The poppy (*Papaver*) in old Polish botanical literature and culture

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**Summary**

Wszystkie gatunki maku występujące w Polsce, z wyjątkiem jednego - maku Bursera (*Papaver burserii* Crantz) są roślinami uprawnymi lub archeofitami przybyłymi do końca XV w. Największe znaczenie w gospodarce i kulturze miały *Papaver somniferum* i *P. rhoeas*. Gatunki te pojawiły się na terenie Polski już w neolicie. Pisali o nich polscy autorzy dzieł botanicznych w średniowieczu i renesansie. Dzięki długiej obecności w uprawie mak znalazł ważne miejsce w kulturze ludowej, jako roślina jadalna, narkotyczna, a także symboliczna. Kwiaty mak zdomowili się w polskim krajobrazie, co znalazło odzwierciedlenie w sztukach plastycznych oraz w literaturze pięknej.

**Introduction**

In Poland, the Burser’s poppy (*Papaver burserii* Crantz, *P. alpinum* L. subsp. *burserii* (Crantz) Fedde), is the only species of poppy that occurs naturally. The remaining species present in the Polish flora are archaeophytes which journeyed here along with cultivated plants from the south, or cultivated species, some of which escaped back into the wild. The first group includes those originating in the Mediterranean or Irano-Turanian areas (Zając 1979):

- corn poppy (*Papaver rhoeas* L.), very common throughout Poland, as a segetal or ruderal weed;
- prickly poppy (*Papaver argemone* L.), a fairly common segetal weed;
- long-headed poppy (*Papaver dubium* L.), a fairly common segetal weed.

The most cultivated species include:

- garden poppy (*Papaver somniferum* L.), probably originating from Asia Minor, planted as a medicinal plant, providing edible seeds and as decorative plant in a number of varieties;
- oriental poppy (*Papaver orientale* L.), also originating from Asia Minor, a decorative plant, represented by a number of varieties.

**Palaeobotanical data**

The subfossil remnants of poppy plants are fairly difficult to identify when only seeds are available, as size or external seed shell morphology are not good diagnostic features for differentiating between wild and cultivated species. The principal difference between the garden poppy *P. somniferum* and the wild *P. setigerum* species, is its capsule shape (elongated in the wild species) (Lityńska-Zając and Wasylikowa 2005). The oldest discoveries of poppy seeds in Europe have been those from the archaeological sites of the Linear Band Pottery Culture in the Rhineland and in Holland. The seeds from the Rhineland area have been regarded by some researchers as being of the wild form of *setigerum* (Knörzer 1971), whereas others have seen them as doubtful and suggest that these seeds should be treated as *P. somniferum* in a broader sense, without declaring the possibility of identifying them as either a wild or cultivated form (Schultze-Motel 1979). The presence of wild poppy in the Rhineland region, could be indicative of its broader natural habitat range in the past than at present. On the other hand, the occurrence of the cultivated form might indicate contact between the people of the Linear Band Pottery Culture and the peoples of the Mediterranean, from where poppy growing originated (Körber-Grohne 1988).

In Poland, the garden poppy first appeared in the Neolithic period and its discoveries are not very frequent - 12 seeds at a site of the Radial-decorated pottery culture [Baden culture] in Zesławice near Cracow (Giżbert 1960a), in the Lusatian culture levels in Biskupin (Jaroń 1938) and 600 burnt seeds from the Roman period from a site of Przeworsk culture in the Mogila locality near Cracow (Giżbert 1960b). Also known are discoveries of garden poppy in both early and late mediaeval sites. In the sediments beneath the western part of the Main Market Square in Cracow, deposited from between the end of the 13th to the mid-15th century, some 17 seeds of *P. somniferum* and *P. rhoeas* (Bieniek et al. 2006) were found among other seeds.

Within the *Papaver* genus, pollen grains do not differ to the extent that allows palynological identification of individual species. After Moore *et al.* (1991) the following collective types have been distinguished:

- *Papaver rhoeas* - type (this type embraces: *P. rhoeas*, *P. dubium*, *P. hybridum*, *P. orientale*, *P. somniferum*
and *P. strigosum*) - morphologically these are pollen grains which are trizonocolpate i.e. comprised of three lobes separated by three furrows.

- *P. argemone* - type (this type embraces: *P. argemone* [as well as *Roemeria hybrida*]) - round pollen grains with pores scattered over the entire surface of the grain.

Microscopic identification of pollen grains is difficult and as such they are often left unidentified in the sediments subjected to palynological analysis. In the sediments obtained from the Miłkowski lake (Masurian lake district) dated back to the 12th-13th centuries single pollen grains of *P. rhoes* -type were found (Wacnik A., unpublished). A single pollen grain of *P. argemone* was recorded, in the sediments from the Świetokrzyskie lake (Gniezno) in the horizons below the late-Neolithic stage of the Globular Amphora culture. Two more pollen grains of *P. argemone*, together with a single pollen grain in the type of *P. rhoes*, are known from the sediments of the same lake dated to the 20th century (Makohonienko 2000). In mediaeval sediments unearthed in Cracow at Krupnicza street, some single pollen grains of *Papaver* were identified (Sokolowski et al. 2008).

**Poppy (Papaver) in old Polish botanical literature**

**Middle ages**

Polish names “poppy” and “opium” often appear in the mediaeval pharmaceutical/medical manuscripts (chiefly of the 15th century) (Rostafiński 1900: 173). These names refer to the cultivated *Papaver somniferum*, represented by two varieties differing in seed colour; namely: *album* and *nigrum*, but also to *Papaver rhoes* - then a common weed of cultivated fields. The name “opium” denoted concentrated juice from the poppy heads of *P. somniferum*, often imported from the south. The poppy, particular the garden poppy has been used in Poland since time immemorial as both an edible and medicinal plant (Rostafiński 1899).

A description of a poppy with a drawing, was included in the first-ever book on plants printed in Poland: *De herbarum virtutibus* (1532) by Aemilius Macer (Macer Floridus) 1, published by a Polish physician Simon of Lovicz [Szymon z Łowicza] (ca. 1512-1538), who added Polish plant names (Macer 1532: leaves 28-29). Macer wrote about *P. somniferum* and *P. rhoes* and noted that the former had much more valuable properties. He also mentioned the use of a juice squeezed from poppy heads and dried in the sun and that its seeds were used to produce oil (of unpleasant taste) and that when a sick person drinks such a poppy extract they should get much desired sleep unless death came first. He also noted that poppy juice (mixed with milk) stops excessive coughing and eliminates constipation. According to Macer, pulverised leaves were used to prepare poultices, helping to treat sore throats or strained vocal chords.

**Renaissance**

Voluminous information on the poppy and a drawing were included in the first book on plants printed in the Polish language: *O ziołach y o moczy gich* [On herbs and their power] (1534) by Stefan Falimirz (died 1534) (Falimirz 1534: leaf 103, Capitulum 167). The author recommended a ‘sleeping plaster’ made from poppy (seeds) mixed with ‘womanly milk’ and egg white, to be placed on the forehead. He also wrote that the pharmacies of that time sold a poppy syrup to be used as medicine against consumption (poppy seeds mixed with liquorice extract, gum arabic and anise). But he warned, however, that dishes containing poppy seed could ‘make you sleepy’ and ‘ruin your memory’. Another recommendation given was to apply crushed poppy leaves with vinegar, as an analgesic or to reduce swelling. Yet another application was given, this time of white poppy seeds which was deemed to relieve a dry cough, eye dryness, ulcers and aching joints (Falimirz 1534 - “O wodkach”: leaf 8). Falimirz devotes a separate chapter to opium i.e. the juice obtained by slitting poppy heads, which was then thickened by exposing it to wind (Falimirz 1534: leaf 94, Capitulum 152). The book gives various recipes for medicaments, made with opium as a constituent, applied to combat insomnia, treat visceral ulcers, reddened eyes as well as relieve headaches.

Marcin of Urzędów [Marcin z Urzędowa] (ca 1500-1573) in his work *Herbarz Polski* [The Polish Herbal] (1595), describes separately the “sown poppy” (which is the garden poppy - *Papaver somniferum*) (Marcin Urzędów 1595: 234-235, Cap. CCLXXI) and “small field poppy” (the corn poppy - *P. rhoes*) (Marcin Urzędów 1595: 235-236, Cap. CCLXXII), as well as providing separate drawings of each. The author quotes Dioscorides, who recommended placing plasters containing smashed heads of corn poppies on painful spots and using poppy heads boiled in wine as a sleep-producing sedative. According to Marcin, a similar effect could be obtained by soaking feet in water boiled with poppy leaves and heads. The heads boiled in water with honey were used to relive coughs. The author also recommended the garden poppy for relieving headaches, earaches, ophthalmia, as well as against “vaginal discharges in women”. Again, warnings are given regarding the potent sleeping effect produced by the poppy.

The most voluminous body of information about the poppy in the old-Polish literature, has been provided by Simon Syrennius (Szymon Syreniusz) (ca 1540-1611) – who authored the largest work of the Polish Renaissance
entitled *Zielnik* [The Herbal] (1613), written at the end of the 16th century and published posthumously in 1613. The author included two chapters on poppies; namely the “small field poppy” or “wolfish poppy” (*Papaver rhoeas*) (Syrennius 1613: V/80, 1358-1359) and “garden poppy” (*Papaver somniferum*) (Syrennius 1613: V/81, 1359-1362) (fig. 1). He describes thoroughly the habitats of both species, by writing that the “small field poppy” grows amidst cereals and in ditches and along roads among fields, whereas the “garden poppy” is cultivated in fields and gardens, in several varieties, e.g. one with large heads from which opium is obtained. He also points out that “in our cold countries” it is less harmful than in hot regions. In Poland it is often being used in Lent. Syrennius recommended corn poppy as a sleep-producing aid (poppy heads boiled with wine - Dioscorides’ recipe) and for ‘removing leucoma from the eyes of stock animals (poppy leaves ground with olive, applied to the eye – Pliny’s recipe). He describes a dish prepared from corn poppy seed fried with butter and cottage cheese and he mentions that it is eaten in Italy where he had lived several years himself. Quoting Galen, the author reports that Greeks added poppy seed to dishes, bread and cakes they baked with honey. Syrennius provides an abundant list of applications for the ‘garden poppy’ which, in his times, was used both for preparing medicines and as an ingredient in cooking, including a poppy soup ‘of pleasant taste but little nourishment’, as well as white poppy seeds which Jews fried in honey with the addition of pepper. He also included some recipes for sweets made of poppy seeds with the addition of a number of other plants, e.g. liquorice root extract, resin Arabic, almonds, quince fruits, starch and sugar, ground with boiled sweet wine. Among the many medicinal uses, he lists first the sleep producing effects of poppy (its seeds were given to infants, mixed with the mother’s milk). The author also recommends the poppy for combating ‘melancholy’, spitting blood, headaches (fresh leaves) and coughs (a drink of poppy mixed with dew and wine). Syrennius provides recipes for various poppy mixtures: with syrup, honey, seed oil. He devoted considerable attention to opium, but recommended its use only in exceptional cases, for strong pains and to
induce sleep. Further, he criticised those apothecaries who sold opium without any restrictions, because it is a harmful substance which ‘weakens spirits enlivening the body’, affects the memory, brings about ‘head trembling’, is detrimental to sight and ‘bothers’ (irritates) male private parts. An interesting bit of information is quoted by Syrennius about a poppy drink called Turkish ‘masłok’, used in the Turkish army to boost the courage of soldiers, particularly janissaries. The drink reportedly caused over-excitation which sometimes led to self-mutilations.

18th century

A considerable amount of information about the uses of plants in 18th-century Poland was provided by Krzysztof Kluk (1739-1796) in a work entitled *Dykcyonarz roślinny* [Dictionary of plants] (Vol. I-III, 1786-1788). Separate chapters are devoted to both the corn poppy (*Papaver rhoesas*) (Kluk 1787, Vol. II: 166) and the garden poppy (*Papaver somniferum*) (Kluk 1787, Vol. II: 167-168). The author describes the use of corn poppy flowers as a herbal tea, syrup, cough reliever, running nose and fever. The juice squeezed from fruits was used to treat gripes and the juice obtained by squeezing fresh flowers to dye thread. According to Kluk, the garden poppy was widely applied, particularly by peasants in villages. The seed was used to press oil to be used in kitchen or varnish oil. Water boiled with poppy fruits in which feet were soaked before nighttime was used to produce sleep. Stomach troubles and coughs were treated with syrup prepared by boiling sugar with poppy heads.

Folk traditions

In the 19th and 20th centuries, poppy was used by rural people, as a medicinal and edible plant (fig. 2).

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**Material Culture**

**Medicinal plant**

Adam Paluch, who has analysed the use of medicinal plants in the Polish vernacular culture, reports that the poppy was used in more than 75% of cases in insomnia, particularly in infants. They were given an extract from poppy heads or the latter were placed under the heads of children lying in bed (Paluch 1988: 61; see also Chętnik 1936: 71, Klepacki 2007). Poppy heads were also thrown into the bathing water (Gustawicz 1882: 276). All this has been associated with the narcotic properties of the poppy commonly known in many cultures. In the cases of toothache, poppy was smoked in a pipe (Gustawicz 1882: 276).

In almost 7% of cases, the poppy has been used to counter persistent coughing and, in 4.5% of cases, to treat diarrhoea (Paluch 1988: 61). Like with other plants used in folk medicine, the poppy heads were often brought to church in a bouquet prepared in order to be blessed on the holiday of Our Lady of the Herbs, on 15 August (e.g. Niebrzegowska 2000: 209).

**Edible plant**

The single most important use of the poppy was in ceremonial dishes. The ceremonies were a ritualised form of behaviour in a special time – a holy time. Everything that happens in such a context relates to contact with the world of *sacram* and a certain course of behaviour that helped the participants in the ceremonial rites to get in touch with another world.

The poppy was ideally suited for the requisite role in religious rites because of its narcotic properties. Poppy has been a constituent of meals prepared for All Saints’ Day, All Souls’ Day and Christmas Eve. These meals were of a complex nature, as they represented a symbolic feast with the deceased, in which food performed an intermediary role. The ritual meals were designed to win the approval of the world of the dead, so they were of a somewhat sacrificial nature. Seeds – grains of cereals, poppy, hemp and nuts – represented an evident symbolism of fertility (reviving to new life, multiplying the whole ear of wheat or poppy head growing from a single seed etc.). Eating seeds was believed to guarantee the abundance of crops and a general propitiousness. The success in matrimonial matters was also boded by throwing some food such as *kutia* (see below) on...
to the ceiling, before checking whether it stuck to it or not (Łeńska-Bąk 2005: 190). ‘Throwing food up’ into the vast expanse above was understood, under a traditional way of thinking, to represent a sacrifice to the souls of the deceased, to deities, demons and all other irrational powers, that might be particularly active during the rite of passage and could encourage favours, to protect and safeguard, but also to bring blessings and aid fertility (Łeńska-Bąk 2005: 193). In the Siedlce region, fruit trees were sprinkled with poppy seeds on Christmas Eve (Niebrzegowska 2000: 110), in order to encourage a good crop the following year. For the same reasons, the newly-weds were also sprinkled, e.g. with poppy seeds and cereal grains; today this is done with small coins or rice.

What is now a traditional dish for Christmas, *kutia* – an old ritual dish associated with the cult of ancestors and funeral rites – has become a traditional part of the Christmas Eve supper, an important holiday solemnly observed in the Polish Catholic Church. *Kutia* was made of grains of cereal crops – wheat or barley – with the addition of poppy, walnuts and honey. In some regions (central and eastern Poland) the cereals have been replaced by dumplings, sometimes in the form of square noodles (Bohdanowicz 1996: 58-59). All these have their symbolic meanings: grains provide basic nourishment, whilst the poppy is a symbol of fertility and abundance (Łeńska-Bąk 2005: 189). Gustawicz describes a superstition that someone who sneaks *kutia* before the Christmas supper might be bitten by fleas throughout the next year, or find a bold husband (Gustawicz 1882: 277). In Ruthenia, this prohibition included even uttering the words *hreczka* (buckwheat) and *mak* (poppy), because it might bring into the house, fleas as large as buckwheat seed and as numerous as poppy seeds (Gustawicz 1882: 280).

In his monograph about the diet of the *Kurpie* ethnic group of central Poland, Adam Chętnik reports that they eat mashed potatoes mixed with pulped poppy seeds (Chętnik 1936: 77). This was by no means an everyday food, because, as he writes “poppy is used only on extraordinary occasions, added to potato or rare wheat or buckwheat dumplings” (Chętnik 1936: 81).

**Spiritual culture**

There are accounts originating in southern and south-eastern Poland about poppy being used as an apotropaic plant to repel ‘forces of evil’. Seeds were used in practices meant to prevent charms being cast on cattle by witches (Gustawicz 1882: 277). The poppy seeds blessed in the church were used like other plants of the same function. These magic practices were performed on the eve of St. Lucia’s Day or on Christmas Eve, when witches were believed to be particularly active. The poppy seeds were scattered around the doorway of the barn and also in corners of the house for the same purpose (Łeńska-Bąk 2005: 195). It was believed that the witch would have to count the poppy seeds which would absorb all her time, so forcing her to abandon any evil plans. Following the same line of reasoning, people insured themselves against the spirits of the deceased (ghosts) returning to their old haunts (Lehr 1985: 63-64, Paluch 1988: 61). Poppy seeds were placed in the coffin of a dead child in order to occupy it with the gathering of seeds, so that it would not return to the village in its extraterrestrial form (Biegeleisen 1930: 180; after: Łeńska-Bąk 2005: 192). Poppy seeds were also scattered along the route of a funeral procession and on the grave (Paluch 1985: 49). This custom had a double purpose: to protect against spirits and to facilitate the transition of the deceased to the other world. The people of the Polesye region scattered poppy seeds around their houses on every major holiday, to protect themselves against evil powers. Polish peasants did the same on the eve of St. John the Baptist’s Day. In order to keep vermin away from the household, on Maundy Thursday, one would stand with the face turned into the sun, sweep around the cottage with a broom and scatter poppy seeds to prevent whatever could crawl from moving. The same purpose was served by scattering poppy seeds in the corners of the cottage (Łeńska-Bąk 2005: 195).

Poppy is also a plant associated with the cult of the Mother of God. As the legend goes, the red flowers of corn poppy grew out of drops of blood from Her feet, hurt when running barefoot across a stubble-field to fetch a remedy for the ailing Holy Child. Another custom involved peasant girls gathering red poppies growing among grain crops. The dried flowers were then used to adorn the statues of the Mother of God on the day of Mother of God of the Blessed Thunder Candle (2 February - Candlemas) (Trojanowska 2008: 316-317).

**The poppy represented in poetry, painting and the applied arts**

For many centuries, poppies have also been closely integrated with the Polish landscape, especially the corn poppy (*Papaver rhoeas*) whose beautiful red flowers have adorned cereal fields and roadsides. In gardens and field patches there have been conspicuous flower beds with large eye-catching flowers of garden poppy (*Papaver somniferum*), whose fruits (poppy heads – *makówki* in Polish) have been known to villagers since early childhood as children used them as toys and adults applied them around the household or used them as medicine. No wonder, therefore, that poppies have frequently been depicted in poetry and paintings alike.


Poetry

A grand work from the Romantic period in Poland, Pan Tadeusz, known under the international English title Pan Tadeusz: The Last Foray in Lithuania... (1834) by Adam Mickiewicz (1798-1855), contained many descriptions of nature. In this book the poppy appears in several places, inter alia, in the image of the garden surrounding a mansion of a noble family (the species involved is Papaver somniferum) (Hryniewiecki 1956; Kmieć 2002; Literatura polska... 1985, T. 1, p. 663-665; Mickiewicz 1957: 51):

Beyond, the whitish poppy-plants arise;
It seems as if a swarm of butterflies
With fluttering wings has settled on their stems
And glitters with a rainbow flash of gems,
With so great brilliance do the poppies blaze.
(Book II, 419- 423) 2

Mickiewicz refers also to an old custom of placing poppy leaves in infants' cradles in order to ensure they have a good sleep (Mickiewicz 1957: 76):

As when a noisy child is laid to sleep,
His mother ties green curtains o’er his head.
And sprinkles poppy leaves beneath his head.
(Book 3, 307-309)

Many years later, Maria Pawlikowska-Jasnorzewska (1891-1945) in the poem Szelest makówki [Rustle of a poppy head], compared the fruits – poppy heads – to rattles, used by children in poor families (Pawlikowska-Jasnorzewska 2003: 259, first published 1935):

Silver rattle
With a starry crown
To which child
Is it destined to go?

To the poorest child,
The child of despair
Penury-embraced,
Bursts into tears. 3

After World War II, there was a song, very popular in Poland, with lyrics by Feliks Konarski (1907-1991) entitled Red poppies on Monte Cassino, where red poppies symbolised the blood of Polish soldiers shed in the battle of Monte Cassino (1944):

Red poppies on Monte Cassino
Instead of dew, drank Polish blood.
As the soldier crushed them in falling,
For the anger was more potent than death.
Years will pass and ages will roll,
But traces of bygone days will stay,
And the poppies on Monte Cassino
Will be redder having quaffed Polish blood.

(http://homepages.ihug.co.nz/wiersze/Cassino)

A completely different, satirical depiction of the poppy was shown by Jerzy Harasymowicz (1933-1999) in a poem Mak [Poppy] (Harasymowicz 1975:79, first published 1960):

poppy so busy
a lot of things
under red hat [...] 
fellow, fiery
red eyes weary
hey, poppy,
this night,
in a dream
you will see
your own mummy
baked:
a poppy-seed cake.

Painting and applied art

The images of poppies are found in both painting and applied art. In the second half of the 19th century and early 20th century, landscape artists created a ‘typical Polish’ landscape with vast expanses of cultivated fields, with golden grain crops dotted by red poppy flowers. Poppies were often depicted on paintings of bouquets of field flowers collected and painted in early summer. Sometimes the colourful splashes of red and purple poppies were painted in gardens, amidst other flowers. In the Polish Art Nouveau paintings, the decorative motives of plants were of particular importance, sometimes with symbolic meanings. The poppy, which is seen as a plant containing narcotic substances facilitating the transition into the world of ‘artificial paradises’, was gladly portrayed at that time (fig. 3). The architecture of the early 20th century of Krakow presents a number of beautiful flower motifs, with poppies carved on the wooden benches and pulpit in the Jesuit Church of Holiest Heart of Jesus at nr 26 Kopernika street in Krakow (fig. 4). Poppies are often depicted in Polish folk art, particularly in applied art as decorative motifs on plates, mugs, tablecloths, etc. Even today, one can buy ‘rustic-style’ tablecloths and napkins decorated by images of bouquets of corn poppy flowers motifs.

Current uses of poppy in Poland

At present, in Poland it is mainly the garden poppy (Papaver somniferum) which is being used for consumption and medicinal purposes and (illegally) as a narcotic plant.

Edible plant

The poppy as a component to food is vastly popular mainly because it is used to sprinkle on bread. There are
numerous kinds of bread and rolls with poppy seeds on top, which is much more common than other seeds (also used are: flax, cornflower, sesame, black cumin). Poppy seed is also used in confectionery products – even during the period of ‘socialism’ there were soft sweets to munch, containing poppy seed. Even today, during parish fairs (in villages and towns alike), homemade poppy lollipops and other sweets are sold. Poppy seed cake is used to fill one of the most popular sweet roll cakes – makowiec. Also popular are little sticks sold either with salt or poppy seed. Some local bread products like bagels characteristic for Krakow have a poppy seed version. Poppy seed can also be found in other sweets, like short pastry tarts or in layers used in sponge cakes.

The residents of the Małopolska region associate poppy seeds with Christmas Eve and the supper which is a ceremonially celebrated meal in the family, in a tradition cultivated in the Catholic Church for centuries. Christmas Eve is one of the most important days in the year and thus the customs and menu are pretty constant. Despite all the changes occurring in our culture, certain regional variations can still be noted and the dishes served are relics from olden times, additionally ‘loaded’ with symbolic meaning.

Till the present day, kutia is a traditional dish for the Christmas Eve supper, particularly in the east of Poland and wherever Poles have settled, who once lived in the eastern regions that now lie within the borders of Belarus and Ukraine.

Another Christmas Eve dish with an eastern connection is ‘łamaniec’ (known from the Suwałki region and the former Eastern regions). Its Polish name [‘something crushed or broken’] refers to the thinly rolled wheat dough, baked in a tray which is then broken into pieces and soaked in sweet milk from pounded poppy seed (Bohdanowicz 1996: 59). Yet another Christmas Eve dish is ‘makówki’ [poppy heads], originating from the Upper Silesia and Wielkopolska regions – a wheat bun, cut into slices soaked in sweetened ground poppy seed (Bohdanowicz 1996: 59).

**Medicinal plant**

The contemporary uses of various species of poppies, apart from their use as decorative plants, is limited to two species – *P. rhoeas* and *P. somniferum*. The former has only a narrow range of application, as flower petals are collected (Flis Rhoeados), dried and used to treat upper airways, e.g. as a component of cough-relieving preparations.

Garden poppy (*Papaver somniferum*) has a much
broader application. Traditionally, its seeds are used in bread and confectioneries. The production of oil, once with a very widespread application as edible oil or in technical applications to produce oil paints, is much more limited nowadays. Its most widespread application is as a raw material in medicine, as it is used to obtain a number of alkaloids (e.g. morphine, papaverine, narcotine, tebaine, codeine), which are applied as analgesics, relaxants and cough-relievers. The raw material consists of immature poppy heads (Fructus Papaveri immaturus) and the poppy straw, after removing the seeds. Also applied in medicine is poppy-seed oil (Oleum Papaveris) (Strzelecka and Kowalski 2000; Ożarowski and Jaroniewski 1987).

Because of the use of the garden poppy for the illegal production of narcotics, only the low-morphine or morphine-free varieties are permitted to be universally cultivated, whereas growing them for pharmaceutical purposes must be strictly monitored.

Narcotic plant

In Poland, extracting morphine from poppies has been for years the most popular and cheapest method of illegal production of narcotics. There were attempts to combat this illegal practice with administrative methods, but obtaining new low-morphine varieties of the poppy at the break of the 1980s and 1990s was much more effective, especially as these had characteristic appearance. The ten times lower concentration of morphine in mature poppy straw (at ca. 0.05%) is insufficient for effective and profitable extraction.

Throughout the decades, before narcotics became an issue, the growing of poppy was legal and even more so, the state encouraged children to bring poppy heads to special collecting centres, where they were sold for pharmaceutical industry purposes. Relevant comic strips were printed on the covers of school notebooks (fig. 5). (http://www.ihar.edu.pl/odmiany__ihar__slonecznik__len, _mak.php).

At present, the poppy and hemp cultivation is subject to strict measures of inspection. The only varieties grown are low-morphine varieties which differ distinctly in terms of the colour and shape of flowers from other varieties and are grown exclusively for the food industry or for seed production. The high-morphine varieties are cultivated to meet the needs of the pharmaceutical industry and are subject to even stricter administrative means of inspection. All cultivation is pursued only in limited areas, under a permit and a contract to buy the entire yield under a compulsory sale agreement. Any cultivation of poppy (even the low-morphine variety) or hemp for own use is prohibited in Poland (Articles 45 through 52 of the Act on preventing drug addiction, of 29 July 2005, promulgated in Journal of Laws of 19 September 2005, No. 179 item. 1485). Despite this, there are websites on the Internet where users exchange knowledge and experiences on how to grow poppy or Indian hemp by oneself. The problem persists, although on a much lesser scale than in previous years. For example, a nationwide operation of the General headquarters of the Police, named ‘Poppy and hemp’ undertaken in 2008, located and destroyed some 300 plantations and 10 kg of dried hemp and 2200 kg of dried poppies were seized and 1500 persons were charged for their involvement in illegal practices. (http://www.policja.pl/portal/pol/1/30899/Mak_i_konop ie_na_celowniku_Policji.html).

The poppy in the Polish language

The poppy is present in the language: in proverbs, sayings, collocations and set phrases. The author of a book of phraseology of the Polish language has remarked, however, on a limited list of such sayings referring to the poppy as an edible plant: phraseological units concerning that aspect are relatively few e.g. humorously marvelling at something by saying «o, sweetest poppy and honey» [o, najsłodszy mak z miodem], or saying «when remembering the poppy,
everything else is worth eating» [wspomnianyszy na mak, to z sie i tak] (Nowakowska 2005: 112).

Listed below are several of the best known sayings and proverbs:

- Cicho jak makiem zasiał - meaning deadly hush, an expression of unknown origin perhaps referring to the fact that sowing such tiny seeds required perfect (windless) weather.
- Jak ziarenka maku. “Like poppy seeds” – a simile referring to a great number, means multitude.
- Dobrać się jak w korcus4 maku – “to be perfect for each other, to be a perfect match, understand each other perfectly” – so like each other as poppy seeds are.
- Figa z makiem – Polish for “to get nothing”, something that failed.
- Pisać maczkiem – to write in a tiny hand – in letters as small as poppy seeds.
- W drobny mak (e.g. smash to very small pieces).
- Głowka jak makówka – comparing head-like shapes, sometimes the word makówka is used as a synonym of ‘the head’ (humorously).

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