

BOTANY-ETHNOLOGY

Origins of The Vine and The Fig Tree

"A Classic of Science"

An Antiquarian-Botanist Worked Out the History of Two Proverbial Plants Long Cultivated by Mankind

ORIGIN OF CULTIVATED PLANTS, by Alphonse de Candolle. New York: Appleton, 1902. (First French edition in 1883.)

Vine—*Vitis vinifera*, Linnaeus

THE vine grows wild in the temperate regions of Western Asia, Southern Europe, Algeria, and Morocco. It is especially in the Pontus, in Armenia to the south of the Caucasus and of the Caspian Sea, that it grows with the luxuriant wildness of a tropical creeper, clinging to tall trees and producing abundant fruit without pruning or cultivation. Its vigorous growth is mentioned in ancient Bactriana, Cabul, Kashmir, and even in Badakkhan to the north of the Hindu Koosh. Of course, it is a question whether the plants found there, as elsewhere, are not sprung from seeds carried from vineyards by birds. I notice, however, that the most trustworthy botanists, those who have most thoroughly explored the Transcaucasian provinces of Russia, do not hesitate to say that the plant is wild and indigenous in this region. It is as we advance towards India and Arabia, Europe and the north of Africa, that we frequently find in floras the expression that the vine is "subspontaneous," perhaps wild, or become wild (*verwildert* is the expressive German term).

The dissemination by birds must have begun very early, as soon as the fruit existed, before cultivation, before the migration of the most ancient Asiatic peoples, perhaps before the existence of man in Europe or even in Asia. Nevertheless, the frequency of cultivation, and the multitude of forms of the cultivated grape, may have extended naturalization and introduced among wild vines varieties which originated in cultivation. In fact, natural agents, such as birds, winds, and currents, have always widened the area of species independently of man, as far as the limits imposed in each age by geographical and physical conditions, together with the hostile action of other plants and ani-

mals, allow. An absolutely primitive habitation is more or less mythical, but habitations successively extended or restricted are in accordance with the nature of things. They constitute areas more or less ancient and real, provided that the species has maintained itself wild without the constant addition of fresh seed.

Concerning the vine, we have proofs of its great antiquity in Europe as in Asia. Seeds of the grape have been found in the lake-dwellings of Castione, near Parma, which date from the age of bronze, in a prehistoric settlement of Lake Varese, and in the lake-dwellings of Wangen, Switzerland, but in the latter instance at an uncertain depth. And, what is more, vine-leaves have been found in the tufa round Montpellier, where they were probably deposited before the historical epoch, and in the tufa of Meyrargue in Provence, which is certainly prehistoric, though later than the tertiary epoch of geologists.

Two Ancient Varieties

A Russian botanist, Kolenati, has made some very interesting observations on the different varieties of the vine, both wild and cultivated, in the country which may be called the central, and perhaps the most ancient home of the species, the south of the Caucasus. I consider his opinion the more important that the author has based his classification of varieties with reference to the downy character and veining of the leaves, points absolutely indifferent to cultivators, and which consequently must far better represent the natural conditions of the plant. He says that the wild vines, of which he had seen an immense quantity between the Black and Caspian Seas, may be grouped into two subspecies which he describes and declares are recognizable at a distance, and which are the point of departure of cultivated vines at least in Armenia and the neighbourhood. He recognized them near Mount Ararat, at an altitude where the vine is not cultivated, where, indeed, it could not be cultivated. Other



"THE GADDING VINE"

Was known to Egyptian, Phoenician, Greek, Roman and Swiss Lake Dwellers.

characters—for instance, the shape and colour of the grapes—vary in each of the subspecies. We cannot enter here into the purely botanical details of Kolenati's paper any more than into those of Regel's more recent work on the genus *Vitis*, but it is well to note that a species cultivated from a very remote epoch, and which has perhaps two thousand described varieties, presents in the district where it is most ancient, and probably presented before all cultivation, at least two principal forms, with others of minor importance. If the wild vines of Persia and Kashmir, of Lebanon and Greece, were observed with the same care, perhaps other subspecies of prehistoric antiquity might be found. The idea of collecting the juice of the grape and of allowing it to ferment may have occurred to different peoples, principally in Western Asia, where the vine abounds and thrives. Adolphe Pictet, who has, in common with numerous authors, but in a more scientific manner, considered the historical, philological, and even mythological questions relating to the vine among ancient peoples, admits that both Semitic and Aryan

nations knew the use of wine, so that they may have introduced it into all the countries into which they migrated, into India and Egypt and Europe. This they were the better able to do, since they found the vine wild in several of these regions.

The records of the cultivation of the grape and of the making of wine in Egypt go back five or six thousand years. In the West the propagation of its culture by the Phenicians, Greeks, and Romans is pretty well known, but to the east of Asia it took place at a late period. The Chinese who now cultivate the vine in their northern provinces did not possess it earlier than the year 122 B.C.

It is known that several wild vines exist in the north of China, but I cannot agree with M. Regel in considering *Vitis Amurensis*, Ruprecht, the one

most analagous to our vine, as identical in species. The seeds drawn in the *Gartenflora*, 1861, pl. 33, differ too widely. If the fruit of these vines of Eastern Asia had any value, the Chinese would certainly have turned them to account.

Fig—*Ficus carica*, Linnaeus

The history of the fig presents a close analogy with that of the olive in point of origin and geographical limits. Its area as a wild species may have been extended by the dispersal of the seeds as cultivation spread. This seems probable, as the seeds pass intact through the digestive organs of men and animals. However, countries may be cited where the fig has been cultivated for a century at least, and where no such naturalization has taken place. I am not speaking of Europe north of the Alps, where the tree demands particular care

and the fruit ripens with difficulty, even the first crop, but of India for instance, the Southern States of America, Mauritius, and Chili where to judge from the silence of compilers of floras, the instances of quasi-wildness are rare. In our own day the fig tree grows wild, or nearly wild, over a vast region of which Syria is about the centre; that is to say, from the east of Persia, or even from Afghanistan across the whole of the Mediterranean region as far as the Canaries. From north to south this zone varies in width from the 25th to the 40th or 42nd parallel, according to local circumstances. As a rule, the fig stops like the olive at the foot of the Caucasus and the mountains of Europe which limit the Mediterranean basin, but it grows nearly wild on the south-west coast of France, where the winter is very mild.

We turn to historical and philological records to see whether the area was more limited in antiquity. The ancient Egyptians called the fig *teb*, and the earliest Hebrew books speak of the fig, whether wild or cultivated, under the name *teenah*, which leaves its trace in the Arabic *tin*. The Persian name is quite different, *unjir*; but I do not know if it dates from the Zend. Piddington's *Index* has a Sanskrit name, *udumvara*, which Roxburgh, who is very careful in such matters, does not give, and which has left no trace in modern Indian languages, to judge from four names quoted by authors. The antiquity of its existence east of Persia appears to me doubtful, until the Sanskrit name is verified. The Chinese received the fig tree from Persia, but only in the eighth century of our era. Herodotus says the Persians did not lack figs, and Reynier, who has made careful researches into the customs of this ancient people, does not mention the fig tree. This only proves that the species was not utilized and cultivated, but it perhaps existed in a wild state.

Ancient Names of the Fig

The Greeks called the wild fig *erineos*, and the Latins *caprificus*. Homer mentions a fig tree in the *Iliad* which grew near Troy. Hehn asserts that the cultivated fig cannot have been developed from the wild fig, but all botanists hold a contrary opinion; and without speaking of floral details on which they rely, I may say that Gussone obtained from the same seeds plants of the form *caprificus*, and other varieties. The remark made by several scholars as to the absence of all mention of the cul-

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tivated fig *sukai* in the *Iliad*, does not therefore prove the absence of the fig tree in Greece at the time of the Trojan war. Homer mentions the sweet fig in the *Odyssey*, and that but vaguely. Hesiod, says Hehn, does not mention it, and Archilochus (700 B.C.) is the first to mention distinctly its cultivation by the Greeks of Paros. According to this the species grew wild in Greece, at least in the Archipelago, before the introduction of cultivated varieties of Asiatic origin. Theophrastus and Dioscorides mention wild and cultivated figs.

Romulus and Remus, according to tradition, were nursed at the foot of a fig tree called *ruminalis*, from *rumen*, breast or udder. The Latin name, *figus*, which Hehn derives by an effort of erudition, from the Greek *sukai*, also argues an ancient existence in Italy, and Pliny's opinion is positive on this head. The good cultivated varieties were of later introduction. They came from Greece, Syria, and Asia Minor. In the time of Tiberius, as now, the best figs came from the East.

We learnt at school how Cato exhibited to the assembled senators Carthaginian figs, still fresh, as a proof of the proximity of the hated country. The Phœnicians must have transported good varieties to the coast of Africa and their other colonies on the Mediterranean, even as far as the Canaries, where, however, the wild fig may have already existed.

The result of our inquiry shows, then, that the prehistoric area of the fig tree covered the middle and southern part of the Mediterranean basin from Syria to the Canaries.

We may doubt the antiquity of the fig in the south of France, but a curious fact deserves mention. Planchon found in the quaternary tufa of Montpellier, and de Saporta in those of Ayalades near Marseilles, and in the quaternary strata of La Celle near Paris, leaves and even fruit of the wild *Ficus carica*, with teeth of *Elephas primigenius*, and leaves of plants of which some no longer exist, and others, like *Laurus canariensis*, have survived in the Canaries. So that the fig tree perhaps existed in its modern form in this remote epoch. It is possible that it perished in the south of France, as it certainly did at Paris, and reappeared later in a wild state in the southern region. Perhaps the fig trees which Webb and Berthelot had seen as old plants in the wildest part of the Canaries were descended from those which existed in the fourth epoch.

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