

The Development of the Sericulture Industry in Ancient Persia

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Abstract: This paper delves into the unique geographical advantages of the Persian region and explores how various factors such as climate, trade, politics, and warfare contributed to its significant influence on other nations in terms of silk production techniques. By tracing historical roots, we aim to uncover the reasons behind the emergence of a distinct Persian silk culture and innovative silk production methods, which would soon exert their influence far and wide. Furthermore, we investigate how the wisdom of these techniques spread across different global regions, drawing upon insights from various disciplines. Our comprehensive analysis integrates historical perspectives, political dynamics, and economic and agricultural theories, shedding light on the uncommon history of sericulture in this region during an unusual era. Ultimately, this essay seeks to redirect scholarly attention beyond the traditional focal points of Europe and East Asia.

Keywords: climate, trade, persia, China, silk, sericulture

1. Introduction

The sericulture industry has historically received significant attention in both the Chinese region and Europe due to the influences of Eurocentrism and the ‘celestial’ concept in Chinese history. When examining the origins of silk, it is imperative to consider China’s pivotal role in the silk trade. Additionally, within the context of Eurocentrism, the sericulture industry that thrived during Justinian’s reign in the Roman Empire has emerged as one of the most prominent subjects in sericulture discourse. However, the remarkable contributions of the Persians in this regard have often been overlooked. This paper argues that sericulture research should extend its focus to the Persian region, particularly during the period from the 6th to the 10th century.

2. Climate and Geographic Factors

The Persian region, primarily encompassing the highlands known as the Persian Plateau, featured a diverse range of climate types. Fundamentally, it possessed a continental climate. However, due to the influence of the Caspian Sea and the Mediterranean Sea, northwestern Iran received ample rainfall [1]. Consequently, the temperature in this region provided an optimal environment for the cultivation of silkworms. Moreover, the Persian Gulf and the plains of Mesopotamia, now predominantly encompassing Syria and Iraq, also offered a humid and fertile ecosystem conducive to silkworm breeding.

Another crucial aspect for creating a suitable habitat for silkworms is the presence of mulberry trees, their primary food source. Mulberries thrive primarily in subtropical and temperate zones [2]. This is the key reason why the primary sericulture industry in China flourished in Jiangnan (now Jiangsu, Zhejiang, Anhui, and Shanghai) and Fujian [3]. In the Persian Plateau, the majority of the region fell within the temperate and subtropical zones [4], making these areas ideal for the development of the sericulture industry.

Considering the amount of precipitation and the climatic conditions prevailing in the Persian region, it becomes evident that the southern shoreline of the Caspian Sea presents an excellent environment for the growth of the sericulture industry. This area boasts a superb climate, vast expanses of flatland, and access to trade routes leading to Russia, Caucasia, and the Balkans through cost-effective sea transportation.

When examining the geographic location of Persia, it becomes apparent that Persians had relatively easy access to silkworms, which were otherwise monopolized by the Chinese government. In his work 'History of The Wars,' Procopius mentions how Emperor Justinian acquired silkworms from China through an Indian monk [5]. However, the Persians could procure silkworms much more readily than the Romans, thus facilitating the development of sericulture in the Persian region.

To understand why Persians might have had access to silkworms, it is essential to delve into the origins of these creatures. Wild silkworms were predominantly found in subtropical and tropical regions and were indigenous to both China and India. Consequently, India and China are the two primary countries believed to be the origins of silkworms [6]. In light of this, Persia's geographical location was exceptionally advantageous. Persians could acquire silkworms and mulberry trees far more easily than the Romans. The Romans could only establish contact with individuals on the Silk Road, with monks and merchants exclusively arriving in the Roman Empire via this route. In contrast, the Persians could establish contact not only with the Chinese through the Silk Road but also through the trade routes from India to Persia, utilizing both overland and water transport via the Persian Gulf. Consequently, the likelihood that Persians obtained silkworms from China and India is highly plausible, potentially enabling them to initiate sericulture centuries before the Romans did so in the 6th century.

3. Politics and Wars

The Sassanid Empire, a formidable dominion that endured for four centuries, from the 3rd to the 7th century, played a pivotal role in the historical landscape. During this era, the Persians cultivated a sprawling, culturally rich, and economically thriving realm [7]. This affluence radiated its influence across the Persian Plateau, touching the realms of Europe, China, and India [8].

Artistic expression during the Sassanid Empire exhibited exceptional prominence, setting it apart from both Achaemenid Persia and Safavid Persia, primarily due to the adherence to pure Zoroastrianism. This distinctive form of art witnessed a significant transformation following the expansion of the Sassanian Empire, particularly influencing India and China after the annexation of Afghanistan and Baluchistan [9].

The formidable empire also nurtured distinctive techniques in textiles, thereby significantly augmenting silk production [10]. This surge in production allowed for the consumption of silk within the empire and facilitated its export beyond Persia's borders [11].

In customary artisan fashion, ingenious Persians amalgamated their unique Sassanid artistry into silk production. With their exceptional skills and advanced techniques applied to sericulture, 'Persian-styled' silk gained widespread popularity through innovative processes. These silk products left an enduring imprint on sericulture during the Tang Dynasty in China. During this epoch, the Chinese acquired techniques from Persia, enabling them to create high-quality silk products [12]. Subsequently, the silk products produced during the Tang Dynasty found their way to

numerous civilizations worldwide, thanks to a burgeoning population and numerous workshops.

Furthermore, the collapse of the Sassanid Empire in 651 CE at the hands of the Arabians prompted Sassanian nobility and citizens to seek refuge in China, fostering opportunities for the exchange of techniques and the diffusion of Sassanid culture and its artistic expression. Consequently, China absorbed further techniques, enhancing its global monopoly, with Persia playing a significant role in this dynamic.



Figure 1: Ancient silk products found in China from Tang dynasty.



Figure 2: Ancient silk products found in Iran from Sassanid empire.

Figures 1 and 2: Ancient silk artifacts showcasing Sassanian style, discovered in China from the Tang Dynasty and in Iran from the Sassanid Empire [13].

The aftermath of the Sassanid Empire's collapse did not diminish the influence of Persian sericulture. In 651 CE, Arabians assumed control over Persia, and while warfare impacted sericulture during this period, the critical sericulture hubs—Southern Caspian Sea Plains—remained under their control. The Arabians, moreover, disseminated the influence of Persian silk across the world.

Spanning from the Iberian Peninsula to the Iranian Plateau, the Arabian domain recognized the immense potential for silk production. Leveraging the silk production regions in Persia as a foundation, the Arabians established their own sericulture industry around the Mediterranean Sea [14].

With the conquest of the Iberian Peninsula accomplished, the Arabians also initiated sericulture in Iberia, known as Al-Andalus in Arabic. Interestingly, this region marked the inception of silk production in Western Europe. Notably, Lucca in Italy embarked on its own sericulture industry

several centuries later. Al-Andalus, with its unique climate and strategic geographical location, became a conduit for silk exports from Granada, Almería, and Córdoba to neighboring countries like France and Portugal [15]. These outcomes all trace their origins to the silk production in the Southern Caspian Sea Plain and the Fertile Crescent Area in Persia. A preeminent craftsman skilled in creating opulent silk hailed from the regions of Syria and Iraq [15], eventually migrating to Al-Andalus following encouragement from the Arabian government.

4. Economics and Trade Routes

The Persians, due to their central location within Eurasia, occupied a distinctive position along the Silk Road. Virtually all land-based trade between Europe, China, and India necessitated passage through the Persian Empire. Although nomadic groups controlled vast expanses of terrain between China and Persia, their limited population and dispersed communities rendered them less efficient than a centralized empire like Persia. The primary ‘business threats’ to Persian merchants were the Sogdians and the Arabians. Utilizing the Caspian Sea and the Strait of Hormuz, the export of silk from the Southern Caspian Sea Plain and the Fertile Crescent significantly reduced transportation costs compared to camel and horse caravans traversing the highlands of the Iranian Plateau.

Persia not only dominated maritime trade routes but also held sway over numerous land-based trade routes. Being situated in proximity to three major civilizations, Persia consistently commanded higher prices for its goods compared to those offered by Indian or Chinese merchants. These extensive trade routes contributed to Persia’s affluence, owing to its sophisticated transportation infrastructure and advantageous geographical position.

Furthermore, the silk trade thrived in Sassanian Persia. Persians disseminated their silk products globally, thanks to the distinctive artistic qualities embellishing their textiles. As the silk economy flourished, Persia constructed new ports along the Persian Gulf to enhance trade with India. Additionally, Persia’s control over Yemen and Oman facilitated a monopoly in the Persian Gulf [16]. As their hold on the Arabian Peninsula stabilized, Persians began to displace Roman merchants in the Indian Ocean, further solidifying their dominance in Indian and Persian Gulf trade [17]. These factors, coupled with substantial demand, spurred enhancements in the Persian native sericulture industry, establishing Persia as the preeminent nation in the silk trade from the 6th to the 10th century.

5. Conclusions

In summary, the enduring impact of the Persian silk trade, coupled with its distinctive techniques and the remarkable artistic contributions originating in Sassanian Persia, solidify its role as a foremost influencer in the silk trade throughout the Middle Ages. At times, the sericulture of the Tang Dynasty even faced challenges from Persia, underscoring the exceptional status of Persia within the global sericulture industry.

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