The carob through the ages and its use in Greece

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Area of origin (Zohary 1973) in Arabian peninsula and the African Horn (Somalia) as Ceratonia oreothauma, an uncultivated species.
Pulp consists of 90% and seeds 10%.

Average production of tree is c. 20 kilos and can reach 70 kilos.
The archaeological data:

- Pollen
- Charcoal
- Seeds
Pyrgouthi in the Berbati Valley, Argolid: Fragment of pod and seed
Water flotation method used to collect plant fragments, such as pods, seeds and charcoal.
Water flotation for the retrieval of environmental data:

a) the process of washing soil (left);

b) the residue from washing before sorting (right).
Sorting residue from water flotation (left); sorting flot through a stereoscope microscope (right).
The archaeology of the carob

Earliest carob pollen identified from Hula valley, north Israel, in the ca 40,000 BP. (before present).

Carob charcoal ca 10,000-8,500 BP from Jericho. At Pe-pottery Atlit-Yam both seeds and wood was located.

Seeds were recovered from Nahal Oren site, so carob existed in the eastern Mediterranean before the start of agriculture. Both Liphschitz (1987) and Zohary (1973) suggest that the Mediterranean region must have been, at least, one of its domestication centres.

From Crete charcoal was found at Mochlos (Schock & Ntinou 2004) (Late Minaon IB levels) (ca. 1450 BCE). From pollen in Crete (Bottema & Sarpaki 2003) carob seems to have been present shortly after LMIA (ca. 1500 BCE).
New Testament

Now John himself wore clothing made of camel’s hair, with a leather belt around his waist. His food was locusts and wild honey. (Mathew 3:4)

John the Baptist lived an ascetic life in the desert by eating “locusts and honey”. According to some researchers, the locusts which he ate, were the known insects which were allowed by the Law of Moses. According to some others were the fresh buds of the trees or the extremities of herbs and plants which he found in the desert, as they are all named akrides (locusts) in ancient Greek.* In the medieval period, the monks, annoyed from the fact that Saint John did not perform abstention from meat, insisted that he ate carobs, which were also called “locusts”, as they look like those that were hanging from the tree. Hence, the carobs became known as “the bread of Saint John”.

* The New Testament was written in Koine Greek, which was based on the Attic dialect and was the common language of the Eastern Mediterranean from the 4th BC until 600 AD.

He went to work for[c] one of the citizens of that country, who sent him into his fields to feed pigs. He longed to eat his fill from[d] the carob pods[e] the pigs were eating, but no one would give him any.” (The Parable of the Lost Son (Luke 15, 11-32)

In the above mentioned passages, carobs are either included in the sense of restraint and abstention, from whatever brings pleasure or they are part of an obligatory choice.
Mesopotamia

Probably, the Semitic populations that arrived in Mesopotamia from Arabia between the 4th and the 2nd millennium brought with them the carobs in order to feed their animals, but, finally, they included them in their diet. In the Gilgamesh Epic, the tree ‘halub’ has been, at times, translated as carob (Gadotti, 2014, xiv, 430).

The earliest recipe with carob comes from Mesopotamia.

Meat and Carob Stew

Meat is used. Prepare water; add fat; salt to taste; shallots; halazzu [carob]; water; leek and garlic, mashed with kisimmu [sour cream or yogurt]. It is ready to serve.

Several Assyriologists translate the word halazzu as carob.
Ancient Egypt

Uses of the carob:
- animal fodder
- the resin used as glue for the clothes during mummification.
- funeral offering
- wine
- medicine
- In hieroglyphic, the sign of the carob attributes the meaning of ‘sweet’ taste.

In the list of funerary offerings which appears in the west wall of the Temple of Mery-nesut, an official of the 5th Dynasty (2494-2345), between the several types of bread, pieces of meat and different kind of birds, beer, fresh and dried fruits, also carob is mentioned.
The father of Botany, the Greek philosopher Theophrastus from Eresos (IV: 2, 4) mentions that the Ionians name the carob “Keronian” and others Egyptian fig, saying that it does not grow in Egypt but in Syria, in Ionia, in Knidos and in Rhodes, without adding information on the edible parts of its fruit. Nevertheless, he describes the taste as sweet, showing that it was a tasted crop: “Again, some things which have a good taste, have a terrible smell, such as the carob, which is sweet (that happens in some areas, if not for all).
Roman Times

According to Daniel Zohary, carob was maybe domesticated in the Roman times (Zohary 2002), but dispersed rapidly in the Mediterranean. It was introduced to Rome through Greece, as is shown by its name siliqua graeca, for example the Greek pod and the circumstantial use of the Greek word ‘keratea’ a name given by Dioscurides to the carob.

Cassella recognised two pods on a wall painting in the triclinium of the House de Cervi at Herculaneum (Casella 1950,IV.21) and two others at lararium which is located right, as one enters the House of the Ephebe (I.VII.10-12). Unfortunately, they have not been saved. Remains of carobs have been found in Herculaneum and fruits as well as wood from Pompeii.
Written records

Strabo, writing in Augustus times, mentions that at Meroë, the palm tree, persea (peach), ebony and carob tree are found in abundance (Strabo, Geography, XVII, ch.II).

According to Pliny the Elder, carob is a fruit which is not very different from the chestnut (..) except that in this fruit you can eat the skin (N.H. 16.8). Pliny, agreed with Theophrastus and claimed that the tree comes from Syria.

Columella includes the carob amongst the trees that are food for the pigs (RR V. 7.9.6).

Dioscorides, a doctor, a herbalist, a pharmacist and botanist is the one who gave the name of ‘keratea’ to the carob and ‘keration’ to the fruit, as it resembles the corn of the goat. Dioscorides, as he referred to the ‘keration’ and its pharmaceutical uses, he wrote amongst other things that the immature give stomach pain and diarrhoea, whereas the dried one are kind to the stomach and stop diarrhoea.
An experiment

Diorscourides (Materia medica V, 24) refers to the carob wine:

“The carob wine and the sorb apple wine and the medlar wine are made like quince wine. They are all astringent, with a bitter taste, friendly to the stomach’.

In an experiment to make carob wine, the process of making the quince wine was followed, as it has been provided by Dioscurides: ‘After taking away the seeds, the quince are cut in pieces and 12 mnes of quince are covered for 30 days. They are then sieved and stored’.

We used not totally ripe carobs, which we have cut in small pieces, we transferred to a pot. We covered them with must of the Romeiko variety of grapes, as there were none of the varieties which were present in Roman times. Regarding this the experiment was not totally completed. We followed the quantities of ingredients that Dioscurides suggested- 12 mnes of carobs and 1 measure of must-decreased to half: namely 2.594 gr. of carob and 19.7 litres of must. After 30 days where it rested at a cellar, to mixture was sieved. The taste was slightly acrid with slight notes of wine taste. Surely, a wine with pharmaceutical properties.
The Ancient Greeks, the Romans and the Byzantines had garum, this product which is made from the enzymatic hydrolysis of the fish intestines or of the whole fish with the addition of salt. The Arabs too, in the medieval period, had the murri, a condiment made from barley or wheat bread which had been made to ferment for a long time and had been salted. Both garum and murri replaced salt in the food and lifted the tastes in food. Garum disappeared from Greek cuisine but also murri did not leave any trace in Arabian cuisines which date after the 15th century.

There are recipes for making murri which demand months of fermentation, however, in the *Kitab Waaf al-At’ima al Mu’tada* (14th century) we read about a Byzantine recipe. This is very interesting quick method of murri, which represents the Greek idea of garum as it was applied by the poor in fish environment of the Middle East. It also includes carob from Syria. This dark and thick sauce has a special taste, slightly unfamiliar but not disagreeable and in fact very salty, as it was used instead of salt.

Recipe of Byzantine Murri right away. Take, upon the name of God, the Most High, three pounds of honey scorched in a kettle [nuqra]; 10 loaves of bread scorched in the brick oven and pounded; half a pound of starch; two ounces each of roasted anise, fennel and nigella; an ounce of Byzantine saffron; cellery seed, an ounce; half a pound of Syrian carob; 50 peeled walnuts; half a pound of syrup; five split quinces; half a makkûk of salt dissolved in honey; and 30 [viz. 100] pounds of water. Throw the rest of the ingredients on it [viz. on the water], and boil it on a slow flame until a third of the water goes away. Then strain it well. Put it up in a greased glass or earthenware vessel with a narrow top. [....] (Perry Ch., 2001, pp.406-7).
Traditional Greek Diet

During WW II, the nutritious role of the carob was indeed very important for the survival of the Greeks who were excluded from access to many other foods. The carobs were consumed as they were or were cooked with other simple ingredients or even were used for the production of petimezi (carob syrup) or else were made into flour. Regarding the carob flour, it was often mixed with chestnut flour or flour from dried fruits such as apples or pears.

At this period Crete was an important exporter of carobs to the North of Greece. A large part of the imports which arrived to Thessaloniki were used for the production of carob honey which they redirected for the production of Halva.

A Wartime Carob Bread

⅓ cup olive oil
1/3 cup raisins
2 apples, diced into pieces
water
1 cup chestnut flour
3 cups carob flour
1 1/2 cup sourdough starter

Anna Kandilieri (1943. Galatas- Chania)
Some thoughts concerning the use of carob as food.

According to the written records in much of the Greco-Roman and Byzantine Mediterranean, carob was considered animal fodder, food indicating an ascetic life, a natural remedy, food to which people resorted to in times of hunger and starvation. It was not considered a delicacy.

When unfavorable weather phenomena destroyed crops, when wars decimated both animals and humans, when famine and disease spread rapidly throughout the country, then people took refuge in foods that they would not have preferred in otherwise circumstances. Hay, roots, leaves, dangerous legumes, acorns, carobs, rats, earth with a small addition of flour and even human flesh could find a place in the diet. Although the consumption of foods intended for survival is so embarrassing that often even their remembrance lies buried.

The authors of the ancient and Byzantine world refer to poverty food and of extreme necessity, even if they are not reported in detail. The fact that the ancient authors do not mention cooking the carob and carob flour can mean that it had neither been cooked nor had turned into flour.
In my opinion, the ancient technology did not exclude the production of carob flour. The fruits of algarobbo (genus Prosopis) have a similar degree of hardness and are turned into flour in Argentina in huge mortars. Why then, the carob failed to become a popular food?

Mortars and bedrock mortars, Argentina (Capparelli & Lema, 2011, p.78)
Both the bread and legumes symbolize agricultural societies and express the idea of man’s domination over nature, contrary to the carob which is connected to the forest. The Arcadians, eaters of the acorns, were not standing for culture.

Moreover, both the color and the absence of gluten did not have the complex typology which defined the connection of quality and the comparability of financial position of the consumer. Pulses were employed to make bread in antiquity, although this kind of breads did not belong to everyday living. In any case the carob was not in the same category such as legumes ... I therefore believe that in the present Hellenic area it was used as animal feed, as medicine, as a drink and only in cases of extreme poverty and famine, as food. However, since the written information is not sufficient, archaeological findings can contribute to a more complete spectrum of its uses.

Also, bear in mind that although in modern times the carob was used in various ways, it does not mean that it was similarly used in the past, although it is tempting to imagine the ancient people as some version of ourselves.