



PLANT CULTURE

## Symbolic plant(s) of the Olympic Games

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### Abstract

The victors of the Olympic Games in ancient Greece were awarded crowns made of olive branches. In Antiquity, the symbolism of plants was related to myths, properties, aesthetic values, and civilization. Theophrastus first classifies and identifies plants, and gathers information about them, in his classic books (4th century BC). Symbolic plants are native to the Mediterranean region and they exhibit some convergent behaviour with respect to their functional characteristics. These plants were collected (among other species) by Professor J. Sibthorp and his partners in two botanical journeys in the Levant during the 18th century, and they have been illustrated for *Flora Graeca Sibthorpiana*.

Key words: Olympic Games, symbolic plants.

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*The nature always sets out to achieve what is best.*  
Theophrastus, *The causes of plants* I.16.11

### Olympics remind us of Flora

The origin of the Olympic Games is lost in the mists of history; yet everybody agrees that their origin was religious. At the time when Earth was still worshipped, the first references were made to contests during the festivals celebrated in her honour. The Olympic Games assumed a panhellenic character from the end of 7th century BC (i.e. 776 BC).

Olympia was one of the largest ancient Greek sanctuaries, equal in importance to Delphi. Olympia was a sacred place, in a small valley between two rivers, and full of places of worship and works of art as well as auxiliary

buildings used during the Games. Every four years during the Olympic Games in the summertime, almost-naked athletes and umpires dressed in royal scarlet lived in harmony with nature in that place.

Ancient Greeks have always placed reliance on eternal values (Empedocles). Lloyd-Jones (2001) argued that while the culture and literature of early Greece have been and still are admired, the notion that the ethics of that period might have much to teach us now seems bizarre to most people. As a rule, the ethics of people are closely bound up with religion, and if one wishes to understand the early Greeks, it is worthwhile to look at the religion in which they had their origin. Arguably therefore, the close link between the Greeks and the plant world expresses itself in the name *Chloris* (the newly-born green shoot), i.e. the Greek name equivalent to the Latin *Flora*. Chloris personified spring and she was the Goddess of flowers. In that religion, nymphs and springs were responsible for the life of plants.

Twenty-eight centuries ago plants were established as the official, symbolic awards of the Olympic Games. The extensive use of plants as symbols is at the heart of the Olympic tradition, but the ancient Greeks went beyond symbolism to lay the foundations of modern botany.

### Classical times: on Theophrastus

Plants that were symbolically used as awards during the Olympics in Ancient Olympia (Table 1), as well as plants used in everyday life throughout the Games (Table 2), were described by Theophrastus (371–286 BC) 24 centuries ago. Theophrastus is the author of the most important botanical works that have survived from classical antiquity, i.e. *Enquiry into plants* and *De Causis Plantarum* (*The causes of plants*). The work is not a text book; it is research. According to Linnaeus, Theophrastus is the father of Botany; he is also considered as the founder of several disciplines of plant biology, such as morphology, physiology, taxonomy, phytogeography, seed biology, and plant ecology (Enevari, 1984; Thanos, 1994).

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**Table 1.** Symbolic plants in the ancient Olympic Games

Bauer's illustration in <i>Flora Graeca Sibthorpi-ana</i> (in the National Library of Greece)	Name of the plant according to Theophrastus 4th century BC	Common name of the plant today	Scientific name of the plant and the family in the 18th century	A garland of branches as a symbol of
Vol. IV, page 57	ΔΑΦΝΗ, DAPHNE	Laurel, bay, sweet bay	<i>Laurus nobilis</i> L., Lauraceae	Fame, justice, honour, power, recognition victory, wisdom Peace, victory
Vol. I, page 3	ΕΛΑΑ, ELAA	Olive	<i>Olea europaea</i> L., Oleaceae	Beauty, euthanasia, love, peace, protection Fruiting branches as a symbol of victory An apple as a symbol of beauty, knowledge, wisdom
Vol. V, page 59	ΜΥΡΡΙΝΗ, MYRRENE ΦΟΙΝΙΕ, FENIKS	Myrtle Date-palm	<i>Myrtus communis</i> L., Myrtaceae <i>Phoenix</i> spp, Palmaceae	
Vol. V, page 63	ΜΗΛΕΑ, MELEA	Apple tree	<i>Malus</i> spp, Rosaceae	

**Table 2.** Some of the plants, used in every day life in ancient Olympia, during the Olympic Games

Bauer's illustration in <i>Flora Graeca Sibthorpi-ana</i> (in the National Library of Greece)	Name according to Theophrastus 4th century BC	Common name today	Scientific name in the 18th century	Use
Vol. III, page 36 Vol. X, page 86, Vol. V, page 2	ΑΜΠΕΛΟΣ, AMPELOS ΔΙΟΣΑΝΘΟΣ, DIOSANTHOS	Grapevine Wild pinks	<i>Vitis vinifera</i> L. <i>Dianthus</i> spp	Wine Flowers for the decoration of statues
Vol. X, page 35 Vol. I, page 30 Vol. I, page 79 Vol. IV, pages 2, 3, 4, 5 Vol. VII, page 8 Vol. V, page 74 Vol. X, page 38 Vol. I, page 80 Vol. V, page 60 Vol. V, pages 66, 67	ΑΡΥΣ, DRYΣ ΙΡΙΣ, IRIS ΚΡΙΘΗ, KRITHI ΛΙΝΟΝ, LENON ΑΓΝΟΣ, AGNOS ΜΗΚΟΝ, MEKON ΠΕΥΚΗ, PEUKE ΠΥΡΟΣ, PYROS ΡΟΑ, ROA ΡΟΔΩΝΙΑ, RODONIA	Kermes oak Iris Barley Flax Chaste tree Opium poppy Pine Wheat Pomegranate Roses	<i>Quercus coccifera</i> L. <i>Iris germanica</i> L. <i>Hordeum</i> spp <i>Linum</i> spp <i>Vitex agnus-castus</i> L. <i>Papaver somniferum</i> L. <i>Pinus maritima</i> Ait. <i>Triticum</i> spp <i>Punica granatum</i> L. <i>Rosa</i> spp	Wood Flowers for decoration Food Clothes for statues Garlands of flowers Seeds, food, oil Wood Seeds Decor for temples and statues Flowers for decoration

Theophrastus made original observations:

*Some plants can be planted and propagated both from detached sucker and from their extremities. From a detached sucker grow cabbage and rue, and among the coronaries southernwood for example, bergamot, mint and tufted thyme; and some of the same—rue and southernwood with some coronaries—also grow from other parts*

*The causes of plants* I.4.3

This store of information was summarized by Theophrastus in a logical and well-balanced manner placing facts in a coherent theoretical framework, and creating a true science of plants (Morton, 1981). He also incorporated information of several foreign regions, although he did not travel much beyond Greece. This knowledge derived from reports of individuals who accompanied Alexander the Great on his military conquests; referring to the occasion when there was an expedition to those returning from India sent out by Alexander (*Enquiry into plants* IV.VII.3).

It is assumed that the following first sentence of Theophrastus' first book in *Enquiry of plants* proclaims

that the study of plants has become a science (Morton, 1981):

*In considering the distinctive characters of plants and their nature generally one must take into account their parts, their qualities, their ways in which their life originates, and the course which is followed in each case*

*Enquiry into plants* I.I.1

### Symbolic plants

Olive (*Olea europaea* L.), a sacred tree (Table 1; Fig. 1) was the symbol of winning and of compromising. Theophrastus in *Enquiry into plants* IV.XIII.2 mentioned

*the wild olive at Olympia, from which the wreaths for the games are made*

The olive tree attracts considerable interest because it has significant importance in nutrition and health and it is economically very important. An olive branch is still the symbol of peace, probably because it brings to mind Noah's Ark. It is the tree of the goddess Athena that put forth shoots



**Fig. 1.** *Olea europaea* L.: a drawing by Ferdinand Bauer in *Flora Graeca Sibthorpiana* (reproduced with permission of the National Library of Greece), produced between 1787 and 1794.

from ashes in the garden of Gethsemane. It may be in the spirit of peace that olive branches appear on the flag of the United Nation Organization.

Crowning of the Olympic victors was made with a garland of stems bearing leaves of olive, belonging to the *kallistefanos* (making good garland), the very first wild olive tree which Hercules brought from the land of the Hyperborean and planted in Olympia. Hercules gave to the victor an olive branch as the finest memorial of the games in Olympia and a crown of merit for the winners of the contest. From that point on, the olive crowned the foreheads of winners. A garland of an olive branch is the official symbol of the Olympic Games 2004 (Fig. 2), in Athens. The cultivated olive tree is also of divine origin and associated with the goddess of wisdom, Athena, since it apparently sprang from the barren rock of the Acropolis of Athens (Fig. 3).

The fruiting branches of date-palm (*Phoenix*) were also offered to Olympic victors. Garlands of honour were made from the aromatic branches of myrtle (*Myrtus communis* L.),



**Fig. 2.** This olive garland is the official symbol of the Olympic Games 2004 (Athens 2004).



**Fig. 3.** The city of Athens (18th century) and flowers from some native species of Greece are shown in the drawing of Ferdinand Bauer, frontispiece of Vol. VI of *Flora Graeca Sibthorpiana* (1826). (Reproduced with permission of the National Library of Greece.)

*myrtles like those used for garlands*  
*Enquiry into plants V.VIII.3*

and laurel (*Laurus nobilis* L.). Stems of *Myrtus communis* with the elegant white flowers, evergreen leaves and pleasant perfume symbolized beauty and love. Leaves of *Laurus nobilis* with their strong aromatic scent were used as a means of purification; later, laurel became a symbol of respect, wisdom, victory, glory, and fame, hence the term laureate. It is of interest to note that during the first Olympics, i.e. before 776 BC, the best award was an apple (instead of the golden metal).

The garland-makers use summer flowers, i.e.

*rose carnation (krinon) lily spike-lavender iris wild*  
*pinks the Phrygian sweet-marjoram the plant called*  
*“regret”*

*Enquiry into plants VI.VIII.1,3*

noteworthy for a long flowering period and for pronounced perfume (Baumann, 1996), to decorate temples and statues of gods and heroes (Table 2). The everlasting flower of *Helichrysum* species (the golden-sun flower, from Gr. hélios: sun and khrūsós: gold; Hoad, 1991) is one of the summer-flowering plants traditionally used in the making of wreaths. Despite the fact that sports events were held in Antiquity during the summer, many spring flowers in Greece are short-lived and without scent (Rhizopoulou, 2004). The formation and accumulation of essential oils in plants tends to rise in drier environments (Penka, 1978; Rhizopoulou and Diamantoglou, 1991), while during spring adequate soil water is available for growth of the Mediterranean vegetation (Kummerow, 1983). Theophrastus wrote

*rose on the other hand and tufted thyme and the like*  
*are in the wild state too dry. Hence the rose lacking*  
*moisture, is weak in scent, like a plant devoid of*  
*odour; stock too in fact is not fragrant when the*  
*ground is exceedingly dry and thin and again where*  
*the air is extremely hot and torrid; since the air dries*  
*out. Whereas tufted thyme, mint and the like, owing to*  
*their dryness, some to have odours that are far too*  
*pungent and harsh; whereas under cultivation the*  
*odours are milder.*

*The causes of plants VI.20.3*

A mixture of major natural, chemical components (monoterpenes, sesquiterpenes, benzenoids, aliphatics) makes up the fragrance of vegetation (Lavid *et al.*, 2002; Chen *et al.*, 2003). The leaf surfaces have glands, which are full of volatile oils and which burst, releasing their contents into the air. Other fragrant scents to human senses are most often those produced by flowers visited by pollinators (Proctor *et al.*, 1996; King, 1997). Whether strongly or weakly scented to us, flowers synchronize the maximum output of their emissions with the time when pollen is mature and

a flower ready for pollination (Menzel *et al.*, 1997; Schiestl and Ayasse, 2001).

The relationship between people and the plant world became evident in early myths (Baumann, 1996). For example, in honour of Iris, the messenger of the gods, a botanical genus received the name *Iris*. Iris accompanied the souls of mortals to their eternal rest along a path made by the rainbow of which the iris possesses the iridescent colours. Colour is an essential ingredient in the plant world. The plants make a wide range of different pigments to achieve colour. Flower colour, which may often function to attract pollinators, results primarily from vacuolar anthocyanins (*ánthos*: flower in Greek and cyanine: a Greek word for blue); such as the pelargonidines (orange, salmon, pink, red), the cyanidins (magenta and crimson), and the delphinidins (purple, mauve, blue). Related flavonoids (i.e. flavones, flavonoles, chalcones) also contribute to colour definition (Strack, 1997; Clegg and Durbin, 2000; Gronquist *et al.*, 2001). The enormous class of plant phenolics (flavonoids, lignins, tannins) is essential, having such various roles as establishing flower colour, contributing substantially to certain flavours (tastes and odours) and defending plants against herbivores and pathogens (Heil and Bostock, 2002; Ananthakrishnan, 2003; Saeder and Baldwin, 2004). According to Theophrastus,

*the kinds of flavours, as of odours and colours are*  
*held to be seven in number. For the list is (1) sweet (2)*  
*oily (3) bitter (4) dry-wine (5) pungent (6) acid (7)*  
*astrigent; and the salty is also added to these as an*  
*eight*

*The causes of plants VI.4.1*

The properties of the plants in the garlands, i.e. the evergreen nature, the odour, the long-lived and deep-rooted character, the tolerance of stress, the numerous colourful flowers and fruits, had a symbolism which was meant to direct the initiate to something higher, to existence and life. For example, the fruit of pomegranate, having its husk filled with numerous fleshy seeds, became a symbol of fertility. A close connection between sports and plant life that is related to nature, culture, civilization, use, and symbolism, started in ancient Olympia, 28 ages ago.

### **18th century: on *Flora Graeca Sibthorpiana***

Two centuries ago, John (Johannes) Sibthorp (1758–1796), professor of Botany at the University of Oxford, carried out two botanical expeditions to the mainland of Greece. Notwithstanding his poor health, he explored lands, which, because of their remoteness and terror, were closed to travellers. In the first trip, Sibthorp was accompanied by Ferdinand Bauer (1760–1826), who undertook to draw the Greek plants and flowers. The names of the plants in modern Greek were among Sibthorp's constant preoccupations; he knew that ancient Greeks named the plants

according to the properties that were attributed to them. During the first trip he learnt from a monk more than 100 names of plants, most of them staying unaltered and uncorrupted from the ancient names of Theophrastus and Dioscorides (Lack and Mabberley, 1999).

The so-called symbolic plants of the Olympics are illustrated (among 966 other plates of plant species) in finely detailed colour plates, of breathtaking quality by Ferdinand Bauer, in the extraordinary publication of *Flora Graeca* (10 volumes, 49×34 cm, 1806–1840, London). F Bauer (1760–1826) is regarded as one of the most accomplished botanical artists of all time (see Fig. 3). It is the pictorial record which made the *Flora Graeca* famous as the most expensive Flora ever produced (Lack and Mabberley, 1999).

...especially if art imitates nature

Theophrastus, *The causes of plants* II.18.2

*Flora Graeca* was, upon its completion, a work of the connoisseur or more to the point 'a non-book'. It took about one and a half centuries before *Flora Graeca* became available to the scientific community. Only 30 complete copies of this edition were issued to subscribers. The knowledge gain was immense with scores of species new to science; for example, Sibthorp was the first to discover natural stands of lilac. Then, gardens in England were enriched with many species not previously known, among them plants which soon became very popular, like several campanulas, carnations, and milfoils (Lack and Mabberley, 1999).

The output of the work of Sibthorp and his partners (Bauer, Hawkins, and Smith in the first rank and of the Sowerbys, Brown, Lindley, and Platt in the second) during the 18th century is now well documented. Lack and Mabberley (1999) note that for Smith and Hawkins this work was just one of their many activities, but one which occupied them in parallel with other projects, for several decades. Bauer dedicated eight years of his life exclusively to this work. Sibthorp committed life itself to this one cause; in a way, he died for Greek plants, because his death was a sacrifice through disease to Greece. Their book contributes to our understanding of the collection and recording of natural history specimens in the 18th century and provides a detailed insight into the complex process of writing and publishing a Flora. According to Michele Tenore (Professor of Botany at the University of Naples and one of the reviewers of *Flora Graeca*) 'the classical territory of the sciences and the arts, the country of Theophrastus, Aristotle, Homer, Phidias, Praxiteles well deserved the gift of the most splendid Flora of the world. This in fact is the *Flora Graeca* of Sibthorp'.

Nowadays Sibthorp and Bauer are remembered not only for their endeavours in the study of the flora in the Levant, but also for the plants dedicated to their memory, among them *Fritillaria sibthorpiana* (a fritillary restricted to the south-west and the adjacent island of Simi close to the island of Rhodes), *Rhopalostylis baueri* (a palm tree). At Oxford,

Sibthorp is remembered today in a different way: via the Sibthorpien Professorship of Plant Sciences. Theophrastus is widely recognized as the founder of Botany. The Olympic Games became an International sports events, held once every four years, in different countries of the Earth.

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