



CROCUS L. – GENUS

Order: Asparagales Link (APG IV), Liliales Perleb (Cronquist)

Family: *Iridaceae* Juss.

Tribe: Croceae

Crocus L. species are bulbous (generally provided with a corm¹) or, occasionally, rhizomatous geophytes. Both spring-flowering (e.g., *C. vernus* (L.) Hill. *C. biflorus* Mill.) and autumn-flowering (*C. sativus* L., *C. cartwrightianus* Herb., *C. longiflorus* Raf.) species exist. The former usually bloom in early spring (*C. vernus* flowers begin to appear in February), i.e. in a period in which temperatures are still low but daylight hours definitely begin to increase; the latter bloom in early autumn, when the daylight hours begin to decrease significantly and temperatures begin to decrease.

Commercial saffron is a spice made up of the dried stigmas of the *Crocus sativus* L. flower. The use of saffron is very ancient: it was already documented in 3600-year-old Minoan frescos from the southern Aegean islands Crete and Santorini. *C. sativus* is a male-sterile triploid ($2n=3x=24$) which ever since its origin has been propagated vegetatively. [Nemati, Nemati2]

Its mode of evolution and area of origin are matters of long-lasting debates that have not yet ended so far. Its closest relatives are obligate outbreeding diploids, and the most probable parents belong, like *C. sativus*, to *Crocus* series *Crocus*, a group consisting of 16 autumn-flowering species distributed from Italy in the West to the Caucasus in the East with the center of diversity on the Balkan Peninsula and Asia Minor. [Nemati, Nemati2]

Most of the more recent studies have evolved around the central question of whether saffron is a triploid mutation derived from a single wild progenitor by autotriploidy, or it is an allotriploid originated by a cross between two distinct wild species [Caiola].

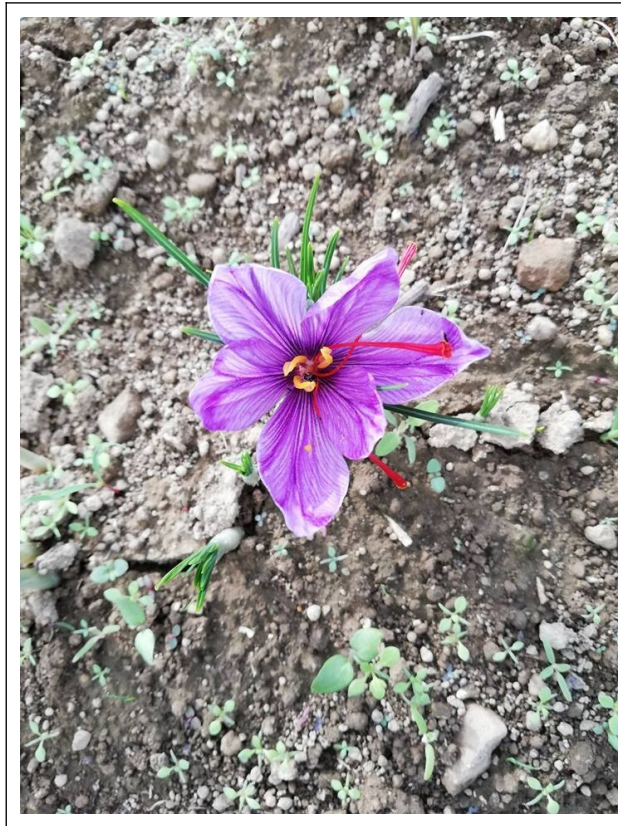
The overall similarity between *C. sativus* L. and *C. cartwrightianus* Herb. has led to assume that *C. cartwrightianus*, also called wild saffron, is one of the progenitors of the crop. However, other similar species, among which *C. thomasii* Ten. and *C. hadriaticus* Herb., can have contributed as a possible parental taxa. [Caiola, Nemati, Nemati2]

C. cartwrightianus stigmata can be used as a wild source of saffron: they have been collected from the wild in the Kania region of Crete in the late twentieth century, and is still gathered today on the island of Santorini [Day, Jacobsen]. *C. thomasii* (Thomas' saffron) stigma too have been (and are currently) collected in Southern Italy as a valid substitute of those of *C. sativus*. The stigma of *C. sativus* is thought to be longer and darker than that of its wild relatives and the aroma is more pronounced in the cultivar. [Nemati2]

¹ Short and enlarged underground organ of some plants, resembling a bulb, but without buds, and similar to the tuber but with the reserve substances placed in the enlarged stem and not in the scales. It is also called a *bulbous tuber* [Acta].

One of the most recent studies shows that, with reasonable certainty, *C. sativus* is an autotriploid that evolved in Attica by combining two different genotypes (or cytotypes) of *C. cartwrightianus*. [Nemati2]

CROCUS SATIVUS L.



<i>Primary functionality:</i>	Sun; Leo, Aries
<i>Secondary functionality:</i>	Pluto (Mars); Scorpio, Aries
<i>Nature:</i>	Warm in the second degree and dry in the first, “ <i>retaining in itself a certain amount of cold, and earthy.</i> ” [Durante] TCM: cold or neutral; enters the Heart and Liver meridians [AmDragon]
<i>Taste:</i>	Stigmata: bitter, aromatic and slightly pungent; anthers: slightly bitter and slightly pungent; petals: sweet and slightly acrid, bitter, aromatic, spicy, slightly astringent
<i>Tropism:</i>	Mind/heart, blood, female genital organs, eyes, nerves.
<i>Humoral actions²:</i>	Resolves heat excess, stagnation and deficiency; eliminates

phlegmatic-melancholic waste and purifies the blood

<i>Clinical actions:</i>	Abortifacient, alexiteric, anthelmintic, antidepressant, anti-inflammatory, antispasmodic, aperient, aphrodisiac, astringent, bechic, blood purifier, blood tonic, cardiogenic, carminative, cordial, diaphoretic, digestive, diuretic, emmenagogue, eupeptic, eutocic, expulsive, hematinic, lactagogue, laxative, maturative, ripercussive, stimulant, tonic, uterotonic
<i>Used parts:</i>	Stigmata, flowers

Description

“It has the virtue of ripening, mollifying, and slightly astringing: it causes urine: it gives a good colour. Drunk with pitch wine, it is against drunkenness. Applied with human milk, it stops eye flow. [...] Crocus stimulates lust, and mitigates, plastered, the inflammations, which tend to shingles; it is useful for the purulent collection in the ears.” (Dioscorides, see [Mattioli]).

“Crocus comforts the heart, purifies the blood, chases away poisons from the heart [...], it helps whit gall overflow, especially when drunk with sweet wine, or Malvasia. The root, drunk with vincotto, causes urine, but drunk at the weight of two or three drachms, it is deadly, and so the flower, which helps in weakness, and in ulcers of the stomach, chest, liver, lung, kidneys, and bladder, eaten in foods: but the excessive use, and the smell, offends the head, dulls the intellect, makes man pale, and makes him die laughing, bringing too much joy.” [Durante]

“It quickens the brain, for the Sun is exalted in Aries, as well as he has his house in Leo: it helps consumption of the lungs, and difficulty of breathing: it is excellent in epidemical diseases, as pestilence, small-pox, and measles. It is a notable expulsive medicine, and a good remedy for the yellow-jaundice. [...] It is said to be more cordial, and exhilarating than any of the other aromatics, and is particularly serviceable in disorders of the breast in female obstructions, and hysteric depressions. Saffron is endowed with great virtues, for it refreshes the spirits, and is good against fainting-fits, and the palpitation of the heart: it strengthens the stomach, helps digestion, cleanses the lungs, and is good in coughs. It is said to open obstructions of the viscera, and is good in hysteric disorders.” [Culpeper]

Saffron has long been used medicinally too, but currently its main use is as a coloring and flavoring spice in cooking. Nonetheless, its therapeutic properties are very interesting, as can be seen from the descriptions given by ancient and Renaissance authors.

According to Matthew Wood, *“the aromatic, bitter taste reveals that it is a stimulant and carminative. [...] As a warming stimulant crocus is used when the blood is congealed and clotted, in old bruises and menstrual difficulties, and when cancer develops from such blood³. It also helps to bring the ‘bad blood’ out of the system in eruptive fevers, where it brings the rash to the surface. [...] The dangers of eruptive fevers are magnified by filth in the blood, which tends to internalize the fever, resulting in prolongation of the fever and damage to the internal organs.”* [Wood]

Homeopathic proving and traditional use have shown that saffron is especially indicated *“when the blood is black, viscid, clotting, forming itself into long black strings”* [Clarke]. Matthew Wood

² See the “Notes on humors” paragraph.

³ Also in TCM cancer can derive from blood stagnation.

reports that *“Boerhaave said that saffron possesses the power of liquefying the blood”* (W.T. Fernie) [Wood].

From the humoral point of view, such appearance of the blood indicates that it is strongly “polluted” with melancholic waste (which makes it dark and facilitates clotting) and by thickened phlegm (which instead makes it viscous and gives it a certain degree of “plasticity”). This humoral condition explains most of the conditions for which saffron is indicated, both in herbal medicine and in homeopathy, which are characterized by blood stasis (stagnation), such as amenorrhea, dysmenorrhea, secondine retention, hemorrhoids, cardiovascular problems. Furthermore, according to Traditional Chinese Medicine, “congealed” blood (blood stasis) can also cause cancer.

Indeed, saffron is also used on old “indolent” bruises that do not heal and has an old reputation in the cure of tumors. According to Clarke, for instance, *“it was used externally ‘to scatter indolent tumours and ecchymoses.’ Cooper has given it in single doses of the ∅ tincture in a case of malignant disease of the side following extirpation of cancerous kidney, with the result of arrest of progress after an initial aggravation, and complete relief of pain. The patient was a woman, who had formerly had hæmorrhage with dark clots at the periods and feeling of weight towards womb. She had had also the sensation of something moving in the abdomen.”* [Clarke]

An excessively congealed blood indicates the need for a warming stimulant. [Wood]

Even the mind picture of *Crocus* patients is affected by a kind of phlegmatic-melancholic “obstruction” which prevents the correct flow of emotions. Matthew Wood sums up well this: *“In homeopathic proving, Crocus brought distinctive mental symptoms, with alternation between violent rage and repentance, or laughter and tears, and as if between inebriation and sobriety.”* [Wood]. It is interesting to note that according to Traditional Chinese Medicine, Phlegm⁴ can obstruct the “Heart orifices” and disturb the Mind, causing important mental and/or psychological disorders⁵, torment the Liver and Gallbladder and deposit in the canals.

Violent and explosive anger is often a sign of (physical or energetic) stagnation at the level of liver and more importantly of gallbladder and it is not infrequent that it is accompanied by disorders such as gallstones, cholestatic syndrome or even jaundice.

The action of saffron on the liver and bile is known. Castore Durante, for example, writes that saffron *“is beneficial for the overflow of gall⁶, especially drunk with sweet wine, or Malvasia”* [Durante] while Culpeper suggests this plant in case of jaundice [Culpeper]. Moreover, in the *Regimen Sanitatis Salernitanum*, in chapter 73 we read: *“De croco. / Confortare crocus dicatur laetificando, / Membraque dejecta confortat hepar reparando.”⁷* [Regimen]

Dr. Finley Ellingwood notes that for newborn babes saffron *“was thought necessary to encourage the action of the liver and to cleanse the intestinal canal and stomach. It was positively indicated, if the skin was yellow and [in] infantile colic.”* [Ellingwood]

Besides moving and purifying the blood and resolving obstructions, saffron is also slightly astringent, as highlighted by Dioscorides and reported by Mattioli and Culpeper ([Culpeper, Mattioli]), so much so that is also indicated in case of bleeding. For example, according to the

4 Phlegm of TCM corresponds to the thickened phlegm of Hippocratic-Galenic medicine.

5 The concomitant presence of a strong Perverse Heat (Fire) can cause the onset of conditions characterized by mental confusion, reckless behavior, violent behavior with a tendency to hit or scold people, uncontrolled laughter and crying, a tendency to shout, depression, manic behavior.

6 Cholestatic syndrome.

7 Transl.: *“Of saffron. The sick say that saffron comforts and cheers; and that by healing the liver he banishes laxity.”*

eclectic J. W. Fyfe: *“Crocus has a specific action on the uterus, and in amenorrhea, as well as in profuse bleeding, it exerts a corrective influence. In menorrhagia, especially when the discharge is clotted, it modifies the pain and restores normal menstruation, and in suppression of the lochia it is deemed useful. In chronic loss of blood from the uterus it is also said to be an efficient remedy.”* [Wood]

Saffron also has a certain ability to ripen, as stated by Dioscorides (*“It has the virtue of ripening, mollifying, and slightly astringing”*, see [Mattioli]), Culpeper and Mattioli. The latter writes: *“and therefore it has a certain virtue of ripening, to which contributes the little astringency it has. Truly all those medicines, which are not too hot, and which have a little astringency, have the same faculty of essences, which we call, plastering, and maturative.”* [Mattioli]

The syrup is a *“slightly stimulating exhilarant”* (W. T. Fernie) [Wood].

According to Rudolf Steiner, *“the neck is the region in which a vegetable thus constituted can act”* [Pelikan]. *“Properly processed, the crocus bulb fights the swelling of the thyroid gland, as is the case with colchicum and cyclamen”* [Pelikan]. And again: *“Since ancient times the stigmas of the crocus have been used [...] also as a vegetal remedy acting on the lower, metabolic and sexual region of the body. [...] In the human organism the blood is strongly pushed towards the lower organs; serious inflammations, haemorrhages, the expulsion of the fetus and, on the other hand, the weakening of consciousness, a dizziness similar to drunkenness can occur, a few grams of the drug can even be fatal. [...] Rudolf Steiner, in an ingenious pharmaceutical composition proposed by him (associating crocus with antimony and coral), demonstrated how the harmful ‘excessive forces’ of crocus can be tamed to obtain a regulator of the entire blood process up to on the periphery of the body.”* [Pelikan]

Saffron is also used in Traditional Chinese Medicine. *Fan Hong Hua* (藏红花, *Stigma Croci Sativi*) is classified as an herb that invigorate the Blood. Its taste is sweet and its temperature cold or neutral; it enters the Heart and Liver meridians. It is mainly used to:

- invigorate the Blood, dispel blood stasis and unblock the menses: this herb treats menorrhagia, amenorrhea, dystocia⁸, retention of lochia, external and internal trauma and pain due to stagnant Blood;
- cool the Blood and resolve toxicity, in case of maculo-papular rashes with high fevers when the color of the rash is not very red. [AmDragon]

This herb is contraindicated during pregnancy. Overdose may cause vomiting, intestinal bleeding, intestinal colic, hematuria, disorientation and convulsions. [AmDragon]

Saffron is said to ease the chest and diaphragm and unbind the stomach to allow food and drink to enter. Long-term administration enriches the lower base, makes the face and complexion joyous and treats mania from Cold damage. [AmDragon]

Saffron and safflower (*Carthamus tinctorius* L., also known as *Hong hua*, 红花, or *Flos Carthami*) are used for similar purposes in TCM. Saffron is reputed stronger than safflower. Both herbs invigorate the Blood and dispel Blood stasis. Safflower has a stronger ability to expel stagnation but is less able than saffron to nourish Blood. Saffron also cools the Blood and resolves toxicity. Due to its high cost, saffron is usually reserved for severe problems [AmDragon].

Saffron, marigold (*Calendula*) and safflower has several overlapping functions. For example, they can all be used to facilitate the eruption of exanthematous diseases and to resolve blood

⁸ Difficult or impeded labor, due to abnormal fetal size or position.

stagnations, are emmenagogue drugs that move the blood and specifically move it downward (e.g., in homeopathic proving, both *Crocus* and *Calendula* have a sensation of weight and fullness in pelvis/toward uterus, that is, downward).

Cooper and Clarke, too, think *Crocus* is very similar to *Calendula* in its action, since it is a vulnerary and corresponds to the effects of blows (deafness, tumors, etc.) [Clarke].

Obviously, there are also several differences between these drugs.

According to modern research, saffron has anti-cancer, anti-convulsant, anti-arthritic, anti-inflammatory, hypolipidemic, and antidiabetic effects, and may have a role in treating ischemia, memory impairment, neurodegenerative diseases (Alzheimer's, Parkinson's,...), depression, anxiety, visual impairment, myocardial infarction, atherosclerosis, and in preventing lung pathology due to inflammation. [Bukhari]

Generally, only the stigmas of *Crocus sativus* are used in therapy, even if several recent studies have highlighted important clinical actions of the petals as well (see for example, [Babaei, Fatehi, Hosseinzadeh, Omid, Omid2]). Petals, among other things, are also less toxic than stigmas (see for example, [Gani Mir, Hosseinzadeh]).

Properties

Temperature and taste

According to Culpeper, saffron "*is a very elegant and useful aromatic, of a strong penetrating smell, and a warm, pungent, bitterish taste.*" [Culpeper]

Matthew Wood classifies it as come sweet, pungent, aromatic [Wood].

Saffron stigmas are bitter, aromatic and slightly pungent (they leave a slight tingling sensation on the tongue which is perceived mainly as an aftertaste and which stimulates salivary secretion). The petals are initially perceived as sweet and slightly acrid, then bitter, aromatic, pungent, slightly astringent. The anthers taste like pollen, with a bitter tone and a slightly pungent aftertaste.

According to Andrea Mattioli, "*the crocus has yet a little of constrictive, which has something earthy, and something frigid. But the hot virtue in it exceeds, so that all its essence reaches the second degree of hotness, and the first of dryness.*" [Mattioli]

Durante also classifies it as hot in the second degree and dry in the first, "*retaining in itself a certain bit of frigid, & terrestrial.*" [During]. Culpeper simply deems it hot in the second degree and dry in the first. [Culpeper]

In TCM crocus is classified as having a sweet taste and a cold or neutral temperature. It enters the Heart and Liver meridians. [AmDragon]

Symbology and signatures

Crocuses are brightly colored perennials. Like many Iridaceae, in fact, they produce very colorful flowers (it is no coincidence that the name of the family comes from ἶρις (Iris), messenger of the gods in the Greek pantheon and personification of the rainbow): from white to yellow up to the various shades of purple in tepals, yellow in anthers and the red-orange in pistils.

This profusion of colors, together with the characteristic of emitting flowers as the light conditions vary (both in spring flowering and in autumn flowering species) certainly characterizes the crocus plants as particularly “sensitive” to light.

Furthermore, saffron is a hot drug and, indeed, its flower is characterized by an intense but not excessive heat. Such heat is also evident to the eye in the intense red-orange color of the stigmas and in the golden color that the stigmas release when they are soaked in water. This is a clear solar signature, which is also shown in a part of the Mediterranean iconography, for example, in the floral motif that decorated the altar of Apollo Karneios in Cyrene (7th century BC), adorned, in fact, with a crocus motif.

The heat of saffron is not fueled so much by a fire that comes from above, but rather by a chthonic fire that emanates from the bowels of the earth. When the plants generally begins to rest entering the cold half of the year and the heat of the solar star clearly begins to decrease, the saffron flowers emerge from the ground like many little spears, whitish at first and that afterwards open to reveal their well known chromatic intensity. Indeed, they appear before the leaves, which also resemble many intensely colored (green) spears and which emerge from the ground only at a later time.

If in the warm half of the year the solar heat emanated from the celestial body radiates intensely towards the surface of the Earth, in the cold half the saffron flower absorbs, so to speak, and externalizes the heat of a chthonic fire that burns in the womb of the Earth. And it is this chthonic fire, bright and hot like all fires, that gives saffron its properties of light and heat.

Crocus is, therefore, a solar plant; but, more than referring to a hot sun shining high in the sky, its signature rather points to a “dying”, winter sun which, glowing hidden from view, heats what is underground and symbolically illuminates what is ordinarily hidden from view: like embers under the ashes, this sun ripens the roots rather than the fruits, preparing the whole plant world (and not only it) for the future return of the bright half of the year.

From a symbolic point of view, we are in that complex mythical space placed between the purely solar gods and those more properly chthonic and usually linked to vegetation and wilderness, for example between Apollo and Dionysus, between Horus and Osiris.

It is probably no coincidence that Dionysus was often associated with both the sights and scents of saffron. Indeed, in his *Metamorphoses*, Ovid tells that Dionysus/Bacchus is announced by a smell of saffron and myrrh⁹. Moreover, the god was often depicted as wearing the κροκωτός (krokotòs), a saffron-dyed chiton, also worn by his followers, as shown, for example, in the Dionysian friezes of Villa dei Misteri in Pompeii [Benda-Weber, DeMone].

In addition to the generally accepted solar signature, one can recognize another, secondary, decidedly Plutonian (or Martial, if we want to remain within the scope of the classical description of planetary functionalities)¹⁰: this gives reason for the activating, circulation-stimulating and tonic properties of crocus and is expressed in a Scorpio potential which accounts for the activities of this herb in the region of the perineum, coccyx and female genitals, where it, among other things, moves the blood and resolve stagnation and “opiplations”.

⁹ “Here, they conclude: yet giue their hands no rest; / But Bacchus slight, and still prophane his Feast. / Then, suddenly harsh instruments surprize / Their charged eares, not extant to their eyes: / Sweet Myrrhe and Saffron all the house perfume. / Their webs (past credit!) flourish in the loome: / The hanging wooll to green-leau'd luy spreads; / Part, into vines: the equall twisted threads / To branches run: buds from the distaffe shoot; / And with that purple paint their blushing fruit.” (Ovid, “*Metamorphoses*”, Liber 4, 389-398; transl. [OvidLib])

¹⁰ Clearly the Plutonian function is decidedly more appropriate.

Culpeper places saffron rightly under the solar sign of Leo (“*it is an herb of the Sun, and under the Lion, and therefore you need not demand a reason why it strengthens the heart so exceedingly*” [Culpeper]), but the participation of both Sun and Pluto (Mars) also makes this plant active in the sphere of Aries, a sign that regulates the head and, together with Leo, the eyesight and the circulatory function.

Tissue Phases

N/A

Actions and indications

Humoral actions

Saffron resolves the excesses and stagnation of heat but also provides heat where this is deficient: Moreover, it eliminates phlegmatic-melancholic waste and purifies the blood.

Tropism

Mind/Heart, Blood, Female Genitals, Eyes, Nerves.

Clinical actions

Abortifacient, alexiteric, anthelmintic, antidepressant, anti-inflammatory, antispasmodic, aperient, aphrodisiac, astringent, bechic, blood purifier, blood tonic, cardiogenic, carminative, cordial, diaphoretic, digestive, diuretic, emmenagogue, eupeptic, eutocic, expulsive, hematinic, lactagogue, laxative, maturative, ripercussive, stimulant, tonic, uterotonic.

Principal actions

“*It binds, mollifies, suppures*” [Culpeper].

“*Useful in spleen disorders*” [Atzei].

Abortifacient [Duke].

Alexiteric¹¹ [Duke].

Anthelmintic [Duke].

Antiinflammatory [Duke, Mattioli].

Antispasmodic [Ellingwood].

Aperient [Durante].

Aphrodisiac [Duke, Durante, Mattioli].

¹¹ Resisting poison or venom: a preservative agent against infectious diseases and against the effects of poison.

Astringent (slightly, Dioscorides) [Culpeper, Mattioli].

Bechic [Duke].

Blood purifier [Durante].

- Purify the blood from melancholic and phlegmatic waste.

Blood tonic, hematinic¹² [AmDragon, Duke]:

- TCM: invigorates the Blood. [AmDragon]

Carminative [Grieve].

Cardiotonic [Atzei]:

- Liter.: *"It is added in moderation to foods, toasted and minced"* [Atzei].

Cordial, antidepressant [Culpeper, Durante].

- Liter.: *"It is said to be more cordial, and exhilarating than any of the other aromatics"* [Culpeper]
- Liter.: *"Il croco conforta il cuore."* [Durante]

Diaphoretic [Grieve], mild diaphoretic [Ellingwood].

Diuretic [Atzei, Duke, Durante, Mattioli]; also Dioscorides (see [Mattioli]).

Emmenagogue [AmDragon, Atzei, Duke, Durante, Grieve]:

- TCM: unblocks the menses [AmDragon]
- TCM: dispels blood stasis. [AmDragon]
- Eupeptic-digestive [Atzei, Culpeper]:
- Liter.: *"It strengthens the stomach, helps digestion."* [Culpeper]
- Liter.: *"After meals a cup of very hot sugared water [is drunk], in which a few threads of the drug have been placed."* [Atzei]

Eutocic¹³ [AmDragon, Atzei].

Expulsive [Culpeper].

Lactagogue [Duke].

Laxative [Duke].

Maturative [Mattioli].

Ripercussive¹⁴ [Durante].

Stimulant [Ellingwood].

Tonic [Duke, Durante, Ellingwood]:

- Liter.: *"the flower [...] helps in weakness [...], when eaten with food."* [Durante]

¹² A nutrient that stimulates the formation of blood cells in the process of hematopoiesis and increase the hemoglobin content of the blood.

¹³ It promotes the physiological course of childbirth.

¹⁴ Which sends back humors (e.g., blood, body fluids) or a disease (e.g., scabies); sometimes with the meaning of apt to resolve an inflammation or an infection.

Uterotonic [Duke].

Specific indications

General

- Inequality of the complexion; red face or pallor alternating with redness [Wood]. Face of an earthy color [Clarke]. Circumscribed, burning red spots on the face [Clarke, Hering], or livid complexion [Hering]. Yellowish, sallow color of face, during epistaxis or metrorrhagia [Hering].
- **Sensation as if something alive were moving or jumping about** internally, in abdomen, chest, uterus, arms or other parts of the body [Allen, Clarke, Karo, Nash, Phatak, Pierce, Vermeulen].
- In hemorrhage from any part (nosebleed, menses,...), **blood dark/black, viscid, clotted**, forming into **long black strings hanging from the bleeding orifice** [Allen, Karo, Nash, Phatak, Pierce, Vermeulen].
- Lipoma [Clarke, Phatak].
- Tumor; encephaloma [Clarke, Phatak]; tumours with ulceration and characteristic bleeding [Clarke].
- Effects of blows [Phatak].
- Pulsations, pulsating pains, pulsating headache [Allen, Clarke, Boericke, Hering, Phatak, Pierce, Vermeulen]; pulsation on one side of the face [Clarke].

Mind

- **Frequent and extreme changes in sensations and emotions** (hysterical conditions); *sudden*, from the greatest hilarity to the deepest despondency; singing and dancing, jumping, laughing, whistling, alternating with melancholy and rage [Allen, Boericke, Clarke, Hering, Karo, Nash, Phatak, Pierce, Vermeulen]. *Excessively happy, affectionate, wants to kiss everybody; next moment in a rage* [Allen, Boericke, Hering, Phatak].
- Great tendency to sadness, sometimes alternating with great gaiety and joyousness [Clarke].
- *Speaks little if he gets angry* (for reproaches) [Vermeulen].
- Choleric passion and violence or anger, followed by repentance [Boericke, Clarke, Hering].

Head

- Headache; especially in the forehead; vertigo. [Wood]
- Tongue: prominent papillae. [Wood]

Eyes

- As a collirium [Duke, Durante, Mattioli]:
 - saffron infusion. [Duke]
 - Liter.: *“Applied with human milk, it stops the eye flows”*. (Dioscoride) [Mattioli]; simil. [Durante]

Mouth

- Dental caries and toothache (direct application of stigma, or rinses with the same soaked in water) [Atzei].

Blood

- In hemorrhage from any part (nosebleed, menses,...), **blood dark/black, viscid, clotted**, forming into **long black strings hanging from the bleeding orifice** [Allen, Karo, Nash, Phatak, Pierce, Vermeulen].
- TCM: invigorate the Blood, dispel blood stasis, cools the Blood and resolves toxicity. [AmDragon]

Immune system

- Exanthematous viral diseases, epidemical diseases [AmDragon, Culpeper]:
 - Chickenpox, *scarlet fever*, *measles*, mumps, smallpox, whooping cough [Culpeper, Duke, Wood]
 - *Stimulating diaphoretic given in the early stages of eruptive fever, to bring out the rash.* [Wood]
 - Liter.: *“It may be given in the early stages of fevers, and especially in eruptive fevers, in full doses if there is a retrocession of the eruption.”* [Ellingwood]
 - A dozen pistils to a large cup of hot water for children (Lebanese). [Duke]
 - Saffron in milk for measles (Germans). [Duke]
 - TCM: Cools the Blood and resolves toxicity; in case of maculo-papular rashes with high fevers, when the color of the rash is not very red. [AmDragon]

Heart

- Palpitation of the heart (circumstances not defined) [Atzei, Culpeper, Wood]; decoction or infusion [Atzei].
- Coagulation of the blood leading to heart disease. [Wood]

Respiratory system

- Cough. [Culpeper]
 - Violent, dry, shaking (cf. *Verbascum*). [Wood]
- Asthma, whooping cough [Duke]:
 - Eight to ten filaments (stigmata) per cup of tea as a “narcotic” in case of asthma, whooping cough, hysteria (North Africans) [Duke]
- Tonsillitis. [Wood]
- Tuberculosis [Culpeper, Wood]; expectoration of blood. [Wood]
- Bronchitis. [Wood]
- Eases the chest and diaphragm [AmDragon].

Metabolism

- Diabetes (mixed with ghee) [Duke]
- Hyperglycemia and hypoglycemia. [Wood]

Gastrointestinal system

- Stomach disorders, bad digestion [AmDragon, Culpeper, Wood]:
 - Stomach much disordered; heartburn, risings, qualmishness, nausea, bloating. [Wood]
 - Unbinds the stomach to allow food and drink to enter. [AmDragon]
 - Liter.: “*It strengthens the stomach, helps digestion.*” [Culpeper]
- Colic and flatulence [Wood]; infantile colic. [Wood]
- Distention of the stomach and abdomen. [Wood]
- Cholera. [Duke]
- Hemorrhoids.

Liver and gallbladder

- Cholestatic syndrome, jaundice [Culpeper, Durante]:
 - Liter.: “*it helps whit gall overflow, especially when drunk with sweet wine, or Malvasia.*” [Durante]
 - Infantile jaundice. [Wood]
- Gallstones (reduces) [Atzei]

Kidneys and bladder

- Water retention. [Wood]
- Kidney stones. [Wood]

Sexual organs

FEMALE

- Amenorrhea. [AmDragon, Wood]
 - Menstruation with pains in the lumbar region. [Wood]
- Congestive dysmenorrhea, discharge dark and stringy. [Wood]
- Dystocia. [AmDragon]
- Menometrorrhagia [AmDragon, Ellingwood, Grieve, Wood]:
 - Chronic haemorrhage of the uterus in adults. [Grieve]
 - Uterine hemorrhage; blood dark and tarry; clotted and in strings. [Wood]
 - Liter.: *"It checks mild cases of irregular uterine hemorrhage, menorrhagia or metrorrhagia."* [Ellingwood]
- Pregnancy: excessive fetal movement. [Wood]
- Pregnancy: sleeplessness and pain. [Wood]
- Postpartum: suppression of the lochial discharge [AmDragon, Ellingwood, Wood].
 - Liter.: *"[It] encourages the lochial discharge when suppressed after confinement."* [Ellingwood]

Musculoskeletal system

- Rheumatism, arthritis. [Wood]
- Back: coldness, heaviness, soreness, bruised feeling. [Wood]

Skin

- Psoriasis. [Wood]
- Chafes, scalds, cuts, wounds, itch, bleeding. [Wood]
- Emollient, softening; softens hard lumps and knots. [Culpeper, Wood]
- Boils, suppurating boils (external use; opens and heals) [Atzei, Wood].
- Aches, pains, exhaustion (bath). [Wood]

Other

- External and internal trauma, pain due to stagnant Blood. [AmDragon]
- Internal ulcers [Durante]:
 - Liter.: *“the flower [...] helps in weakness, & in the ulcers of stomach, chest, liver, lung, kidney and bladder, when eaten with food.”* [Durante]
- Drunkenness [Durante]:
 - Liter.: *“Drunk with raisin wine, it helps against drunkenness”.* (Dioscoride) [Mattioli]; simil. [Durante].
- Hidradenitis (compress) [Atzei].

Parts used and their collection

Usually only the dried stigmas are used. However, all parts of the flower are edible and usable in therapy.

Preparation and dosage

Saffron is safe when used in low dosages, but excessive quantities are harmful, as well as economically inconvenient.

In TCM, 1-6g of saffron [AmDragon] is recommended, but 6g is considered excessive by some authors (see below). The recommended dosage for saffron stigmas is 10-15 stigmata/cup water [Duke] up to 0.5-1.5 g/day [Duke].

According to Culpeper, *“a few grains¹⁵ of this is commonly a dose, though some have prescribed it from half a scruple¹⁶ to a scruple and a half.”* [Culpeper]

Tincture of the stigmas is administered in 5-15 drops at a time. The homeopathic preparations have the same application as the herbal. [Wood]

Contraindications and collateral effects

This herb is contraindicated during pregnancy. Overdose may cause vomiting, intestinal bleeding, intestinal colic, hematuria, disorientation and convulsions. [AmDragon]

1.5g/day of saffron is considered a safe dosage; severe side effects may result from ingesting 5g saffron, 20g may be lethal [Bukhari, Duke].

The maximum non-fatal doses of stigma aqueous and ethanolic extracts have been reported as 0.8 g/kg and 2 g/kg (i.p.), respectively. LD₅₀ values of aqueous and ethanolic stigma extracts have been reported as 1.6 g/kg, i.p. and 3.38 g/kg, i.p. in mice. [Hosseinzadeh]

The maximum non-fatal doses of petal aqueous and ethanolic extracts have been reported as 3.6 g/kg and 8 g/kg (i.p.), respectively. LD₅₀ values of the petal aqueous and ethanolic extracts were 6.67 g/kg, i.p. and 9.99 g/kg, i.p., respectively. [Hosseinzadeh]

¹⁵ 1 grain = 0,0647989 g.

¹⁶ 1 scruple = 1.2959782 g.

In respect to LD₅₀ values and maximum non-fatal doses, the stigma extracts were more toxic than the petal extracts. According to a toxicity classification, stigma and petal extracts are “relatively toxic” and “low toxic”, respectively. [Hosseinzadeh]

LD₅₀ values of saffron stigma and petal extracts (intra-peritoneal administration, solvent not specified) in mice were reported to be 1.6 and 6 g/kg. [Fatehi]

The toxicity of saffron was well known to ancient authors. Dioscorides, for example, reports that “*Crocus, drunk three drachmas [corresponding to about 12 grams] with water, kills*” (quoted in [Mattioli]).

More: “*Excessive use of saffron proves harmful. It will produce an intense pain in the head, and imperil the reason. Half a scruple, that is, ten grains, should be the largest dose. In full doses this tincture will provoke a determination of blood to the head, with bleeding from the nose, and sometimes with a disposition to immoderate laughter. Small doses, therefore, of the diluted tincture, ought to relieve these symptoms when they occur as spontaneous illness.*” (Ferne, 1914). [Wood]

In some cases, even a small, homeopathic dose can exert a strong action in some individuals. Edward Hamilton writes: “*Formerly the third potency of Crocus had been used, it is true, with success, but sometimes occasioning, in irritable persons and in very violent diseases, a somewhat dangerous aggravation of the symptoms. To obviate this danger, the thirtieth potency is now generally employed, although the lower preparations may sometimes be useful in torpid individuals.*” [Hamilton]

Therefore, a certain caution must be exercised when administering saffron to people with “strong” symptoms, e.g., bipolar disorder or tendency to bursts of anger, preferring a lower dosage.

Homeopathy

Crocus sativus – Croc.

The homeopathic medicine is prepared with the dried stigmata, either by treating it at once in twenty parts of alcohol, or making the three first attenuations by trituration. [Hamilton]

In one of his first publications, Hahnemann writes: “*it appears as if saffron (crocus sativus), in its direct action, brought down the circulation and vital heat. Slow pulse, pale face, vertigo, exhaustion, have been observed. In this stage most probably occur the melancholy and headache that have been observed from its action, and in the second stage (the indirect secondary action), occur the senseless, extravagant gaiety, the stupefaction of the senses, the increased action in the arteries and heart, and lastly, the hemorrhage which have been observed from its use. For this reason it may be useful in restoring flows of blood that have been checked, as a similarly-acting remedy, as its power of increasing the circulation occurs first in the secondary action; consequently, the opposite must take place in its direct action. It has been found useful as a similarly acting remedy in vertigo and headache, with slow pulse. In some cases of melancholia with slow pulse, and in amenorrhea, it appears also to be of service as a similarly-acting remedy. It has (in its direct action) produced death by apoplexy, and is said to have proved efficacious in similar affections (probably in relaxed organisms). The phenomena of its secondary action point to much increased irritability of the fibre, hence probably the cause of its readily producing hysteria*”. [Hahnemann]

Three main characteristics stand out prominently in this remedy: the *hysterical symptoms*, with rapid (and even extreme) *alternation of mental conditions*; the peculiar *sensation of something alive moving or jumping about* in the pit of the stomach, abdomen, arms or other parts of the body; *haemorrhages of dark, almost black, viscid, slimy blood* that can form long black strings hanging from the bleeding orifice [Allen, Clarke, Phatak, Pierce].

According to Willard Ide Pierce, “*Crocus is a remedy useful for headache during the climacteric and worse during the period in which she was accustomed to have menstrual flow. These headaches are congestive, pulsating and better from pressure; sometimes one side of the head is affected and sometimes the other, with pain in, or over the corresponding eye.*

In the eyes we have ciliary neuralgia where the pain goes from the eye to the top of the head and associated with a sensation as if a cold wind were blowing against the eye. It is useful in asthenopia with a feeling as if a veil were between the eyes and the light, or as if a film of mucus were over them and he is obliged to wink or wipe his eyes in order to remove it; along with this, we may have extreme photophobia, cannot read without a gush of tears.

Crocus has a sensation as if something living were jumping about in the pit of the stomach, abdomen, arms or other parts of the body, or a sensation of worms crawling in the abdomen or of something dead lying there and associated with a condition of extreme nervousness. [...]

Menstruation is too profuse and too long of thick, dark blood and aggravated by any motion. It is of great value in menorrhagia and metrorrhagia at the climacteric, with increased flow on the slightest movement.” [Pierce]

Tropism: MIND; NERVES [Phatak, Vermeulen]; eyes; circulation; *female genital organs* [Vermeulen].

General

- **Sensation as if something alive were moving or jumping about** internally, in abdomen, chest, uterus, arms or other parts of the body [Allen, Clarke, Karo, Nash, Phatak, Pierce, Stapf, Vermeulen], with nausea, faintness and shivering [Allen, Phatak, Pierce].
- Tingling, crawling, pricking and itching sensations [Phatak]. Tingling in different parts of the body [Clarke]. Stitches, shocks, throbbings, broad thrusts, cuttings and jerkings [Clarke].
- **Haemorrhage** from any part, **blood dark/black, viscid, clotted**, forming into **long black strings hanging from the bleeding orifice** [Allen, Karo, Nash, Phatak, Pierce, Vermeulen].
- Prostration, weariness, fainting, with epistaxis, metrorrhagia [Phatak].
- Drowsiness, > by literary occupation [Phatak].
- Ebullition of blood, sometimes throughout the body [Clarke].
- Lipoma [Clarke, Phatak].
- Tumor; encephaloma [Clarke, Phatak]; tumours with ulceration and characteristic bleeding [Clarke].
- Effects of blows. [Phatak]

Mind

- **Frequent and extreme changes in moods and facial expressions** (hysterical conditions); *sudden*, from the greatest hilarity to the deepest despondency; singing and dancing, jumping, laughing, whistling, alternating with melancholy and rage [Allen, Boericke, Clarke, Hering, Karo, Nash, Phatak, Pierce, Stapf, Vermeulen]. *Excessively happy, affectionate, wants to kiss everybody; next moment in a rage* [Allen, Boericke, Hering, Phatak].
- Great tendency to sadness, sometimes alternating with great gaiety and joyousness [Clarke].
- Joyous longing for something without knowing what [Stapf].
- *Speaks little if he gets angry* (for reproaches) [Vermeulen].
- Choleric passion and violence or anger, followed by repentance [Boericke, Clarke, Hering, Stapf].
- *Vacillating* [Boericke, Phatak].
- Laughing mania [Clarke, Phatak]; after “having smelled of leather bottles that had contained essence of saffron” [Clarke]. Pleasant mania [Boericke].
- Frolicsome and jesting mania, with paleness of face, headache, and obscuration of the eyes [Clarke].
- Child sits or stands up in bed making various quick movements without being conscious of what he is doing; this is followed by a short interval of quietness, in which he may regain consciousness, but without any knowledge of what has passed; this remission followed by another attack, and so on; febrile condition with congestion to head; eyes fixed and bright; redness and heat of face; urine pale and scant; desires neither food nor drink [Hering].
- Sudden vanishing of thought, from being upset about small things [Stapf].
- On attempting to write something down, cannot, on account of loss of recollection [Hering].
- Greatly concerned about his life, believes that he will die, is no longer fit for business, during epistaxis [Hering].
- Inclination to sing [Stapf]; sensitive to music [Clarke, Phatak]; involuntarily joins in on hearing any one sing [Clarke, Stapf, Vermeulen]; sings on hearing a single note sung [Phatak]; merry with music [Vermeulen]; singing in sleep [Stapf].
- Involuntary laughter, weeping, < music. [Phatak]
- Vivid recollection from music heard (*Lyc*). [Boericke]

Head

- Headache: congestive, throbbing, pulsating, before, during, or after menses, or at climacteric period *instead of menses* [Allen, Boericke, Phatak, Pierce, Vermeulen]; < during menses [Boericke]; < *during two or three days of accustomed menstrual flow* [Allen]; > pressure [Phatak, Pierce, Vermeulen]; sometimes one side of the head is affected and sometimes the other, with pain in, or over the corresponding eye [Pierce].

- Stupefying cephalalgia, as if intoxicated [Clarke].
- Vertigo or giddiness: as if intoxicated, in forehead; in room, but not in open air; with confusion; with heat of whole body [Clarke, Hering]; when rising from a reclining posture; when raising the head [Clarke]; with fainting; staggering and giddiness when raising head after lying down at night [Hering].
- Congestion of head, violent throbbing; with nosebleed [Hering].
- Sudden broad thrust in right temple, extending deep into brain, causing him to start; above left frontal eminence, extending deep into brain [Hering].
- Pulsating pains in left side of head extending into eye [Clarke, Hering].
- Sudden cold sensation on left parietal bone, as if a drop of cold water had fallen on it [Hering, Stapf].
- When moving head, sensation as if brain was loose [Clarke, Hering, Stapf].

Eyes

- Sensation: *as if cold air was rushing through/on eye* [Allen, Boericke, Hering, Phatak, Pierce, Stapf]; due to asthenopia or as an after-effect of sclero-choroiditis [Hering]; with dim vision [Stapf].
- Sensation: as if there were *smoke in eyes* [Allen, Boericke, Hering, Phatak, Stapf, Vermeulen]; pressure on closed lids > somewhat [Hering]; and dim vision, must wink frequently [Stapf].
- Sensation: as if a veil were between the eyes and the light, or as if a film of mucus or water were over them and he is obliged to wink or wipe his eyes in order to remove it [Boericke, Clarke, Hering, Phatak, Pierce].
- Sensation: as if [she had been] looking through sharp spectacles. [Boericke, Hering, Phatak]
- Sensation: eyes as if swollen and tense, as if had been violently weeping [Allen, Boericke, Hering].
- Dry, burning, as after weeping. [Phatak]
- Must close eyes tightly [Phatak]. Closing lids tightly > [Allen]. Inclined to press lids tightly together from time to time [Hering].
- *Electric sparks or jumping spots* before the eyes. [Boericke, Clarke, Hering, Phatak, Stapf]
- Lacrimation when reading [Clarke, Phatak, Pierce, Stapf, Vermeulen]; > open air [Vermeulen].
- When reading, the white paper seems of a red or rose color or aurora-colored [Clarke, Hering, Stapf], shining [Hering].
- Dim vision; all things seem pale [Stapf].
- Twitching of the upper eyelid [Clarke, Hering, Phatak, Pierce].
- Heaviness and cramp-like contractions of the eyelids; nocturnal cramps in the eyelids [Clarke].

- *Pupils much dilated* [Boericke, Clarke, Hering] and react slowly [Boericke, Clarke].
- Lids heavy. [Boericke]
- Ciliary neuralgia, pain from eyes to top of head. [Boericke, Pierce]
- Asthenopia [Boericke, Hering, Pierce]
- Extreme photophobia [Boericke, Hering, Pierce].
- Threatened glaucoma. [Boericke]
- Embolism of arteria centralis retinal. [Boericke]

Ears

- Noises in ears with hardness of hearing, < stooping. [Hering, Phatak]
- Otagia, similar to a cramp [Clarke].
- Tinkling in the ears, in the evening, after lying down; buzzing in the ears with hardness of hearing, especially on stooping [Clarke].

Nose

- Epistaxis; with **dark/black, stringy, clotted blood; strings of dark blood** hanging down the nose [Boericke, Clarke, Hering, Karo, Phatak, Stapf]; **every drop can be turned into a thread** [Allen, Hering]; or mucous blood from the nose [Clarke, Hering]; with faintness and cold sweat on forehead [Clarke, Phatak]; with cold sweat in large drops on forehead [Allen, Hering] (cold sweat, but wants to be fanned); in children who develop too rapidly [Allen, Vermeulen] or too slowly [Vermeulen].
- Epistaxis at puberty, of young girls [Phatak]. Epistaxis instead of menstruation; vicariant epistaxis [Vermeulen].
- Violent and frequent sneezing [Clarke, Hering].

Face

- Red, hot face, or alternate redness with paleness. [Clarke, Hering, Phatak]
- Face of an earthy colour [Clarke].
- Circumscribed, burning red spots on the face [Clarke, Hering], or livid complexion [Hering].
- Yellowish, sallow color of face, during epistaxis or metrorrhagia [Hering].
- Burning heat in the face, especially in the morning [Clarke].
- Sensation of warmth in face, with congestion to head and twitching in left eyelid, during epistaxis [Hering].
- Lips cracked and ulcerated [Clarke, Hering].
- Pulsation on one side of the face [Clarke].

Mouth

- Unusual warmth in mouth [Clarke, Hering, Phatak].
- Sour taste [Hering, Phatak]; during epistaxis [Hering].
- Foul odor [Hering, Phatak]; during metrorrhagia [Hering].
- Scraping and roughness in the mouth [Clarke].
- Accumulation of water in the mouth [Clarke].

Tongue

- Tongue moist, and charged with a white coating, papillae elevated [Clarke, Hering]; > after breakfast [Hering]
- Tongue moist, dirty and coated in centre, during metrorrhagia [Hering].

Throat

- Feeling as if uvula were elongated [Boericke, Hering, Phatak] during and when not swallowing [Hering, Phatak].
- Elongation of uvula [Hering].
- Sore throat as if caused by elongation of the uvula, or as if there were a plug in the throat, during deglutition, and at other times [Clarke, Hering].
- Feeling of nausea in throat and chest [Phatak].
- Scraping and roughness in the throat, in the evening before and after, but not during the time he takes his food [Clarke, Hering].
- Morsel of food lodged deep in throat [Stapf].

Stomach & Abdomen

- *Sensation of something alive in abdomen, stomach, etc.*, especially on left side [Boericke, Hering, Phatak].
- *Obstinate constipation* due to portal stagnation [Boericke, Hering]. Constipation of infants [Boericke, Hering, Phatak], when based on venous disturbances [Hering].
- Nauseating, acid, sweetish taste [Clarke].
- Nausea, disappearing in open air [Clarke, Hering].
- Sweet or bitter taste in the bottom of the gullet [Clarke].
- Violent heartburn [Clarke, Hering].
- Absence of appetite, with sensation of fulness, however little be eaten [Clarke].
- Excessive thirst for cold drink [Clarke, Hering, Phatak, Stapf]; thirst in evening [Hering].

- Constant thirst in the evening, with uneasiness in the abdomen after drinking [Clarke].
- Gastric troubles, bloatedness, eructations, vomiting, etc. after operation for hemorrhoids. [Phatak]
- Swollen stomach with fullness and bloatedness [Hering].
- Abdomen swollen [Clarke, Boericke, Hering]; with sensation of fullness [Clarke].
- Sensation of heaviness in the abdomen, with pressing towards the uterus [Boericke, Clarke, Hering].
- Stools contain dark, stringy blood [Hering, Phatak].
- Crawling and stitches in the anus [Boericke, Phatak]. Stitches, itching and tingling in the anus [Clarke, Hering]. Creeping in the anus, as from ascarides [Clarke, Hering].

Respiratory

- Dry cough, paroxysmal [Clarke, Hering, Phatak, Stapf]; > laying or moving the hand on the epigastrium [Clarke, Hering, Phatak, Stapf]; < lying down [Boericke]; expectoration stringy like thread [Boericke, Phatak].
- Cough, with spitting of dark, stringy blood [Clarke, Hering].
- Oppression of the chest, with desire to draw a long breath [Clarke, Hering, Phatak]; > by yawning [Clarke, Hering].
- Breath has offensive, sickly smell [Boericke, Clarke, Hering].
- On breathing, a sensation is felt as from the vapour of sulphur in the throat [Clarke].

Heart

- Sensation of heat ascending to the heart impeding breathing, > yawning [Clarke, Phatak, Stapf].
- Dull stitches in the left chest [Phatak].
- Frequent palpitation with anxiety [Clarke, Hering, Phatak]; during uterine hemorrhage or ascending stairs [Hering]; < ascending stairs [Phatak].
- Weakness in cardiac region, extending through abdomen and to soles of feet [Stapf].

Male

- Excitement of sexual desire, increased sexual desire. [Clarke, Hering, Phatak, Stapf, Vermeulen] (Vermeulen does not distinguish between male and female).

Female

- Menses: *dark and slimy, stringy* [Allen, Boericke, Clarke, Phatak]; clotted [Allen]; too frequent and copious [Boericke, Clarke, Hering, Karo, Pierce], or profuse and lasting too long, but come at proper time [Hering]; painful [Clarke]; foul smelling [Clarke, Karo, Phatak]; accompanied with severe headache [Karo]; with great sexual excitement [Karo]; < any motion [Pierce].
- Uterine hemorrhage, < least movement [Boericke, Clarke, Hering, Phatak]; *clots with long strings* [Phatak]; during the new and full moon [Clarke, Hering] or < during full or new moon [Boericke].
- Menorrhagia and metrorrhagia at the climacteric, with increased flow on the slightest movement [Pierce].
- Dysmenorrhœa, with dark, stringy blood [Hering].
- Daily discharge of bright red blood, viscid, slimy, coagulated, with vertigo, pains in head, stitches in both sides under false ribs, frequent palpitation; small and frequent pulse, pains in back and great exhaustion [Hering].
- Offensive smelling uterine hemorrhage; or when the patient, in consequence of long-continued hemorrhage, has fallen into a state of nervous erethism [Hering].
- *Sensation as if something alive were moving or jumping about* in uterus [Allen, Clarke, Nash, Phatak, Pierce]; with swollen abdomen [Clarke]; the patient mistakes this sensation for the movement of a foetus [Clarke, Nash]; false pregnancy [Hering, Karo, Phatak].
- Threatened abortion [Boericke, Clarke, Hering, Phatak], disposition to miscarriages [Karo, Pierce]; especially when hemorrhage is *dark and stringy* [Boericke]; with the unnatural sensation of worms in the abdomen, or as of something dead lying there [Pierce].
- Post-partum hemorrhage [Clarke].
- Pain in left breast, as if drawn at intervals towards the back by means of thread [Boericke, Clarke, Phatak, Stapf].
- A bounding feeling, as if something alive in right breast. [Boericke, Phatak]
- Movements of fetus are violent and painful [Hering, Phatak].
- Urging of blood to genitals [Boericke, Clarke], as if the menses were commencing [Clarke]; sensation as if menses would appear, with colic and pressing towards genitals [Hering].
- Leucorrhœa in long strings [Karo, Vermeulen].

Back

- Sudden feeling of coldness, as if cold water were thrown over him [Boericke, Phatak, Stapf]. Sensation of coldness in the back [Clarke, Hering].

Extremities

- Cracking in hip joint and knees [Boericke, Hering, Phatak]; when stooping [Hering]; < stooping [Phatak].
- Pain in the shoulder-joint, on moving the arms, as if it were out of joint, or on the point of being dislocated; cracking [Clarke, Hering].
- Chilblains in the hands, in the fingers and on the toes [Clarke, Hering].
- Icy-cold extremities [Boericke]. Cold as ice in metrorrhagia, epistaxis [Hering, Phatak].
- Numbness of whole upper limbs [Boericke, Clarke], with immobility, especially at night, during sleep [Clarke]; numbness and tingling of arms, hands, feet [Stapf].
- Weakness in knees and legs [Boericke].
- Pain in ankles and soles [Boericke].
- Tips of fingers as if tightly bound up, as if blood cannot circulate [Stapf].
- *Musculoskeletal system*
- Chorea [Allen, Clarke, Phatak, Pierce]. Convulsive attacks, like chorea (every seven days), with laughter [Clarke, Phatak], dancing and leaping, alternately with violent paroxysms of whooping-cough [Clarke].
- Jerking and spasmodic contractions of single set of muscles [Allen, Boericke, Clarke, Hering, Nash, Phatak].
- Sensation of relaxation and bending in the joints [Clarke].

Skin

- Prickling and crawling [Clarke, Hering, Phatak], burning and tingling [Clarke, Hering].
- Scarlet spots on the skin [Clarke, Hering, Phatak] or red (scarlet) color of the body [Clarke, Hering].
- Suppuration, painful, of old wounds (old cicatrised wounds open again and suppurate) [Clarke, Hering, Phatak]
- Chilblains [Clarke, Hering].
- Disperses tumors. [Phatak]
- Lipoma, encephaloma [Clarke, Hering, Phatak]; of the scalp [Clarke, Hering].

Sleep

- Deep sleep [Phatak].
- *Sings in sleep* [Clarke, Hering, Phatak, Vermeulen].

- Continuous yawning and desire to sleep; great inclination to sleep in the day, especially after a meal, sometimes in the evening [Clarke, Hering]; drowsiness, with eyes dull and glassy [Clarke].
- Cries, and starts, while sleeping [Clarke].
- Frightful [Clarke, Hering], or gay and pleasant dreams [Clarke]; confused [Hering].

Fever

- Flushes of internal heat, with prickling and crawling in skin. [Clarke, Hering, Phatak]
- Perspiration only on lower half of the body [Clarke, Hering, Phatak]; or perspiration very little, and only at night, cold and debilitating [Clarke, Hering].
- Continuous foul-smelling sweat, < in debility. [Hering, Phatak]
- [Following] hemorrhage after parturition. [Phatak]
- Pulse accelerated; feverish [Clarke].
- Chill in the afternoon, growing < in the evening, with chilliness extending from the back into the legs, with trembling; with thirst [Clarke, Hering].
- Heat, mostly of the head and face, with paleness of the cheeks and thirst [Clarke, Hering].

Modalities

- **Worse:** *motion* [Allen2, Phatak] (especially hemorrhage [Allen2]); reading; puberty [Phatak]; pregnancy; during new and full moon [Clarke, Phatak]; heat (in a hot room or in hot weather) [Boericke, Clarke, Phatak]; lying down [Boericke, Phatak]; fasting [Boericke, Clarke, Phatak]; looking fixedly at an object [Boericke, Clarke, Hering, Phatak] (cannot even thread a needle) [Hering]; evening and night [Clarke]; afternoon, < towards evening [Allen2]; in morning; before breakfast [Boericke].
- Several symptoms *appear at night*, and are generally *aggravated in the morning* [Clarke].
- **Better:** after breakfast; yawning [Clarke, Phatak]; open air [Allen2, Clarke, Boericke, Phatak, Stapf] (all symptoms) [Allen2]; desire for open air [Clarke, Stapf]; *focusing* on things [Vermeulen].
- **Side:** symptoms generally appear on the left side [Clarke].
- **Chill:** With thirst, in the afternoon, increasing towards evening; with shivering from the back down the legs; < by drinking. [Allen2]
- **Heat:** With thirst, internal flushes with pricking and crawling in the skin; of head and face, with pale cheeks. Violent heat over whole body, < in the head, with intense redness of face and distention of blood vessels; great thirst without much dryness of mouth. [Allen2]
- **Sweat:** Scanty, only on lower half of body, or only at night, then cold and debilitating. [Allen2]

Food

- Aversions: Fats and heavy foods [Vermeulen].
- Desires: Cold drinks [Hering, Vermeulen].
- Worsening: Cold drinks [Vermeulen]

Antidotes

Aconitum, Opium, Belladonna [Clarke, Boericke, Hamilton].

Relations

Ign.; Tarent. [Phatak]; other Iridaceae; Alliaceae; Liliaceae [Clarke].

Nux, Pulsatilla or Sulph. follow Crocus well in nearly all complaints. Compare: in menstrual derangements [Allen].

Miasm

Sycotic [Vermeulen].

NOTES

Notes on humors

According to the Hippocratic-Galenic medicine, four humors rule the human body:

- *Bile* (or *Yellow Bile*), corresponding to the Fire element, responsible for all the caloric activities of the human body, both in a physiological sense (e.g., body heat) and in a pathological sense (fever, inflammation, etc.);
- *Blood*, corresponding to the Air element and to the physical blood;
- *Phlegm* (also called *Pituita* or *Lymph*), corresponding to the Water element, responsible for everything that is fluid in the body (body fluids, lymph, blood plasma, synovial fluid, cerebrospinal fluid, etc.)¹⁷;
- *Melancholia* (also called *Black Bile*), corresponding to the Earth element, responsible for everything that is hard and structured (bones, teeth, but also growths, polyps, stones, tumors, etc.).

Heat and body fluids are governed by Yellow Bile and Phlegm respectively. When there are no further specifications, the terms “heat” and “fluids” can be used, in this text, to indicate the corresponding humor.

¹⁷ In this sense, it is conceptually different from the *Phlegm* of Chinese medicine, which corresponds specifically to the *thickened Phlegm* of humoral medicine when it is located in the upper part of the organism.

The functioning of the whole body is governed by the mixing (*crasia*) of such humors: if the ratio between the humors is proper (we speak of *eucrasia*), the body functions at its best and the health is guaranteed; if they are blended improperly (we speak of *discrasia*), illness results.

A humor is defined *correct* when both its “quantity” and its “quality” are proper; when it prevails over the others, generating dyscrasia, it is said that it is *superabundant*, and when its quality is not appropriate it is said that it is *corrupt*. We say in general that a humor is *perverse* when it is overabundant or corrupt. In this text, in order to facilitate comparisons between different systems of medicine, we resort to an extension with respect to the classical conception and define a humor as “perverse”:

- when its “quantity” is not optimal, that is, it is excessive (superabundant humor) or deficient (deficient humor) with respect to the condition of eucrasia (the classical theory allows only excess; deficiency is due to the prevalence of another humor with opposite qualities), or
- when its “quality” is different from the physiologically appropriate one (corrupt humor)¹⁸.

An excess of heat in the body can overheat and “cook” the humors, altering their characteristics. Phlegm thickens and becomes more viscous, giving rise to the so-called *thickened Phlegm*. If the excess heat is important or lasts for a long time, all humors can end up “burning” (in this case we call them *adust humors*). When burned, humors always produce Melancholia. Unani-Tibb medicine provides four types of perverse melancholia produced by the combustion of humors: *malankholia damvi*, produced by the combustion of Blood; *malankholia safravi*, produced by the combustion of Yellow Bile; *malankholia balghami*, produced by the combustion of Phlegm (generally due to fermentation) and *malankholia saudawi*, produced by the combustion of “correct” Melancholia.

Phlegm is cold in the first degree and damp in the second and is a mobile and flowing humor. When coldness becomes excessive, however, the Phlegm can thicken and become viscous (cold indeed makes viscous), producing once again *thickened Phlegm*.

Phlegm itself, when it accumulates and stagnates for any reason (for example due to a lack of heat or an excess of Tension, see below), generates, by “compression”, secondary heat that can condense the humor and make it viscous.

Furthermore, in nature stagnant dampness favors fermentation and putrefactive processes, especially when there is concomitant heat. Also in the human body an accumulation or stagnation of Phlegm may cause the onset of fermentation or putrefaction (phenomena that today’s medicine generically indicates as *infections*), which are certainly supported by the natural heat of the body and by any secondary heat generated by compression of the Phlegm. Moreover, the fermentation and putrefaction generate further secondary heat¹⁹. All these phenomena are characterized by the coexistence of perverse dampness and heat, even if, to be more precise, they should be described as due to the presence of pathological dampness associated with a certain degree of perverse heat (it is therefore more correct to think of them as due to “heated” humidity rather than moist heat). From a clinical point of view, the disorders characterized by this humoral

¹⁸ Melancholia, for example, can be in excess with respect to the physiological condition of eucrasia (generating excessive structures) or in deficit (generating deficient constructions), but it can also be generated by the combustion of humors by heat (see below); in the latter case, it is always perverse (therefore it is perverse in quality rather than in quantity). In classical humoral medicine these three conditions are usually not so sharply distinguished from each other.

¹⁹ The fermentation and putrefaction processes are generally exothermic or generate a “hot” response from the human body..

picture include the phenomena known as *putrefaction*²⁰ which are manifested by the emission or collection of purulent material, often even hardened (e.g., abscesses)²¹.

The conditions described so far (thickened phlegm, adust humors, putrefaction) are perverse not due to an incorrect quantity of the humors, but because of their “bad” quality.

Tension

In this text, for the exclusive purpose of simplifying any comparisons between different systems of medicine (for example, Chinese and humoral), we add the pseudo-humor *Tension*²², which is responsible for the “functionality” of the whole body or its parts (e.g., the organs). In this sense, it corresponds to the *Qi* of Chinese medicine but also to other concepts, such as that of the *Four Virtues* (attractive, retentive, alterative and expulsive) of organs according to Galen (see for example [Giannelli]) and it can also be related to the *vasoconstriction* and *vasorelaxation* conditions of Physiomedicalism and to Matthew Wood’s *Constriction* and *Relaxation* tissue states [Wood].

Tension, defined as a *pseudo*-humor because it is not contemplated by the classical humoral theory, can be thought of as formally derived from Fire to which a sort of “constraint”, “limitation”, or “obstacle” has been applied. Like Fire, in fact, it is a form of “energy”, mobile in itself and activating; but whereas Fire tends to move only upwards and centrifugally, thus expanding indefinitely, the movement of Tension is more “structured” and so to speak “oriented” towards specific, defined forms and modalities. We can therefore see it as a kind of Fire to which a structuration (element of “terrestrial” nature) has been applied.

We can resort to an image taken from everyday life as an example. If we pour water on the fire, the latter goes out and the water disperses or evaporates. If we place a hard (i.e., cold and dry) element above the fire (for example, a terracotta or metal container) which prevents the water to directly “mix” with the fire, we are able to let the water heat up without dispersing, and to use it warm for specific purposes (for example, to cook food). By applying a cold and dry “obstacle” (the container) to the fire, we “functionalize” the heat that otherwise would disperse or make the water disperse or evaporate.

Tension can therefore be described, in a humoral sense, as derived from a sort of “functionalization” of Fire by a factor (a principle rather than a material cause) of a cold and dry nature. For this reason Tension is hot and dry, with a lower degree of heat than Fire (because of the cooling due to functionalization).

Even Tension can be correct or perverse and, in the latter case, it can be perverse both in quantity (excess or deficit of Tension) and in quality (think for example of the *Qi ni*, or *counterflow Qi*, of Chinese medicine). Given the correspondence, described above, of Tension with Qi, the various manifestations of perverse Tension will typically have a more or less specific correspondence in Chinese medicine (for example, “Tension deficiency” corresponds to “Qi deficiency”). In general, Tension imbalances correspond to Qi imbalances and/or to “Wind” (intended as a pathogenic manifestation).

20 Corresponding to the *toxic heat* of Chinese medicine. This condition also includes diseases characterized by macular or maculopapular eruptions (e.g., exanthematous diseases).

21 The conditions known as *Dampness/Heat* in Chinese medicine (which include, for example, problems often related to the urinary tract or gallbladder, some cases of jaundice, etc.) also fall within this picture.

22 Name borrowed from Matthew Wood’s tissue states model [Wood].

An imbalance in Tension can also affect other humors, potentially making them perverse. For example, an excess or a stasis (stagnation) of Tension can prevent the body fluids from being moved correctly, generating stagnation of Phlegm and/or Blood; Tension stagnation can generate “compression” which in turn can produce heat (Chinese medicine speaks, for example, of “implosion of stagnant Qi” which generates Fire, understood here not as the element but as a specific manifestation of heat).

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