g., Schmidt-Colinet and Stauffer, *Textilien*, 22, 54 regarding elaborate flower patterns in tapestry weave.

<sup>113</sup> See, e.g., Schmidt-Colinet and Stauffer, *Textilien*, 30-31 for embroidery with silk yarn on silk fabrics.

<sup>114</sup> For an impression of the colors of silk textiles and the patterns of silks see also Thomas; “Perspectives on the Wide World of Luxury,” esp. 66-67, 70, 77, and Schmidt-Colinet and Stauffer, *Textilien*, color pl. VII and VIII with cat.no. 518, 451 (with Chinese motifs), 221 (with Central Asian embroidery(?)), 223 (with Chinese motifs). For a modified embroidered silk see Schmidt-Colinet and Stauffer *Textilien*, cat.no. 447, esp. 13, 30-31, 47, 175 with colour pl. VII c-d. It is unclear where these modifications were applied. Regions from the Eastern Mediterranean to Central Asia are under discussion, ranging from Syria and Mesopotamia to Parthia and the Tarim Basin. See also Evers, *Worlds Apart*, 63.

<sup>115</sup> *Codex Theodosianus* 10,21,3: *Temperant universi, qui cuiuscumque sunt sexus dignitatis artis professionis et generis, ab huiusmodi speciei possessione, quae soli principi eiusque domui dedicatur. Nec pallia tunicasque domi quis serica contextat aut faciat, quae tineta conchylio nullius alterius permixtione subtexta sunt.*

<sup>116</sup> *Codex Theodosianus* 10,20,18.

archaeological silks known in the Mediterranean. The focus of ancient authors – when they distinguish between different silk qualities - lies firmly on fabrics that were produced in the West, namely pure silken and half-silken fabrics, checkered “*scutlata*” damasks, purple-dyed silks, and silks that were embellished with gold and/or precious stones. Texts related to laws and trade are most likely to differentiate between different kinds of silk while moralizing texts mainly focus on the luxury aspect of pure silk that could be increased through purple dye and gold threads. Also, the legislation mirrors the growing interests of the emperors in the trade, production, and use of mainly purple-dyed silks and embellishments with gold and jewels and differentiates accordingly. Silks from the East were usually subsumed under the term for “silks from the silk people” or simply “silks”. Some of them, like the splendid colorful Chinese patterned silks, might hide behind the comparisons with flowers, but we cannot be sure. Some imported silks and their decorations might also have been less appealing to customers in the Western Mediterranean and therefore have not been singled out. These findings show the limitations of Western silk terminology and the importance of combining archaeological and written sources.

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