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The book introduces the final achievements accumulated in the study of the origins and development of viticulture and winemaking in Armenia, with the intention to ensure improved knowledge and increased awareness among the readers. It will be interesting for all readers who realize that wine is not just a drink, which is industrially made independently of its ties to the land, the history, the traditions, the social context; it is for those who understand that wine cannot be viewed independently of the grape varieties, history and traditions used to make it. Vines and Wine allows all of us to learn about history of people who made it, about traditions and culture of places where amazing diversity of native grapes give birth to unique wines.

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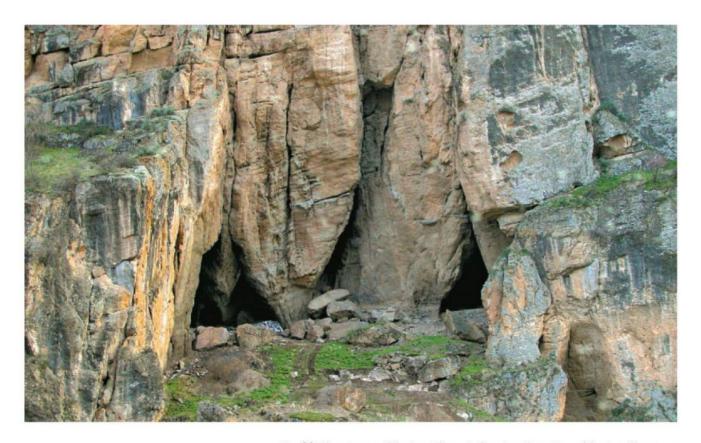


Fig. 36: The entrance of the Areni-1 cave in limestone formations of the Arpa River gorge

Metsamor, Kenan tepe, etc.) (Narimanov, 1960; Kushnareva and Chubinishvili, 1970; van Zeist and Heers, 1974; Kushnareva, 1977; Lisitsina and Prishchepenko, 1977; Burney, 1980; Khanzadyan et al., 1983; Miller, 1986; Javakhishvili et al., 1987; van Zeist, 1988; Wilkinson, 1990; Belisario et al., 1994; Khanzadian, 1995; Badler, 1997; Parker et al., 2003; Parker and Swatz Dodd, 2003; Kozbe, 2004; Sardaryan, 2004; Harutyunyan et al., 2005; Tumanyan, 2008; Parker et al., 2009; Balossi Restelli et al., 2010; Kvavadze et al., 2010; Rusishvili, 2010; Lyonnet et al., 2012; Simonyan and Rothman, 2015). (Fig. 32–35, Map 4, Table 3)

Among the mentioned finds, especially important were hundreds of grape sprouts, barks, fruit stems, seeds, pressed fruits and pulp remains, found in Areni–1 cave, in Vayots Dzor Province of Armenia. A substantial part of these remains is even more important, when evaluated archaeologically, as they were found in the close vicinity to a wine production complex and permit dating of both the grapes and the production facility. The dating of these botanical remains made by radiocarbon analyses in the laboratories of Oxford and California Universities confirm that in Areni–1 we have the oldest archaeological site known in the world attesting the ancient wine production which is at least 6.000 years old, i.e. comprising a time span from the end of the V Millennium BC to the first quarter of the IV Millennium BC (4.100–3.800 BC, calibrated). Mor-

ever, the "direct" dating of the grape remains from different archaeological layers of the cave shows that there are also Middle Bronze Age (2.200-1.900 BC, calibrated), Early (400-600 AD, calibrated) and High Medieval (800-1.300 AD, calibrated) "species". These archaeobotanical remains were well preserved, and contained precise information to support understanding of the diversity of local old grape varieties, as well as their genetic links and relationships with ancient grape from the cave. The results of archaeochemical analysis of samples taken from the pots and vessels of Areni-1 winemaking complex are very important, as they clearly prove that Armenia is one of the ancient centers of origin of winemaking. Similar studies were performed in several archaeological sites of the region, dating to the X-II Millennia BC, among them archaeological sites located in Armenia (tombs of Sisian-1 and Verin Naver), Georgia (Gadachrili gora, Arukhlo, Shulaverisgora), Turkey (Kyortik tepe, Arslantepe, Titrish höyük) and Iran (Hajii Firuz tepe, Godin tepe), and creating an important cultural and scientific background for studying the long process of the production of grape juice and wine (Javakhishvili et al., 1987; Belisario et al., 1994; Algaze et al., 1995; McGovern et al., 1996; Badler, 1997; McGovern and Mitchel, 1997; McGovern, 2009; Balossi Restelli et al., 2010; Kvavadze et al., 2010; Barnard et al., 2011; Wilkinson et al., 2012; Smith et al., 2014; Simonyan, 2014). (Fig. 36, 37, Map 4, Table 3)

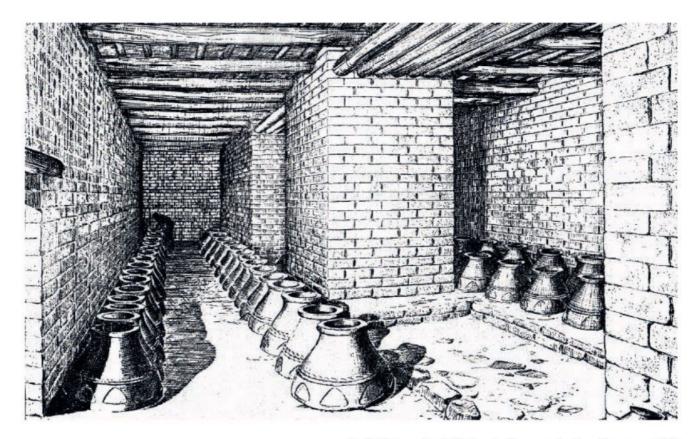


Fig. 123: Wine cellar № 28 (Karmir Blur, reconstruction, Oganesyan, 1955)

wine factory, dates to the same period (Narimanov, 1960; Kushnareva, 1977; Lisitsina and Prishchepenko, 1977; Khanzadyan *et al.*, 1983; Tumanyan, 2008). (Fig. 122)

The existence of winepresses from the period of Van Kingdom (IX-VI centuries BC) is confirmed by written sources and archaeological materials. (Maps 5, 6) Winepresses and wine cellars in the palace of Karmir Blur were a part of economic complexes, which were also placed in the basements of the building and had 4 and more meters of height. The mud brick walls of 2.5m of thickness and the flat clay roof kept regular temperature inside (Khalpakhchyan, 1961). (Fig. 79, 80, 123)

Probably, there were also aragasts in wine cellars or separate halls. Another stone pipe was vertically connected to the pipeline laid in horizontal position in one of the wine cellars of Ayanis fortress (Map 5), situated on the eastern shore of the Lake Van, which allows to suppose that there was production above the warehouse on the ground floor (Çilingiroglu and Salvini, (eds.), 2001; Tumanyan, 2008).

Rock-cut winepresses, existing in the Armenian Highlands since the earlier periods, were widespread especially during the economic rise of the Van Kingdom in the VIII-VII centuries BC. They are mainly typical to the synchronous rock-cut tombs, as the winepress of Agarak. (Map 6) With the biggest probability, it had a ritual meaning and was foreseen "for satisfaction of the needs of the deceased". The tradition of rock-cut winepresses continued also in Classical period Armenia. More than ten rock-cut winepresses of that period (IV/III centu-



Fig. 124: A winepress in the neighborhood of the Urartian tomb from the north-east (VIII-VII centuries BC, Agarak)

ries BC – III/IV centuries AD) were excavated in the northern part of Agarak (Avetisyan, 2003; 2008; Kalantaryan, 2005; Tumanyan, 2008; Phalanjyan, 2015). (Fig. 124–127)

Winepresses existed in the basements of houses and even close to the warehouses of palaces, in the Classical and Medieval periods.

Primary writings about winepresses in Armenia belong to Agatangeghos. He mentioned wineries of Vagharshapat, which consisted of more than one layer and usually the aragasts and takars were on the ground floor (Khalpakhchyan, 1961).



SEV ARENI

Synonyms: Sev Malahi



It is an indigenous Armenian variety belonging to oriental eco-geographical group. Sev Areni takes its name from the village of Areni in Vayots Dzor. The most popular variety in Armenia, cultivated since ancient times.

Sev Areni is characterized by medium-sized, dense and conical bunches, sometimes with wings and medium-sized, black, partly oblong berries, sometimes ovate with a rounded top (Fig. 343). The skin is thick, covered with a thick layer of bloom, the flesh is juicy, and the juice is colorless. The ripening is late and the productiveness is medium. The first harvest comes in the fourth to fifth year after planting. Fully ripe berries have medium level of sweetness and high acidity.

Sev Areni has high resistance to frosts, moderate resistance to powdery mildew (*Erysiphe necator*) and considerable susceptibility to downy mildew (*Plasmopara viticola*).

Sev Areni is widely used to make red ruby colored, full bodied and well balanced table wines, with fresh, silky and unforgettable bouquet of flavors. On the palate the wine shows elegance and balanced tannic structure with notes of cherry, strawberry, blackberry, violets, wisteria and sweet vanilla all in tempting harmony. Flavor of fresh wild berries touched by spices, refreshing acidity and silky roundness create a beautiful balance and exceptional aftertaste. Sev Areni is also used in sparkling wine and juice production.