

Subclassis: **Sympetalae**

Petals and sepals of this taxon are (somewhat) joint in different forms like tube, cone etc.

Order: Ericales

Family: Ericaceae

Shrubs or trees with simple, leathery leaves or sometimes like needles.

Rhododendron ponticum

(Pontic rhododendron, Common rhododendron, Komar, ormangülü)

Bees like these pink flowered plants; honey that they make from these flowers are known as “mad honey (deli bal)**” and is poisonous due to **andromedotoxin**.**

Vaccinium arctostaphylos

(Caucasian whortleberry, Çay üzümü)

Leaves contain **tannin and a heteroside named **arbutoside**, and are consumed as tea.**

Vaccinium myrtillus

(Bilberry, Whortleberry, European blueberry, yaban mersini, ayüzümü)

Red-black colored fruits are used in some vascular and eye disorders due to the **anthocyanosides that they contain. Leaves of this species are used as anti-diarrheic.**

***Arctostaphylos uva-ursi* (Bearberry, Ayı Üzümü)**

Folia Uvae-ursi (Uvae-ursi folium) T.K. (Uva ursi yaprağı)
is a diuretic drug containing tannin and arbutoside;
used in kidney and bladder related diseases.

Order: Primulales
Fam: Primulaceae

Primula vulgaris
(English primrose, Çuha çiçeği)

Roots and rhizomes contain **triterpenic saponosides**, and are used as expectorant.

Fam: **Styracaceae**

Styrax benzoides,
Styrax benzoin,
Styrax tonkinensis
(Siam benzoin).

An oleoresin is obtained by wounding the trunk;
Benzoe (Asilbent): this drug is expectorant and
also used in cosmetics.

Order: **Contortae** (Gentianales)

The characteristic property of this order is corolla's being twisted inside the flower bud

Fam: **Oleaceae**

***Olea europaea* (Olive, Zeytin ağacı)**

Fleshy mesocarp of the fruit contains 50% oil. **Oleum Olivae (Olivae oleum) (zeytinyağı)** is obtained by pressing the mature fruits. (Low pressure yields oil that is used in pharmaceutical technology and in cooking).

Olive oil contains **oleic acid, palmitic acid, stearic acid** and **vitamin E**. Has cholagogue and laxative activity.

The oil obtained later on by increasing the pressure is used in the preparation of soap.

Leaves are used to lower blood sugar and the bark of the trunk and branches are used to lower blood pressure.

Fraxinus ornus

(Manna ash, Dişbudak)

Manna T.K. (Kudrethelvası) is the juice obtained by wounding the trunk, contains 50% **mannitol**, **mucilage** and a coumarin heteroside called **fraxinocide**.

This drug is laxative and is the source in mannitol production.

Fam: Loganiaceae

The members of this family are poisonous plants growing mostly in tropical regions.

Strychnos nux-vomica

(Strychnine tree, Kargabüken)

Small tree growing in India and tropical Asia.

The fruit is a berry containing 4-8 seeds; disc shaped seeds are very hard and covered with dense, silky hairs.

Semen Strychni (Strychni semen) T.K. (Kargabüken tohumu) is a poisonous drug, contains alkaloids like **strychnine**, **brucine** and **vomicine**; these alkaloids are the stimulants of central nervous system, however since the drug is extremely poisonous, it should be used with caution.

Fam: Apocynaceae (Dogbane family)

The members of this family are evergreen trees or small trees growing in tropical and hot regions and they contain latex.

Nerium oleander (Oleander, Zakkum)

The leaves and flowers of this plant contain a cardiotonic heteroside called **oleandrin** (**oleandroside**) and a flavonoside **rutin** (**rutoside**). **Poisonous!**

Strophanthus sp.

Strophanthus gratus (Climbing oleander)

is the species growing in West Africa,

Strophanthus hispidus, grows in West Africa and;

Strophanthus kombe grows in East Africa.

All of them has hairy seeds.

Seeds of these three species yield the drug **Semen Strophanthi (Strophanthi semen) T.K. (Strofantus tohumu)**.

Contains cardioactive heterosides

g-strophantoside (*S. gratus*),
k-strophantoside (*S. kombe*),
h-strophantoside (*S. hispidus*)

Rauwolfia serpentina

(Rauwolfia, Indian snakeroot)

Origin: Asia

**Yields *Radix Rauwolfiae*
(*Rauwolfiae radix*)**

Contains approximately 50 alkaloids; the main alkaloids are *indole alkaloids*, *reserpine*, *serpentine*, *resinamine*, *ajmaline* and their total amount should not be less than 1%; *lowers blood pressure* and is administered as regulative in *cardiac deficiency* and *tachycardia.**

(*tachycardia: a rapid heart rate, especially one above 100 beats per minute in an adult)

***Vinca* sp. (Periwinkle, Cezayir menekşesi)**

V. minor (Lesser periwinkle, küçük cezayirmenekşesi) and *V. major* (Large periwinkle, büyük cezayirmenekşesi) have blue, purple or pinkish-red flowers.

Aerial parts yield **Herba Vincae (Vincae herba)** and contain mainly vincamine alkaloid, and is used to lower blood pressure.

Catharanthus roseus

**(= *Vinca rosea*, Madagascar
periwinkle, Rozet)**

Approximately 30 alkaloids are obtained from the aerial parts of the plant, **Herba Catharanthi (Catharanthi Herba)**; the most well known of them are **vincaleucoblastine** and **leurocristine**.

The drug or the alkaloids that it contains are used in the **treatment of cancer (Hodgkin and pediatric leukemia)** due to their **antitumoral** effects.

Fam: Asclepiadaceae

(Milkweed family)

Perennial herbaceous plants or shrubs containing **latex** are found in this family.

Marsdenia condurango (Condurango)

Is a perennial climbing plant growing in Tropical America.

Barks of the stem are called
Cortex Condurango (Condurango cortex) T.K.
(Kondurango kabuğu), contain **condurangin** and similar
heterosides.

Used in the treatment of cancer.

Order: Tubiflorae (Solanales)

Fam: Convolvulaceae (Bindweed / Morning glory family)

***Convolvulus scammonia* (Scammony, Mahmudeotu)**

Roots of this plant are thick and contain latex: **Radix Scammoniae T.K. (Mahmude kökü).**

The resin found in the composition of the latex is irritating, therefore this drug is a **drastic purgative**. The milk flowing by scratching the root yields a resinous drug called **Scammonium** when dried.

Ipomoea purga
(= *Exogonium purga*, Brazilian morning glory)

A climbing plant growing in Mexico. Has cordate leaves and red flowers.

Tubers of the plant are called **Tubera Jalapae (T.K. (Calapa tuberi))** and are **drastic purgative**; this effect comes from the **resin** that it contains.

The resin obtained by ethanolic extraction of the tubers is called **Resina Jalapae T.K. (Calapa reçinesi)** and is a **purgative** drug that irritates both small and large intestines.

Fam: Solanaceae (Nightshades, Patlıcan giller)

Members of this family containing **tropane alkaloids** that are used in pharmacy and are poisonous. Plants consumed as vegetables are also found in this family.

***Atropa belladonna* (Belladonna, Devil's Berries, Güzelavratotu)**

Is a poisonous plant.

Leaves are collected during the flowering period and give the drug called **Folia Belladonnae (Belladonnae folium)** (Belladon yaprağı).

This drug contains **atropine, hyocyamine** and **scopolamine alkaloids** and is used as analgesic and antispasmodic. In addition, this drug is anti-vomitive, used in stomachache, ulcer, spasms of the kidneys and liver (colics). Atropine is also a mydriatic alkaloid (dilates the pupilla).

Radix Belladonnae (Belladonnae radix) has activities similar to the leaves, but is used in obtaining **atropine** and **hyoscyamine** alkaloids instead.

In the intoxications with this plant, dilated pupils attract attention. Intoxications usually occur when the preparations are taken more than the dose required for treatment or by confusing it with another plant and eating the fruits.

Mandragora autumnalis

(= *M. officinarum*, Autumn Mandrake, adamotu)

The roots of the plant resemble the human body, therefore this plant is called “adamotu” in Turkish (man herb/human herb).

Radix Mandragorae (Mandragorae radix) (Adamotu kökü) contains **atropine, hyoscyamine, scopolamine** and **cuscohigrine alkaloids**. Was used for its analgesic, sedative and narcotic effects, however today it is only used traditionally as analgesic.

Hyoscyamus niger
(Henbane, Stinking
nightshade,
Banotu, gavrhaşhaşı)

Leaves are collected during flowering period: **Folia Hyoscyami (Hyoscyami folium) (Banotu yaprağı)**. The drug contains **hyoscyamine** and **scopolamine** alkaloids; has sedative and analgesic effect due to scopolamine; can be used both internally and externally.

Roots and seeds of the plant are also used for the same purposes.

The leaves are mixed with tobacco and are used against shortness of breath as a cigarette.

Datura stramonium

(Jimsonweed, Devil's trumpet, Tatula, boru çiçeği)

White corolla is in the form of a long cone. The fruit is the size of a walnut and is a septicide capsula.

Folia Stramonii (Stramonii folium) T.K. (Tatula yaprağı) are collected during the flowering period of the plant. Contains **hyoscyamine**, **atropine** and **scopolamine**. This drug is **antispasmodic**. Used against shortness of breath as a cigarette. The seeds also have the same effect.

***Nicotiana tabacum* (Tobacco, Tütün)**

Has been brought to Europe in the 17th century. Cultivated throughout the world for its leaves.

Leaves are big, ovate-lanceolate; flowers are like tubes, pink or greenish-white.

Folia Nicotianae (tütün yaprakları) are the leaves collected during the flowering period of the plant, mainly contains **nicotine alkaloid**.

Nicotiana rustica

(Turkish tobacco, Aztec tobacco, Delitütün, hasankeyf tütünü)

**It is cultivated in Gaziantep and Kahraman Maraş where it is
chewed for pleasure.**

**Pipe and water-pipe tobacco is prepared from the leaves.
Nicotine ratio is higher than *N. tabacum*.**

***Capsicum annuum* (Cayenne pepper, Biber, paprika)**

An annual plant cultivated as a vegetable. Has berry type fruits that resemble a capsule.

The fruits **Fructus Capsici (Capsici fructus) T.K. (Kırmızı biber)** are rich in vitamin C while green.

Contains **capsaicin alkaloid**.

It is used externally against rheumatoid pain since it burns the skin and draws blood.

Order: **Lamiales**

Fam: **Labiatae** (Lamiaceae) (Mint family)

The members of this family grow mainly in the Mediterranean region. Herbaceous plants or shrubs containing glandular trichomes and volatile oil. Stem angular, corolla bilabiate, stamens dydynam.

Mentha piperita
(Peppermint, Nane, İngiliz
Nanesi)

This is the hybrid of ***M. aquatica*** and ***M. spicata***

Mentha spicata (Spearmint)

Cultivated for its volatile oil, yields an oil with a special odor called **Spearmint essence**; this product does not contain menthol. Used to aromatize toothpastes and chewing gums.

Leaves of the plant yield **Folia Menthae piperitae (Menthae piperitae folium)**

T.K. (Nane yaprağı); contains volatile oil and is stomachic, used against nausea* and is appetizer.

(*nausea: a feeling of sickness in the stomach characterized by an urge to vomit)

Leaves yield 0.6-1% volatile oil with steam distillation.

Oleum Menthae piperitae (Menthae piperitae aetheroleum) T.K. (Nane esansı, nane ruhu); contains 50% menthol; is a good throat antiseptic, cholagogue, antispasmodic for the stomach and is also analgesic.

Some other cultivated species are ***Mentha rotundifolia*** (Apple mint) and ***Mentha longifolia*** (Horse mint).

The leaves of these species do not contain mentol, but contain **piperiton** instead.