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EUROPEAN UNION
EUROPEAN REGIONAL
DEVELOPMENT FUND

THIS PROJECT IS IMPLEMENTED THROUGH THE CENTRAL EUROPE PROGRAMME CO-FINANCED BY THE ERDF

Common useful wild plants in Central Europe

Promoting traditional collection and use of wild plants to reduce social and economic disparities in Central Europe



TRAFFIC
the wildlife trade monitoring network



Traditional and wild

This booklet is developed within the Project "Promoting traditional collection and use of wild plants to reduce social and economic disparities in Central Europe" (Traditional and wild) implemented through the CENTRAL EUROPE Programme co-financed by the European Regional Development Fund (ERDF).

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Suggested citation: Rodina, K. (Ed). 2013. Booklet. Common useful wild plants in Central Europe. **Promoting traditional collection and use of wild plants to reduce social and economic disparities in Central Europe.** TRAFFIC and WWF, Budapest, Hungary. 28 pages.

Front cover photo: Forget-me-not (*Myosotis spp.*), Péter Radácsi
Photo credits in the main booklet: Traditional and wild partnership

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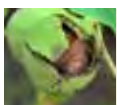
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Bilberry

(*Vaccinium myrtillus*)

Common and folk names:
European Blueberry, Bilberry, Whortleberry, Huckleberry

Description

- A perennial flowering plant in the Ericaceae family with indigo-coloured berries
- The shrub is usually erect, occasionally prostrate, varying in size from 10 cm to 4 m
- Leaves may be either deciduous or evergreen, oval to lance-shaped, 1 to 8 cm long and 0.5 to 3.5 cm broad
- Flowers are bell-shaped, white, pale pink or red, sometimes greenish
- Fruit is a 5–16 mm diameter berry with a crown at the top; it is pale green at first, turning reddish-purple, and finally ripening to dark blue
- The blooming period is from April-May; the most abundant yields are when the plant's age is 5 to 8 years
- Reproduction is by rhizomes and seeds

Occurrence

- Found in Europe, including mountainous areas of Southern Europe; northern Asia and western North America
- It prefers wet, acidic sandy soils, and tolerates partial shade
- Favourable growth in pine, pine-spruce and mixed forests
- Winter frosts frequently damage young bilberry shoots; late frosts negatively impact fruit bearing

Chemical composition

- Fruits contain vitamins C, A, D, and some vitamins from the B group plus rutin, pectins, tannins, carotenoids, flavonoids, anthocyanins, organic acids, iron mineral salts, manganese, potassium, lithium and molybdenum
- Leaves contain chlorophyll, carotenoids, flavonoids, triterpenes, tannins, organic acids, inositol, and manganese



Collection and processing

- Fruit and leaves are collected
- Collect fruit manually and place it into flat baskets. Avoid using special combs for collection
- Collect the leaves at the end of the fruiting period, carefully removing twigs from the leaves
- Natural drying is advisable, spreading out fruit in a thin layer in a shady and airy place
- Initial drying at 30 °C is recommended, followed by a gradual increase of temperature to 60 °C. Direct exposure to the sunlight should be avoided
- After drying, the leaves should remain green and intact, rather than crushed and mixed with other parts of the plant
- One kg of dried material is obtained from 4 kg of fresh leaves or 7.5 kg of fresh fruit

Application

For some of its described properties, Bilberry is used at an industrial level and products manufactured for use as food or food ingredients and for their use in human medicine and/or alternative/complementary health care

- Used for improving eyesight, including night vision
- Used for treating eye conditions such as cataracts and disorders of the retina
- Whilst dried fruits are a widespread cure for diarrhea, fresh fruits have an opposite effect and are used as a laxative for the gastrointestinal tract
- Leaves have mild constipation and antibacterial effects. Also used to treat upper respiratory tract infections
- Infusions and extracts made from the dried berries are effective anti-diarrhea and antibacterial agents
- Blueberries have anti-inflammatory and anti-hemorrhagic effects and are used as a detoxification agent (to eliminate heavy metals from the body)
- The food industry uses berries for colouring wine and production of red food colouring
- Raw and frozen fruit with added sugar can be used for filling dumplings, pancakes and flavouring ice creams

Black Elder

(*Sambucus nigra*)



Common and folk names:

Elderberry, European Elder, Common Elder, Elder Bush

Description

- A deciduous shrub or small tree in the Sambucaceae family, growing to a height of 4 to 6 m
- Bark is light grey when young, and changes to a coarse grey outer bark with lengthwise furrowing
- Leaves are arranged in opposite pairs, 10 to 30 cm long, pinnate with five to seven leaflets. The leaflets are 5 to 12 cm long and 3 to 5 cm broad and have a serrated margin
- Leaves smell foul after crushing
- Hermaphrodite flowers are borne in large corymbs 10 to 25 cm in diameter in mid summer
- Berry is a dark purple to black 3 to 5 mm diameter, produced in drooping clusters in the late autumn



Occurrence

- Widespread in the northern Hemisphere
- Grows in forests, clearings, openings, shrubby slopes, unploughed lands, along roads and rubble sites
- Prefers deep and humid soils that are rich in nitrogen

Chemical composition

- Flowers contain flavonoids, essential oil, vitamin C, mucilage and minerals
- Fruits contain colourants (anthocyanic glycosides), organic acids (malic, citric), sugars (sambubiose), flavonoids (rutin, isokvercitrin, sambucin), vitamins C, A, B3, B6, tannins, bitter substances and pectins



Collection and processing

- Flowers are collected before full flowering in May to June, and fruits from August to October
- Do not cut flowers and fruits with scissors; hand picking is advisable
- Dry on a cord, netting or paper. The drying area should be dark, clean and well-ventilated
- Temperature for artificial drying of flowers is up to 40 °C, for fruit – up to 50 °C
- Store flowers in paper covers for a maximum of 12 months, the fruits in tin or glass containers
- One kg of dried flowers is obtained from 6 kg of fresh material, while one kg of dried fruit yields 8 kg of fresh fruit

Application

For some of its described properties, Black Elder is used at an industrial level and products manufactured for use as food or food ingredients and for their use in human medicine and/or alternative/complementary health care

- Stem bark, leaves, flowers, fruits and root extracts are used for treating bronchitis, coughs, upper respiratory cold infections and fevers
- Flowers can be used to make herbal tea as a remedy for inflammation caused by colds and fever
- Flowers have diaphoretic, diuretic and anti-neuralgic effects
- Therapeutic preparations may be made directly from the flowers and fruits, as well as in the form of fruit jam, fruit syrup (for constipation), fruit vinegar (for massages of muscle pain) and fruit wine (for neuralgia)
- Flowers are also used to prepare juices, wine and sparkling wine, and can also be dipped into a light butter and fried to make elderflower fritters
- Traditionally, the medium-age twigs and stems are also used to carve musical instruments and toys for children
- Berries are used for making jams, jellies, syrups, soups, beverages, pies, bread, wine and marmalade, and for filling dumplings, spread on pancakes and flavouring ice creams



Caraway

(*Carum carvi*)

Common and folk names:
Meridian Fennel, Persian Cumin

Description

- A biennial plant in the Apiaceae family
- Leaves are bipinnate or tripinnate with petioles widening into a sheath, all arranged on the stem in a spiral pattern. At the ends of a branched stem there are flower clusters
- The main flower stem is 40–60 cm tall, with small white or pink flowers in umbrella-shaped umbels
- Caraway fruits (erroneously called “seeds”) are crescent-shaped and around 2 mm long, with five pale ridges
- Blossoming period is in May-June; ripening is gradual during July and August
- The plant has a spicy fragrance

Occurrence

- Caraway is one of the longest-known crop plants. Fruit of the plant was found in Stone and Bronze Age excavations and was also widely used in Medieval Europe (A.D. 950-1250)
- It grows wild in Central and northern Europe, northern Asia, and North Africa
- It can be found in meadows, pastures, roadsides and forest clearings
- It favours only fertile and moist, chalky soils

Chemical composition

- Seeds have a 3 to 7% essential oil content, with carvone and limonene, fatty oil, vitamins A and D, flavonoids, proteins and sugars



Collection and processing

- Rarely collected wild, as it is cultivated in many countries (e.g. Poland, Hungary and Czech Republic)
- It can be grown separately or combined with other plant crops (e.g. peas and coriander)
- It prefers warm, sunny locations and well-drained soils rich in organic matter
- Harvesting should begin when the fruits in the upper part of the umbels turn slightly brownish
- Delayed harvesting of ripe fruit is not advisable because they easily fall
- Well-dried caraway fruit is yellow or grey-brown with a strong odour and acrid flavour

Application

For some of its described properties, Caraway is used at an industrial level and products manufactured for use as food or food ingredients and for their use in human medicine and/or alternative/complementary health care

- Stimulates the secretion of gastric acids and bile, prevents formation of gas and facilitates the expulsion of gas (e.g. in baby teas)
- Fruit is used as a spice in breads, especially rye bread, as well as in seasoning cabbage dishes, vegetable salads, meat and fish, cheese and curd
- Fruit oil is also used as a fragrance component in soaps, lotions and perfumes
- Roots may be cooked as a vegetable
- Caraway has a long tradition of medicinal uses, primarily for stomach complaints
- It is also an endocrine function support agent, specifically related to thyroid disorders and autoimmune disease

Common Juniper

(*Juniperus communis*)



Common and folk names:

Fairy Circle, Hackmatack, Horse Savin, Gorst, Aiten, Dwarf Juniper

Description

- A highly variable evergreen low shrub or small coniferous tree in the Cupressaceae family, occasionally reaching a height of 10 m
- It has green needle-like leaves in whorls of three, with a single white stomatal band on the inner surface
- A wind pollinated dioecious plant, with male and female cones on separate individuals
- Male flowers are yellowish cones richly covered with pollen; female cones are smaller, greenish and embedded in the axils of leaves
- Seed cones are berry-like and green, ripening to purple-black with a blue waxy coating in 18 months
- Blooming period is in April-May
- The plant has a pleasant, resinous and balsamic fragrance

Occurrence

- Widespread in forest-rich regions across Europe, North Africa, North America, northern and western Asia and Japan
- Found in arid areas, pine forests, moors, poor pastures and dry slopes of lowlands and mountains; generally a pasture indicator in areas grazed by livestock
- It grows on a variety of soil types including acidic and calcareous sands, loams or marls
- It prefers light (sandy), medium (loamy) and heavy (clay) soils and tolerates ultramafic soils

Chemical composition

- The fruit has an 0.2 to 2% volatile oil content, including numerous terpenes, 30% invert sugar, tannins, resins, flavonoids, waxes and mineral salts



Collection and processing

- Collect ripe juniper berries in late autumn or during the winter period
- Shake a bush by placing a cloth around the trunk, or shake off the fruit using rakes
- Avoid using sticks because they may break branches and green fruits may fall along with ripe ones
- Dry collected berries in an airy place in thin layers and turn them every few days
- Recommended temperature in a drying room is around 40 °C

Application

For some of its described properties, Common Juniper is used at an industrial level and products manufactured for use as food or food ingredients and for their use in human medicine and/or alternative/complementary health care

- The fruit is a diuretic, liver-stimulating, anti-inflammatory and anti-bacterial agent, limiting excessive fermentation in the intestines and in cases of liver failure
- Juniper oil is an ingredient of ointments treating neuralgia and rheumatic pains
- Berries are a strong urinary tract disinfectant. They are also commonly used for seasoning meat dishes (roast pork and fat poultry), curing meat, fish, sauces, compotes, pickles and cooked cabbage
- Juniper is a common flavouring of liqueurs and spirits (e.g. borovička, gin, jenever, kranewitter and others) and a component of juniper beer
- Roasted juniper seeds are a coffee substitute
- Leafy shoots and fruit are used in the production of juniper sausage, smoked meat and fish, herbs and vinegar
- Juniper wood is used for making a movable part of a manual churn to ensure good cream churning
- Roots are ideal for weaving baskets and other decorative items

Common Nettle

(*Urtica dioica*)



Common and folk names:
Great Nettle, Stinging Nettle

Description

- A herbaceous perennial plant in the Urticaceae family, with long, creeping rhizomes, of yellowish colour
- Stems are 25 to 200 cm tall, non-branched or richly branched in the upper part
- The blade is broadly ovate to lanceolate, pointed in the upper part, heart-shaped at the bottom. Leaves are serrate to coarsely serrate
- Nettle is hairy on the upper side, dark green to greyish green, sporadically yellowish green or matt. On the bottom side, there are markedly accumulated stinging trichomes on the veins
- Flowers are unisexual
- Fruits (achenes) are ovate, 1 to 1.2 mm long, greyish to light brown, occasionally slightly shiny





Occurrence

- Native to Europe, North America, and the non-tropical parts of Africa and Asia
- Widespread at roads edges, river and creek banks and in abandoned sites
- The species grows well in soil supplied with nitrogen, but avoids heavy clay or very light sandy soils
- It prefers high moist soil, semi-shade or sunny sites

Chemical composition

- Leaves contain tannins, silica, formic and citric acids, flavonoids, essential oil, mucilage, chlorophyll, beta carotene, vitamins B, C, K, histamine, acetylcholine, glucokinines, minerals (K, Ca, Fe, Na, Cl, Mn, S)
- Rhizomes contain b-sitosterol, scopoletine, lignans, specific lectin UDA, polysaccharides, monoterpenoids and tannins

Collection and processing

- Collect leaves and shoots from July to September, rhizomes in autumn, seeds when ripe (August – September)
- Dry weather and evening time is favourable for collection
- Pick leaves directly from the shoots or right after cutting the stems, using sharp knives or scissors for cutting
- Do not collect near dunghills due to a strong uptake and accumulation of nitrate
- Place cut material on a flat surface. Natural airflow and shady areas are best for drying; artificial drying temperature is 50 °C
- One kg of dry material is obtained from 5 kg of fresh leaves



Application

For some of its described properties, Common Nettle is used at an industrial level and products manufactured for use as food or food ingredients and for their use in human medicine and/or alternative/complementary health care

- Leaves have hemostatic, mild diuretic, antidiabetic and antirheumatic effects
- Nettle influences the liver and gall bladder functions, helps relieve arteriosclerosis, harmonizes metabolism and heals wounds and sores
- Root extracts are used to treat prostate disorders
- Decoction from dried or fresh rhizome has diuretic effects on oedemas
- In veterinary medicine nettle is used for improving animal hair quality
- Used as ingredients for cosmetics, such as in shampoos and soaps. Powdered seed is recommended for curing diarrhea, dysentery and asthma
- Young leaves, fine cut and blanched, are used in the preparation of soups, salads, spinach, omelettes, potato meals



European Centaury (*Centaureum erythraea*)

Common and folk names:

Bitterherb, Centaury Gentian, Lesser Centaury, Red or Pink Centaury, Feverwort, Filwort, Christ's Ladder

Description

- Annual or biennial plant in the Gentianaceae family, with a light-coloured root and a basal leaf rosette
- Leaves are smooth and a shiny pale green with undivided margins
- Lowest leaves are broader than the others, oblong or wedge-shaped, narrowed at the base, blunt at the end and form a rosette at the base of the plant
- Flowers are small, pink, tubular, star-like apically set in several pseudo-corymbs
- Blooming period is from July to September
- Reproduction is by seeds

Occurrence

- Widespread in Europe, parts of North Africa and West Asia and introduced to North America
- Favourable growth in moist forest clearings, light thickets, roadsides, field margins and mountain slopes up to 1400 m
- Frequent in meadows and dry grasslands
- Tolerates both calcareous and siliceous soils

Chemical composition

- The active ingredients are mainly phenolic acids such as ferulic and sinapic acids
- The plant also contains small amounts of sterols such as brassicasterol and stigmasterol
- Other constituents: methylated xanthenes, phenolic acids, flavonoids, fatty acids, pyridine-type alkaloids, alkanes and waxes



Collection and processing

- Centaury is a popular plant for collection in Europe
- The whole shoot is cut above the ground when the leaves are green and flowers are bright pink
- Collect plants selectively, with 20 to 30% of plant left on after collection
- Collection is advisable in non-polluted areas, a minimum of 100 m away from public roads
- Avoid mining or chemically polluted agricultural areas for collection
- Drying should be done in a shadowed and airy place, avoiding exposure to direct sunlight
- One kg of dried material is obtained from 4 to 4.5 kg of fresh shoots



Application

For some of its described properties, European Centaury is used at an industrial level and products manufactured for use as food or food ingredients and for their use in human medicine and/or alternative/complementary health care

- It is used as a medicinal plant in many parts of Europe
- The herb is mainly prepared as a tea
- Its bitter properties are utilised in making both alcoholic and non-alcoholic beverages
- Its medicinal properties are beneficial for people with gastric and liver diseases
- It is a powerful antioxidant
- It is used as a traditional use for curing anorexia and dyspepsia



Marshmallow

(*Althaea officinalis*)

Common and folk names:

Mallards, Mauls, Common Marshmallow

Description

- Althaea derived from the Greek "althos" meaning "to cure" due to its healing properties
- A perennial plant in the Malvaceae family, with simple or branching roots, developed from its rhizome
- A plant is 10 to 30 cm tall and a stem 2 to 3 cm thick
- The stem is woody at its base, 10 cm high
- Leaves are 3- to 5- lobed, velvety haired and alternate
- Flowers are white or pale pink, blossoming from July to September
- Fruit and seeds: 15 to 20 disc-shaped fruits; large numbers of seeds weighing 1.6 to 3.2 g.
- The required germination temperature is approximately 20 °C



Occurrence

- Lives in saline areas, floodplains, humid and marshy down embankments in Europe, Asia and North Africa
- It prefers low and warm areas, moist, loose soils, lake shores or riversides

Chemical composition

- Roots contain 10 to 20% (mucilage-type) polysaccharides, 30% starch, flavonoid-glycosides, tannins, and also fatty oils
- Leaves contain 5 to 10% mucilage and a low quantity of volatile oil

Collection and processing

- Roots and leaves are collected
- Collect roots in early spring or October-November, leaves before or at the start of blossoming
- Peeling of roots is required before drying
- Drying temperature is 35 to 50 °C
- For storage, plastic sacks are inappropriate due to the tendency for dehydrated roots to mould; linen or paper bags are best



Application

For some of its described properties, Marshmallow is used at an industrial level and products manufactured for use as food or food ingredients and for their use in human medicine and/or alternative/complementary health care

- Marshmallow used to be a valuable food ingredient in ancient Egypt, Greece, China, Syria and the Roman Empire in the Middle Ages
- Roots are often used in tea, syrup or as an ingredient of pills for bronchitis, coughs and huskiness, and help reduce inflammation in catarrh cases
- Roots and leaves have a mild laxative effect
- Root extract is used as a flavouring for the special eastern sweet “halva”
- Flowers and young leaves are popular salad ingredients. Marshmallow is often used as a flavouring for candies
- Due to its strong fibres it is used in paper production and rope weaving
- It may be used in fomentation for festering wounds and curing eye-inflammation



Peppermint

(*Mentha x piperita*)

Common and folk names:

Balm Mint, Brandy Mint, Curled Mint, Lamb Mint, Lammint

Description

- A herbaceous rhizomatous perennial plant in the Lamiaceae family, growing to a height of 30 to 90 cm, with smooth stems, square in cross section
- Rhizomes are wide-spreading, fleshy with bare fibrous roots
- Leaves are 4 to 9 cm long and 1.5 to 4 cm broad, dark green with reddish veins, and with an acute apex and coarsely toothed margins
- Flowers are purple, 6 to 8 mm long, with a four-lobed corolla about 5 mm in diameter; they are produced in whorls (verticillasters) around the stem, forming thick, blunt spikes
- Flowering period is mid to late summer
- Reproduction is from horizontally growing shoots (stolons)

Note on taxonomy

- Peppermint is a hybrid mint, a cross between Spearmint (*Mentha spicata*) and Water Mint (*Mentha aquatica*)

Chemical composition

- Leaves have a 2 or 3% essential oil content whose main ingredients are menthol (50%) and menthone (20%), tannins, flavonoids, organic acids and minerals

Cultivation

- Outside of its native range in Europe and southwest Asia it is cultivated in many temperate and subtropical climates around the world
- Favorable growth in humus soils that are rich in nutrients, permeable and sufficiently moist
- Seedlings from the underground stolons are planted in spring or autumn in rows 5 to 8 cm deep, at a distance of 40 cm from each other
- Cultivation needs weeding
- Healthy, not rusted leaves may be plucked off in the field

Collection and processing

- Collection should be started as soon as the first buds appear
- The plant may be mowed during dry and hot weather
- Drying temperature of not more than 30 °C. Avoid direct sunlight and heat when drying
- Leaves should remain green and be kept in an airtight container



Application

For some of its described properties, Peppermint is used at an industrial level and products manufactured for use as food or food ingredients and for their use in human medicine and/or alternative/complementary health care

- Used traditionally in herbal teas (fresh and dried) in Central and South Eastern Europe, and North Africa
- Wide use of peppermint essential oil
- Peppermint has a general strengthening effect, and is antihemorrhagic when mixed with lemon juice
- Leaves are used for the treatment of nausea, weakened heart muscle, urinary tract inflammation, heartburn and lack of appetite
- Baths with peppermint infusion have an antirheumatic effect
- Peppermint has a high menthol content and is often used for flavouring ice cream, confectionery, chewing gum, toothpaste and mouthwash
- Widely used in the food industry (e.g. leaves are used in seasoning fish, meat dishes as well as sauces)
- Also occasionally used as ingredients for cosmetics, such as in shampoos and soaps

Rosehip

(*Rosa canina*)



Common and folk names:
Dog Rose, Wild Rose, Haggebutt

Description

- A shrub in the Rosaceae family, 1 to 3 m tall, with branches hanging down and sickle-shaped thorns
- Leaves are green, odd-pinnate, flowers are made up of five petals, without fragrance glands on the bottom
- Stems are smooth with 1 to 3 pink flowers 5 cm in diameter. Flowers have a large amount of pollen and are therefore attractive to bees
- Rosehip has small, dry, one-seeded fruits (hips) red-to-orange in colour, which may range from dark purple to black in some species
- The plant is very popular for collection in Europe
- Blooming period is in June, ripening from late summer to autumn

Occurrence

- Native to Europe, northwest Africa and western Asia but due to introductions found in temperate regions throughout both hemispheres
- Non-specific for water and soil, may grow on the worst permeable soils
- Occurs in leafy forests, on their edges and in shrubberies
- A common invasive shrub

Chemical composition

- Fruits contain vitamin C (mainly in fresh fruits), vitamins A, B1, B2, minerals, pectin, organic acids, sugar, carotenoids, tannins, fatty oil, proteins and vitamin E
- The seeds (achenes) have high non-saturated fatty acid content, vitamins A and E



Collection and processing

- Fruits of the plant are collected
- Collect when the fruits are ripe, dark red and hard, from August to October. Collection after frosts is not recommended
- Remove fruit stems when picking the fruits
- Wear leather or canvas jackets, trousers and gloves for harvesting
- Be careful not to pull out the shrubs with the roots
- Avoid collection near railway embankments and road edges due to pollution risks
- Dry fruits quickly in thin layers in a well-ventilated place. Recommended heating temperature is no higher than 60 °C
- Well-dried fruit is dark red and cracks when squeezed

Application

For some of its described properties, Rosehip is used at an industrial level and products manufactured for use as food or food ingredients and for their use in human medicine and/or alternative/complementary health care

- Rosehip is particularly high in vitamin C, one of the richest plant sources available
- It is an important and strong antioxidant
- It is used for cleaning the kidneys and bladder, eliminating uric acid accumulations, helping with gout and rheumatic complaints and fluid retention
- It is also used for cleansing blood, preventing colds, coughs and influenza
- It is mainly applied as part of fruit tea mixtures
- It may be used for making infusions, jams, jellies, syrups, soups, beverages, pies, bread, wine and marmalade
- Rosehip seeds are traditionally used to produce “itching powder”, a practical joke applied by children



Silver Birch

(*Betula pendula*)

Common and folk names:
Weeping Birch, European Weeping Birch

Description

- A medium-sized deciduous tree from the Betulaceae family, typically reaching a height of 15–25 m, with a slender trunk and a crown of arched branches with drooping branchlets
- The bark is white, often with black diamond-shaped marks or larger patches, particularly at the base
- Shoots are rough with small warts, and hairless. The leaves are 3 to 7 cm long, triangular with a broad base and pointed tip, and coarsely double-toothed serrated margins
- Flowers are wind-pollinated catkins, produced before the leaves in early spring
- The flowering period is from March to May
- Propagation is by seeds at the beginning of spring or by cuttings

Occurrence

- Widespread in Europe, although in southern Europe it is only found at higher altitudes. Its range extends into southwest Asia in the mountains of northern Turkey and the Caucasus
- Natural occurrence is at altitudes up to 1000 m above sea level
- It adapts to all soil types, e.g. nutrient poor and extremely acid soils
- It grows in forest margins, clear-cut areas, peat bogs, grazing lands and rocks

Chemical composition

- The outer part of the bark contains up to 20% betulin
- Leaves contain flavonoids, essential oils, tannins, resins, vitamin C and phytoncides



Collection and processing

- Buds are collected from older trees before the budding time (April – May), leaves from April to June, bark in early spring
- Dry leaves in a shady place. Maximum temperature for indoor drying should not exceed 40 °C
- Collect sap into a bottle through a tube attached to the trunk (from a cut or slash in the wood)
- Avoid collecting leaves growing at the end of twigs
- Often planted in parks and gardens, grown for its white bark and gracefully drooping shoots
- Prefers a climate cool enough for at least an occasional winter snowfall. Best growth is in full sun, planted in deep, well-drained soil

Application

For some of its described properties, Silver Birch is used at an industrial level and products manufactured for use as food or food ingredients and for their use in human medicine and/or alternative/complementary health care

- Historically, the bark was used for tanning
- Wood is used for carving kitchen utensils such as wooden spoons and spatulas
- Bark can be heated and the resin collected; the resin is used as waterproof glue and firestarter
- Birch tar is used in the pharmaceutical industry
- Birch sap is used for making syrup, wine and vinegar
- Bark contains waterproof wax (betulin) which gives odour and resistance to leather products
- Leaves may be used for making tea for diuretic and blood cleansing effects and prevention of gall stones, reduction of gout symptoms and rheumatic problems
- Birch is an ingredient in cosmetic products such as shampoo and soaps for healthy hair and better blood circulation
- Young birch leaves can be added to fresh vegetable salads

Walnut

(*Juglans regia*)



Common and folk names:

Common Walnut, Persian Walnut, English Walnut

Description

- A deciduous tree in the Juglandaceae family that is monoecious—the male and female reproductive organs are on the same plant
- The tree may reach 25–35 m in height. The crown is sparse and branching, often of a regular spherical shape
- The bark is smooth and grey when young, having a rougher texture when older
- The leaves are large and odd-pinnated, with a long petiole; fresh and rubbed leaves have a pleasant odour
- Flowering time is April–May, with male flowers blooming first in drooping long catkins, followed by female flowers
- The fruit is light brown rounded nuts 4 or 5 cm in size. The whole fruit, including the green, fleshy husk ripens in autumn. The seed is large and edible

Occurrence

- Native to Southeast Europe (Balkans) throughout Turkey, the Caucasus and the mountain ranges of Central Asia, western China, Iran and the Himalaya, but now widely introduced and distributed throughout Europe, parts of North and South America, Australia and New Zealand
- Trees used to be frequent near roads, in gardens, vineyards and orchards
- Prefers warm, moderately moist soils rich in nutrients

Chemical composition

- Leaves and fleshy husks contain **tannins, nafto-quinones (juglone, hydro-juglone), flavonoids, phenolic acids, a small amount of essential oil and vitamin C**
- Seeds contain **unsaturated fatty acids, proteins, minerals (Mg, K, Ca) and vitamins E and B**



Collection and processing

- Leaves and the fleshy husk are collected for therapeutic purposes
- Seeds are cultivated as an important material in the food industry
- Leaves are collected in July-August after full-development
- Green husks are occasionally collected at the same time as the walnut harvest
- Dry leaves and husk are dried in a shady and airy place, arranged in thin layers; advisable temperature for artificial drying is 35-40 °C. Dried leaves are odour-free

Application

For some of its described properties, Walnut is used at an industrial level and products manufactured for use as food or food ingredients and for their use in human medicine and/or alternative/complementary health care

- Leaves and fleshy husks are ideal for use as a tea in treating intestinal and gastric catarrh, and diarrhea
- Infusion of the leaves may be used as a compress or for cleansing, easing ulcers, pimples, eczema, acne, inflamed wounds; it is also effective as a gargle for sore throats and may be used for hemorrhoids in the form of a sitz bath
- Derivatives of juglone may be used in preparing hair dyes and sun oils; dried husk of walnut may be a home remedy for dying hair
- Used as ingredients for cosmetics, such as in shampoos and soaps
- Seeds may be used for making oil, liqueur, spirits and jam
- Walnut seeds and cold pressed oil help protect blood vessels, prevent atherosclerosis, lower cholesterol levels and have antioxidant effects
- Extracts from green husks have insecticidal properties and are used as mosquito repellents

Sustainable harvesting of useful wild plants in Central Europe



Harvesting of
Wild Garlic (*Allium ursinum*)
in Bosnia and Herzegovina

Photo credit: Sladjana Bundalo

Within the ‘Traditional and wild’ project, TRAFFIC and WWF Hungary led on ensuring sustainability in wild-plant harvesting and trade through implementation of the FairWild Standard principles. TRAFFIC is among the organizations that developed the Standard, and promotes its use and further development through the partnership with the FairWild Foundation.

The FairWild Standard is best practice, allowing the assessment of harvest and trade of wild plants against ecological, social and economic requirements. Use of the FairWild Standard helps to support efforts ensuring sustainable collection and maintenance of wild plant populations, as well as sustainable social aspects of collection, and fair conditions of labour.

The purpose of the FairWild Standard is to

ensure the continued use and long-term survival of wild species and populations in their habitats, while respecting the traditions and cultures, and supporting the livelihoods of all stakeholders, in particular collectors and workers.

In 2012, a training course on aspects of sustainable wild plant collection was developed by TRAFFIC and WWF Hungary within the ‘Traditional and wild’ project. The course contains a brief overview of the medicinal plants sector in Central Europe, the main principles of good collection practices, aspects of sustainable wild-plant harvesting, based on the principles of the FairWild Standard, including main collection instructions, and the handling of plant material before and after collection. Practical exercises have also been designed to make wild plant collection in the Central European region more sustainable.

The authors, publishers and all associated organizations accept no responsibility whatsoever regarding the efficacy, use, storage or application of any of the medicinal preparations described herein, for whatever purpose.

The information in the booklet was all compiled from published sources. To find a full list of references, please visit: ***www.traffic.org/interreg-booklet-references***



**CENTRAL
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EUROPEAN UNION
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DEVELOPMENT FUND

THIS PROJECT IS IMPLEMENTED THROUGH THE CENTRAL EUROPE PROGRAMME CO-FINANCED BY THE ERDF

Medicinal and aromatic plants are collected in Central Europe from the wild for traditional use, as well as an additional source of income, particularly important for vulnerable groups such as the Roma communities, women and the elderly. Since the middle of the 20th century, traditional knowledge about the properties of these plants and their collection traditions are repeatedly reported as being under threat through increasing urbanization, changes in land ownership that affects access to collection sites, and in lifestyles.

The Traditional and wild Project, which aims to prevent the disappearance of this historical knowledge and help improve the livelihoods of vulnerable groups in rural parts of Central Europe, was implemented between May 2011 and April 2014. The project involves collaboration between nine organizations from Hungary, the Czech Republic, Slovenia and Poland, including academic institutions, local authorities, chamber of commerce, and NGOs, bringing together a wide array of expertise to implement the project goals successfully.

Within the Traditional and wild project, TRAFFIC and WWF Hungary led on ensuring sustainability in wild-plant harvesting and trade through implementation of the FairWild Standard principles.

More information:

www.traditionalandwild.eu

www.traffic.org

www.fairwild.org



TRAFFIC
the wildlife trade monitoring network



Traditional and wild