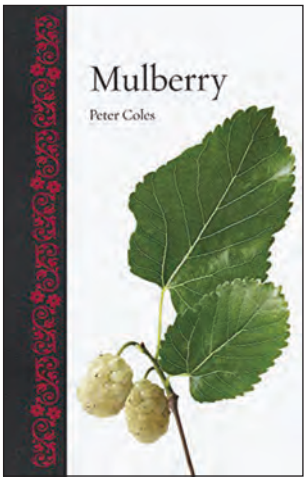
An extended review of *Mulberry* by Peter Coles

By Dorothea Bedigian



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{Ed. Note: Dorothea Bedigian, who has contributed book reviews to Plant Science Bulletin *for years, recently provided a review of the 2019 book "Mulberry" by Peter Coles that surpassed the typical review in terms of depth and research. Because of this unique take, we've chosen to publish this as a full article. Thanks to Dorothea for her work.}*

The material culture of mulberry, including its service to sericulture, paper making, for its wood, fruit, healing properties, and its inspiration to artists and writers is documented in Mulberry (see the Book Review section for full info). Author Peter Coles describes the trees botanically and societally, with 100 effective illustrations (95 in color) that are, in my view, among its most valuable features. There are reference notes to each chapter, a select bibliography, and 6-page Index. Coles is a freelance science writer, fine art photographer and translator, and a Visiting Fellow at the Centre for Urban and Community Research, Goldsmiths, University of London.

It was startling to encounter the full-page illustration (p. 192) with the caption, 'Mulberry pattern textile by Moda Fabric,' because the stems have thorns, the berries have sepals, and the leaves with serrate margins are uniformly tripartite, opposing Coles' photograph of a mulberry and leaf on p. 196! Instead, the striking textile depicted is Rubus L., with sepals at the base of the aggregate drupe(lets), i.e., many carpels from one flower. Rather, Morus L. has many separate flowers/fruits fused together (a syncarp, compound), and the perianth is part of the fleshiness, so there are no distinct/recognizable sepals. While some Morus leaves are lobed, they are not compound.

I looked forward eagerly to reading Mulberry because mulberries were an essential part of my childhood. On summer Sundays we would travel to a nearby wooded area to harvest a week's supply of fresh black and white mulberries; in winter, dried mulberries would substitute. Mulberries relate to my Armenian heritage; I recall grandparents' childhood memories of treasured traditions in Western Armenia, harvesting the fruit by stretching a large sheet held by four corners, while someone climbed the tree to shake its limbs, releasing the ripe fruit.

It is unfortunate that despite Coles' international focus, this detailed work neglects substantial geographical aspects and omits considerable regional expertise

about mulberry. My disappointment is Coles' shocking omission of Armenian culture that venerates, and is identified so completely with, mulberry, involving food, drink, and silk manufacture. Coles identifies mulberry pekmez (պեկմեզ) the concentrated fruit must, widely used as syrup by Armenians (often mixed with tahini), as a Turkish item. However, long before the Mongol invasions of Anatolia, the Armenian Highlands were a site of major agricultural innovations (Bedigian, 2011). Coles credits mulberry foodstuffs to the colonial conquerors, a case of cultural appropriation, thereby erasing history, ignoring contributions of Armenians, among the original peoples of the region after the fall of the Kingdom of Urartu, near the end of the 7th century BCE, many centuries before the Ottoman conquest. This report seeks to rectify the disservice done with these significant gaps.

Although Coles does not delve into these details, black mulberry (*Morus nigra* L.) appears to have originated in the mountainous areas of Mesopotamia and Persia, coinciding with the center of its diversity: the south Caucasus countries, Armenia, and northern Persia (Grieve, 1931; Yaltirik, 1982; Jansen et al., 1991; Westwood, 1995; Tutin, 1996; Browicz, 2000). Iran is viewed as its center of origin (Koyuncu, 2004; Koyuncu et al., 2004, p. 125). According to Markarian (1978), mulberry (evidently *M. alba* L., because the preceding sentence was about its Chinese origin) was introduced to Armenia in the 16th century, in 1710. Safar Vaselian transplanted the first mulberry from Russia (Tereki vicinity, Terek Soviet Republic).

The root of the Armenian term tut (թութ) originates from the Aramaic tūtā (Chicago Assyrian Dictionary, 2006), a loanword also used in present-day Arabic, Azerbaijani, Croatian, Hindi, Georgian, Kazakh, Kyrgyz, Pashto, Persian, Romanian, Tajik, Turkish, and Uzbek, reflecting its transfer along the Silk Road.

There is a long textual tradition of mulberries in Armenia. Mkhit'ar Gōsh, an Armenian scholar, writer, public figure, and priest, was among the stars of the Armenian Renaissance prior to the Turco-Mongol Invasions of the late 12th to early 13th centuries. His Fables (Bayizian, 1987), include a metaphorical rivalry between mulberry and olive: each boasted of its strength(s), the olive of its evergreen condition, and plentitude of fruit—especially since its fruit is made of oil, oil is made of light, and light dispels darkness. The mulberry boasted of the sweetness of its fruit and the fact that its leaves make silk. Worms are born and cloth comes from it—cloth enjoyed by kings and princes. The olive challenged the mulberry, arguing that its fruit passed too quickly, became diseased, was discretionary versus necessary, and that [people] removed [silk clothing] at night, but still left their lamp lit.

An Armenian creation myth describes the origin of mulberry, its place in the natural and social world. It illustrates the importance of mulberry in Armenian culture, offering a fantastical tale of how it came to be (Najarian, 2013).

> *Once upon a time, a silkworm wove a special dress for a girl. It was incredibly thin, light, with stunning lace. It was no ordinary dress. It possessed some magic powers: the woman who wore it became even more attractive. Additionally, any woman who wore the dress could go without food for days. After a woman wore it, she lent it to her friend. Her friend used it, then shared it with another friend. They all rejoiced, seeing their beauty proliferated.*

> *One day, the king chose one of these women to become his wife. She then stipulated that henceforth she alone would wear the beautiful dress; she would never share it. Her friends were taken aback, saddened by her selfishness. Some grew angry, so they went to the palace, began to shout, threw stones at the windows, and eventually stormed the palace; finding the new queen cowering in a corner, they ripped the dress from her hands and tore it to shreds.*
>
> *Suddenly, before the enraged women's eyes, the hem of the dress turned into a tree trunk with many branches. The shreds of the torn dress flew up to the branches of the tree and turned into swollen buds, that expanded broad leaves, forming a dense canopy. That was how the mulberry tree was born.*

Mulberry was ubiquitous throughout historical Armenia, in cuisine and lifestyle. Armenians consumed mulberry fruits fresh and made jams and syrup or molasses, prepared by straining mulberry juice, then boiling and thickening it. Traditionally that was used in place of sugar, an uncommon commodity, found only among the wealthy. Mulberry seasons yogurt and flavors wine. Mulberries are distilled for a coveted commercial product: the powerful (57–65%) alcoholic beverage tti oghi that was widely produced as moonshine at home, across Armenia. Mulberry's sweet aromatic juice doshab is believed to possess healing powers against pneumonia, angina, and the common cold. When dried, doshab forms the fruit leather pekmez. Mulberries are famously esteemed by residents of Goris, Syunik Province, who mount a National Mulberry Festival annually, in July.

Early travelers' accounts are an invaluable resource to reconstruct Armenian cultural life before the massacres (1894–1915). Ainsworth (1842) includes 10 entries about mulberry plantations and groves amidst vineyards, gardens of mulberry, fig, and pomegranate trees: "Someone climbed the mulberry tree and shook the branches, letting down enough fruit to feed 20 persons" (p. 190). Taylor (1868, p. 330) observed "fine gardens of mulberry, apricot and walnut."

Writing about Arabgir, Knight (1854, p. 408) noted: "built amidst a forest of fruit-trees, among which the White Mulberry is most common. The fruit of the mulberry is eaten fresh, or used for making brandy, or it is made into a sweetmeat called pekmez, which is common all through Armenia"; about Anatolia (Knight, 1854, p. 335): "Olive and mulberry trees are extensively cultivated for the production of oil and silk"; about Amasia (Knight 1854, p. 271): "there are numerous mulberry plantations, as silk forms an important article of export"; about Hazero in the Tigris plain near Bitlis (Knight, 1854, p. 515): "mulberry and Lombardy poplar flourish in the district." At the valley of Eghin, mountains rise rapidly to around 400 ft, the lower slopes rising in terraces above the narrow valley laid out in gardens and planted with trees (Knight, 1854, p. 512): "the trees are mostly white mulberry, the fruit of which is eaten fresh, or dried and distilled for brandy, or else boiled into a conserve"; mountains surrounding the basin of Lake Van on the south (Knight, 1854, p. 517) are "clothed with woods of oak, and along the rivers are walnut *trees*, raspberries, *mulberries*, and vines."

The city of Van was widely admired as a "garden city," owing to its impressive 80-km long stone-lined irrigation canal constructed during King Menua's reign, around 810-786 BCE (Bedigian, 2011), that ferried freshwater from the Artos Mountains to water the vineyards and orchards tucked behind mud walls. American missionary and physician

Moses Parmalee reported (1888): "As we approached *Van*, at the *western* extremity of the lake, the villages of the Armenians became more numerous... the dwelling-houses in the *gardens* are embowered in most charming orchards of mulberry and other *fruit trees.*"

Protestant missionary Susan Wheeler (1877, pp. 39-40) provides extensive firsthand culinary detail:

> *"White mulberry is very abundant there and is much used. It is the first fruit that ripens, and the people relish the sweet fruit after the long fast in the spring, when they have little variety in their food. When they are ripe the women bring out large sheets and spread them under the trees, which are then shaken, and the ripe fruit is easily gathered. The berries are put into a large copper boiler, a fire is kindled near the place, and the boiler is supported by large stones on each side of the fire. The fruit is cooked for several hours, and strained through a cotton bag, till all the juice is pressed out. This is put into shallow copper vessels, whitened with tin, and placed on the flat roofs of the houses, where it remains for days to evaporate in the sun. Then it is put into a narrow-necked earthen vessel, the mouth of which is covered with wet leather, and the molasses is ready. Bread and molasses is the morning meal of many a poor Armenian family. They also prepare a sort of sweet meat of this molasses. They stir starch or fine flour into the fresh syrup, boil it till it becomes a paste, and then spread it on their cloth, and dry it for winter. Sometimes they put nuts upon it while it is fresh, or when it is partly dry, rolling up the nuts, strung on strings, in these thin layers. Its appearance, very much like a sausage when rolled so, gives its name "sweet sausage" (*Անուշ սուջուխ*). Rojig (sharots) ['strung in a row,' as in beads] is prepared by stringing walnuts, then dipping the string into a preparation of molasses and flour paste, and then allowed to dry [forming fruit leather around the walnuts]. This kind of sweet paste is often brought in with the sherbet and offered to guests. I often brought home my pockets full of this bastic."*

Taylor (1868, p. 311) stated: "[Kharpert] gardens abound in fine fruit trees; the mulberry, however, is the most profitable, its fruit being made into a kind of thick paste, called 'Pesteek,' largely exported, and into raki, a villainous spirit, largely consumed in the town and villages. A little silk is also raised; but this branch of industry is as yet in its infancy." Lynch (1901, p. 391) also wrote admiringly about Kharpert where "the mulberry grows in such profusion that the silk crop is often of considerable value."

We must also consider the weavers craft, using the silk produced by silkworms bred with mulberry leaves. Hadjian (2018) uncovered historical evidence showing that Bitlis Armenians (ancestral home of my paternal grandparents) always had several mulberry trees in the garden, a remainder of the fact that Bitlis was on the Silk Route. Beyond silk production, Bitlis exported silk carpets and fabrics to France and Italy.

Years later, an editorial in The New Armenia (1920) testifies: "Speaking of the decrease in the production of silk…this industry is in full decline. The principal producing factors have been wrecked, the population which specialized in the rearing of silkworms displaced, and the mulberry plantations uprooted wholesale. Everything has been done to deal a death-blow to a once flourishing industry. [...] There is a slight inaccuracy in the above statement. To say that all this has been 'destroyed by the war' is not strictly accurate… neither of the above-mentioned silk producing regions was anywhere near the

fighting area. The real truth is that the Turkish Government availed itself of the state of war to carry out its favorite policy of exterminating the Greek and Armenian population, in whose hands the silk industry chiefly is."

Shirinian (1997) apprises David Kherdian's celebration of being alive, as in The Fast (an amusing introduction to the person's regard for the delicacy of *rojik*) and '*Mulberry* Trees' (finding one's roots while staining one's fingers with ripe mulberries):

When
as a small boy
I saw them ripen against
the early summer sun
I stopped alone for an hour and ate until
my fingers
took an ancient purple stain
until something remembered
a small, knotty tree
in a barren, rocky landscape
before an older, quieter sun

and I went home a little
sadder, a little gladdened
and standing on the porch
my mother and father
saw their Armenian son.

Thus, Kherdian connects with his heritage, and from the Diaspora in America, he is suddenly transformed through tapping into the larger collective memory of the Armenian people. The mulberry tree in America reminds him of one in the old country he could never have known except discursively, perhaps through his parents' stories. As a result, he is both saddened because of its loss, and he is happy because of the experience that seems to have confirmed his identity. At the end of the poem, through a transposition, he places himself in his parents' point of view and calls himself "their Armenian son." This third-person transposition is the result of Kherdian's reinterpreting his past, trying to make it complete and meaningful. Kherdian, at this point, has arrived at a crucial moment in his life, when he is able to look back and see himself clearly in relation to his parents and their Armenian heritage.

Atom Yarjanian, pen name Siamanto (1875-1915), among the most influential Armenian writers, poets, and national heroes of the 20th century, was one of the intellectuals arrested by Ottoman Turkish authorities on April 24, 1915 and subsequently slain. Excerpted here is a portion of his lament, 'The Mulberry Tree,' which depicts the atrocities committed by the Ottoman Turkish government, characterizing the momentous political and cultural upheaval in the history of the Armenian people. 'The Mulberry Tree' gives voice to a woman who has gone mad, upon seeing her grandson killed.

They've even cut down my mulberry tree.
Give me death. They've cut my mulberry tree.
I planted it the day my grandson was born.
They've cut my mulberry tree.
Woe to his memory. It grew tall before my eyes just like him –
It was seven years old, and I was sitting in its shade with my grandson in my arms singing.
They've even cut my mulberry tree.
Look, they sawed it at the roots.
Where is the cart with the corpses? I still hear it squeak.
I want to be thrown into it next to my grandson.
There's still a place on the cart.

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