

Papaver somniferum

[Synonyms : *Papaver somniferum* subsp. *setigerum*]

OPIUM POPPY is an annual. Thought either to be native possibly to the western Mediterranean, or to have been derived from another species and come from south-western Asia, it has with large white or pale lilac (occasionally red or purple) flowers with or without pink or purple markings.

It is also known as *Abou en noum* (Arabic), *Abu el noom* (Arabic, Egyptian), *Adormidera* (Spanish), *Afyun* (Arabic), *Ahiphenam* (Sanskrit), *Amapola* (Argentinian, Spanish), *Amapola blanca* (Spanish), *Amapola real* (Spanish), *Anfião* (Portuguese), *Aphim* (Hindi, Nepalese), *Aphioni* (Greek), *Aphukam* (Dutch), Blue bread seed poppy, Breadseed poppy, Common poppy, *Dormideira* (Portuguese), *Dormideira-brava* (Portuguese), *Dormideira-das-boticas* (Portuguese), *Dormideira-dos-jardins* (Portuguese), Dream plant, Edible seeded poppy, Fairy's charms, Flower of Venus, Garden poppy, *Gartenmohn* (German), *Gashagasha* (Tamil), *Guli-toriak* (Persian), *Hashhash* (Turkish), *Herba dormidera* (Catalan, Spanish), *Kasakasa* (Telugu), *Kashakasha* (Malayalam), *Khashkhash* (Hindi, Urdu), *Khashkhash aswad* (Arabic), *Kaskash* (Bengali, Hindi), *Kaskash sufaid* (Urdu), *Keshi* (Japanese), *Khasa* (Sanskrit), *Khasksi* (Kannada), *Khosh-khash* (Arabic), *Khush khush* (Punjabi), *Khus khus* (Marathi), *Khuskhush* (Gujarati), Lethean poppy, *Llysiâu'r Cwsg* (Welsh), *Maankop* (Dutch), *Maanzaad* (Dutch), *Mák* (Hungarian), *Mak lekarski* (Polish), *Mak opiinyi* (Russian), *Mák setý* (Czech), *Mak siaty* (Slovak), *Mak snotvorniy* (Russian), Marble flower, Maw, Mawseed, Medicinal poppy, *Mohn* (German), Moonflower, *Oeillette* (French), *Oopiumiunikko* (Finnish), *Opievallmo* (Swedish), *Opiopapavo* (Esperanto), *Opiummohn* (German), *Opiumpapawer* (Afrikaans), *Opiumvallmo* (Swedish), *Opiumvalmue* (Danish, Norwegian), *Papavero* (Italian), *Papavero da oppio* (Italian), *Papavero domestico* (Italian), *Papavero sonnifero* (Italian), *Papoula* (Portuguese), *Papoula do ópio* (Portuguese), *Parag tarbuti* (Hebrew), *Pavot à opium* (French), *Pavot de jardin* (French), *Pavot officinal* (French), *Pavot somnifère* (French), *Pintacoques* (Catalan, Spanish), *Pioniunikko* (Finnish), *Pionvallmo* (Swedish), Poppy, *Schlafmohn* (German), *Slaapbol* (Dutch), *Slaappapaver* (Dutch), Sweet slumber, *Uniko* (Finnish), *Vallmo* (Swedish), *Valmue* (Norwegian), *Valmúafrae* (Icelandic), *Vrtni mak* (Croatian), White poppy, *Xahxieh* (Maltese), *Yang gwi bi* (Korean), *Ya pian* (Chinese), *Ying su* (Chinese), and *Za zang* (Laotian).

About 25 drugs including Morphine, Heroin, Laudanine, Codeine and Papaverine can be extracted from the latex in the capsules, leaves and stems.

Warning – the whole plant (except the seeds) is extremely poisonous particularly the unripe fruit capsules. It can cause mental excitement followed by physical activity, then drowsiness and increased thirst, succeeded by deep sleep and tiny pupils, weak pulse and slow irregular breathing. Both morphine and heroin are addictive and can cause death. In Britain, according to the strength of the drug derived, it can be a controlled drug to a prescription only medicine and obtainable only from a registered pharmacist. Animals as well as humans can be badly poisoned by the poppy but death is rare.

An edible oil can be extracted from the edible seeds known as 'Maw seed'.

It can be illegal to cultivate the opium poppy in many countries including the United States and countries in the European Common Market – however under licence in the United Kingdom in the early 21st Century farmers are growing over 160 acres of it for morphine for hospitals.

Somniferum is Latin (sleep-bringing, sleep-causing) meaning ‘sleep inducing’.

‘Opium’ is derived from a Greek word *opion* and is a Latin word meaning ‘opium or poppy juice’.

The opium poppy was revered by the Sumerians as long ago as 4500 BC when it was given magical and religious connotations. They ate small balls of opium or mixed them with wine and archaeologists have found Sumerian tablets that describe how opium brings sleep and eases pain. (3500 years earlier still this practice was also familiar to the Swiss Lake Dwellers at Robenhausen in the European Alps.) For the Assyrians and the Babylonians the root was an aphrodisiac. Opium poppy was well-known to the ancient Egyptians too as witnessed by its appearance in murals and pictorial relics.

The ancient Greeks and the Romans were equally familiar with it as indicated by references made by the Greek physician, Hippocrates (c.460-377 BC or 359 BC) who supported the use of opium poppy ‘wine’ as a medicine, as well as by the Greek philosopher, Aristotle (384-322 BC), the Roman poet, Virgil (70-19 BC), the 1st Century Roman encyclopaedic writer, Aulus Cornelius Celsus, the Roman natural historian, Pliny (23-79) and many others. It is interesting to note that even in the early years AD some voices were being raised in warning in Europe with regard to the use of opium poppy juice. Among them were those of Hippocrates and of another Greek physician who is not only believed to have been the first to trace the veins and arteries to the heart but is also considered to be one of the pioneers of today’s Western medicine, Erasistratus of Ceos (born 3 BC).

Fruit capsules and flower heads were depicted in decoration by the ancient Greeks on not only images of their gods but also jewellery and household utensils. The poppy featured on their coinage as well.

In Greek mythology it is understood that the opium poppy has been associated with both the god of sleep, Hypnos and his son, Morpheus the god of dreams. Hypnos, who was beneficial to man, was the son of Night and the brother of Death and lived in the Underworld. He is usually portrayed as a winged youth with eyes closed and he often carries an opium poppy. His son, Morpheus (from whom it is said the name ‘morphine’ is derived) can be depicted as a young man similarly winged but carrying a bunch of poppies, the sleep-producing leaves of which are strewn by the wind.

Hypnos’ counterpart in Roman mythology, Somnus, is associated with the opium poppy too. Yet again he is usually shown as a young man of disarming appearance and carries an opium poppy but he distributes sleep from a horn.

In India the opium poppy has long been familiar as well although some debate continues as to when it first appeared there. Some authorities subscribe to 326 BC with the invasion of Alexander the Great (356-323 BC) while others support the theory based on the Arab invasion in the 8th Century. Regardless there are now Buddhist legends about the opium poppy and one of these describes how Buddha cut off his eyelids to avoid falling asleep and the opium poppy sprang from the ground where they fell.

Arab leaders were also caught in opium poppy’s spell,, as were many other celebrated figures, not least the highly respected Arab philosopher and physician, Avicenna 980-1037) who was destined to die in Persia from opium poisoning. Even as recently as the mid-19th Century in Constantinople (Turkey’s largest city now known as Istanbul) the opium poppy’s latex, thickened in the sun, was mixed with sugar and fruit juices and fashioned into small lozenges that were imprinted with the words *Mash Allah* (‘the Work of God’).

The Sultan's couriers, who were famed for the great distances they covered at remarkable speed, often relied on a few of these as their only nourishment on their journeys.

Before proceeding further it might be worth noting a couple of unrelated points that could be considered relevant to that which follows. Some authorities have made the suggestion that inhalation of smoke from an opium pipe only took hold in the Old World after the tobacco (*Nicotiana tabacum*) smoking habit had been introduced from North America in the 16th Century. Secondly that same Century in Europe also saw the height of belief in the dogma known as the Doctrine of Signatures. Apparently the opium poppy was not exempt from its attentions. According to it the plant belongs to the Moon and thus its appropriate use was in the promotion of sleep and dreams.

The opium poppy may have been introduced to Britain by the Romans but it is understood that it was definitely being cultivated in that Country by the 16th Century and the size of the overall crop had reached relatively large commercial proportions by the 19th Century. By then annual consumption in Britain was in the region of 50,000 lb.

Laudanum (an alcoholic extract of opium that contains a high proportion of morphine) was used widely in England in the 18th and 19th Centuries. Many of those who became addicted during that era probably had their first introduction to the drug through its prescription given in good faith by a recognized physician of the time as derivatives used to be prescribed for the treatment of diarrhoea and some coughs, as well as for easing pain. William Wilberforce (1759-1833), the English philanthropist famous for his anti-slavery activities, is said to have taken laudanum daily from about 1788 until his death. Apart from William Wordsworth (1770-1850), most of the English poets of this period, including Samuel Taylor Coleridge (1772-1834) who published the relevant *Kubla Khan* in 1816 and Elizabeth Browning (1806-1861), also seem to have used the drug to varying degrees. Among their number too was Thomas de Quincey (1785-1859), the English critic and essayist, who lived in London for a short time with a prostitute and dabbled with the drug. He became famous in his 30s when his *Confessions of an English Opium-eater* was serialised in *The London Magazine* in 1821. Laudanum or Loddy as it was often called was also taken instead of tea by many of the destitute people living in the industrial areas of Britain. It should perhaps be said that the majority of people in England involved in preparing, trading and/or using opium in one form or another at this time were completely unaware of the horror and degradation the drug causes.

It is also disturbing to appreciate that the East India Company exported opium (grown in India) to China from the beginning of the 18th Century as a commercial undertaking. [Until this time the Chinese had primarily regarded the opium poppy as an ornamental garden plant. Some authorities believe that they first learnt how to smoke the drug in the late 13th Century but this practice was not rife (although it was certainly showing unhealthy signs of becoming so) and importation of opium was forbidden when the East India Company initially made its forceful appearance there.] The Company's profits on this were small in the beginning but they were given a significant boost in 1773 when it obtained monopoly rights over the whole Bengalese crop which at the same time coincided with ever-increasing demand from its millions of Oriental customers. This opium trade however became a catalyst leading to confrontation with China in the following century. (By now the Chinese had christened the despised opium 'foreign black mud'.) The Chinese Emperor was eventually advised that the drug

utterly ruins the minds and morals of the people

and in 1839 the Imperial envoy, Lin Zexu (1785-1850) who had been sent as Imperial Commissioner to Canton, ordered the destruction of 12 million dollars' worth of opium surrendered by the British traders. This led to the so-called Opium War of 1840-1842 – which is believed by most authorities to have arisen from the West's entire relationship

with China not just the, what would now be likely to be viewed as highly discreditable and irresponsible, commercial exploitation of the drug [could there be a looming similarity between opium and tobacco (*Nicotiana tabacum*) in the early 21st Century or will China's own cultivation of tobacco be sufficient to preclude this]. In 1843 the Chinese Emperor again decreed a ban on opium smoking and Commissioner Lin also wrote unsuccessfully to Victoria (1819-1901), the Queen of Britain, demanding a cessation of the opium trade. By then the East India Company realized it needed to protect its legal – and lucrative – tea (*Camellia sinensis*) trade however (this was still dependent upon access to Chinese exports at that time). So that same year (1843) it halted its direct Chinese drug trade and auctioned the Indian opium in Calcutta to private traders – who continued to pour the drug onto the Chinese markets.

In view of the misery inflicted by the opium trade the fate of one of the East India Company's well-known English administrators is poignant. Apparently Robert Clive (1725-1774) was a self-confessed opium addict. He was much fêted by his peers on earlier returns home from India but when he reached England in 1767 these same colleagues accused him of embezzlement when he was handling the Company's affairs in India. Although he was acquitted of these charges in 1773 some contend that this was because of services rendered to the Nation and in 1774 he committed suicide – apparently with an overdose of opium.

Opium has made its presence felt in other European countries as well. The French poet, Charles Baudelaire (1821-1867) after sampling other drugs turned to opium towards the end of his life. In the 20th Century dalliance with opium was also a significant factor in the works of the celebrated playwright, poet and film director, Jean Cocteau (1889-1963).

Scientific analysis has shown both the plant's value medicinally and in contrast how poisonous it can be (heroin is a derivative of morphine) – so much so that many countries are making legislative attempts to contain and regulate its growth. On the one hand the opium poppy's latex has yielded one of the most important painkillers, morphine which has been used for centuries in western Asia, the eastern Mediterranean and the Middle East – and as chemists have been unable to synthesize it the opium poppy is its only source. The edible seeds not only provide a common and for many cultures traditional food flavouring or condiment but also yield a valuable edible oil. On the other hand the plant's latex is a source of the lethal drug heroin that has and is causing human misery worldwide and demands much governmental action and interaction to counteract its nefarious trade and consequent addiction and degradation.

Certain varieties of the opium poppy are grown for their edible blue-grey seeds. The seeds of the opium poppy are not narcotic and they have been used in baking since classical times. In parts of Asia the young plant has been eaten like garden lettuce (*Lactuca sativa*) and it has also been grown for cattle feed.

As well as being used in the food industry and for birdseed the seeds yield an edible oil. This is employed by artists and in the paint industry for paint and varnishes, used in the manufacture of soap, as well as used for cooking. The cooking oil has been used for centuries in some parts of Europe as well as the Middle East, and Europeans until the 20th Century often adulterated it with oil of turpentine and then labelled the mixture 'olive oil'. During the 2nd World War the latter use became of interest to France where cultivation of the opium poppy was revived in order to harvest the seeds for the cooking oil. Unfortunately however the pressed cake made from the residue, after the oil had been extracted from the seeds, was fed to cattle and caused many cases of poisoning.

The opium poppy is referred to in 14th Century English poetry by John Gower (c.1325-1408) in *Confessio Amantis* -

There is growend upon the ground

Poppy that bereth the sede of slepe.
and Geoffrey Chaucer (c.1345-1400), in the form of opium in *The Knightes Tale* -
A claire made of a certayn wyn,
With necotykes, and opye of Thebes fyn.

It also appears in 16th and 17th Century English literature. Edmund Spenser (c.1552-1599) mentions it in what authorities consider to be his greatest work *The Faerie Queene*.

There mournful cypress grew in greatest store,
And trees of bitter gall, and Heben sad,
Dead-sleeping poppy, and black hellebore,

His peer Michael Drayton (1563-1631) mentions the opium poppy –
Here henbane, poppy, hemlock here,
Procuring deadly sleeping.

Then the well-known playwright and poet, William Shakespeare (1564-1616), refers to the opium poppy in *Othello*.

Not poppy , nor mandragora,
Nor all the drowsy syrups of the world,
Shall ever medicine thee to that sweet sleep
Which thou own'dst yesterday.

and John Milton (1608-1674), like Chaucer, mentions opium in his tragedy *Samson Agonistes*.

.....which no cooling herb
Or medicinal liquor can assuage,
Nor breath of vernal air from Snowy Alp;
Sleep hath forsook and given me o'er
To death's benumbing opium as my only cure.

As a result of experiments made in India the plant pulp has been found suitable for various grades of wrapping paper.

The opium poppy is a national emblem for both Belgium, and Switzerland.

At some point this poppy was introduced to North America as records show that the Cherokee Indians were sufficiently familiar with it to absorb it into their medicinal repertoire.

Varying doses were used according to the required effect – they prescribed large amounts for deadening pain and bringing sleep, while smaller amounts were taken as a stimulant.

Medicinally, in addition to uses referred to above, the seeds have long been part of the armoury in Chinese medicine in the treatment of fevers, nausea and vomiting. In the West the pharmaceutical industry uses various drugs extracted from the opium poppy in medicines eg. papaverine, and codeine are used in cough mixtures.