

Discover the Fauna of Our Campus

Grape phylloxera

Order: Hemiptera

Family: Phylloxeridae

Genus: Viteus

Species: Grape phylloxera (*Viteus vitifoliae*)

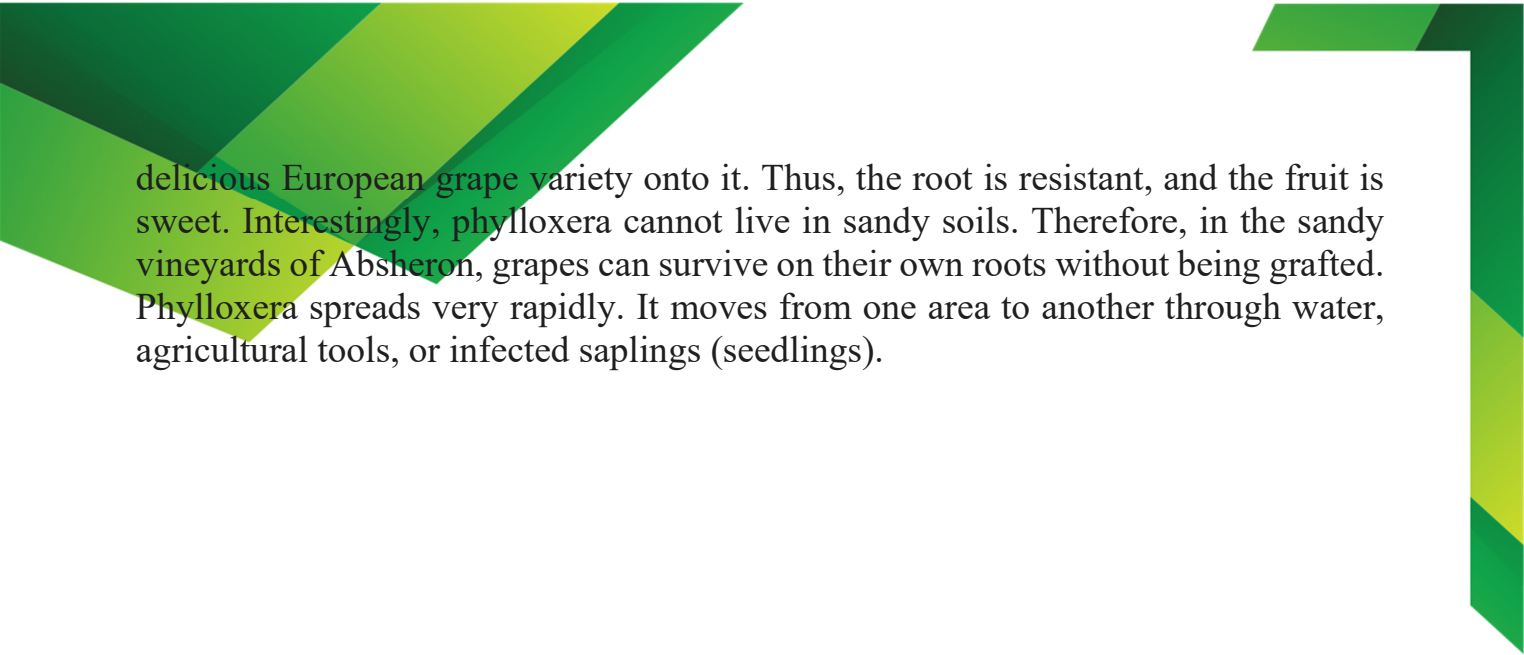
Phylloxera (*Viteus vitifoliae*) is the greatest fear of the viticulture world. This tiny insect arrived in Europe from America in the second half of the 19th century, destroying almost all the vineyards on the continent and causing a catastrophe known in winemaking history as the "Phylloxera Crisis."



It is very small and difficult to see with the naked eye (approximately 1 mm). It is yellowish-green or amber in color. Phylloxera has two main forms: It lives underground and sucks the roots. This is the most dangerous form for European grape varieties. It creates small swellings (galls) under the leaves.

Phylloxera destroys the plant from the inside and from the root: When the insect sucks the root, it secretes a special saliva there. This substance creates swellings and nodules on the root. Over time, these swellings crack, and harmful bacteria from the soil fill the inside of the root. The roots rot, and the plant dries up because it cannot take in water. Initially, the development of the vine weakens, the leaves turn yellow, productivity drops, and within 3-5 years, the plant dies completely.

Since the homeland of this insect is America, the grape roots there are resistant to phylloxera. Even if they are bitten, their roots do not rot. The roots of the sweet grapes we eat (*Vitis vinifera*) are completely defenseless against this insect. Because phylloxera lives underground, chemical pesticides are often ineffective against it. The method that saved world viticulture was found this way: They take the root of an American grape (because it is resistant to phylloxera) and graft a



delicious European grape variety onto it. Thus, the root is resistant, and the fruit is sweet. Interestingly, phylloxera cannot live in sandy soils. Therefore, in the sandy vineyards of Absheron, grapes can survive on their own roots without being grafted. Phylloxera spreads very rapidly. It moves from one area to another through water, agricultural tools, or infected saplings (seedlings).

