

EDIBLE PLANTS



A SURVIVAL GUIDE

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EDIBLE PLANTS

EDIBLE PLANTS

There are many temperate edible plants in addition to those illustrated in colour, including the wild forms of cultivated plants such as currants and gooseberries. The following are a further selection of the food plants available.

If you are unlucky enough to find none of the plants illustrated or described here use the standard tests for edibility on the plants that are available.

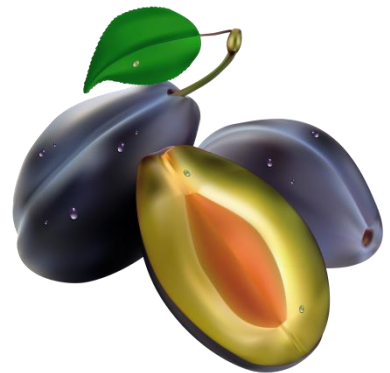
REMEMBER that although one part of a plant can be eaten another may be poisonous. Test leaves, stems, roots and fruits separately.

FRUITS

- **Currants and Gooseberries** (*Ribes*), found in woods, scrub and waste places, are medium-sized usually bushy shrubs with toothed leaves resembling those of a maple, small, greenish-white to purple five-petal led flowers and red, purplish black or yellow berries. Ripe currants are edible raw; cook gooseberries.



- **Plums** (*Prunus*) exist in many varieties in scrub and woodland in virtually all temperate areas. Small shrubs or trees, similar to wild cherries, their fruits are larger, downy, blackish-purple, red or yellow; some are too tart to be edible raw.



ROOTS, LEAVES AND STEMS

- **Horseradishes** (*Armoracia*) grow to 50cm (20in) in damp waste places with large, long-stalked, wavy-edged oval leaves and clusters of tiny white flowers. Chop up the hot-tasting root and add to stews; the young leaves are edible raw or boiled.



- **Common Evening Primrose** (*Oenothera biennis*) is a tall plant of drier open areas, leafy, hairy, with spear-shaped, crinkly-margined leaves and sometimes reddish flower-stalks topped with large yellow, four-petal led flowers. The roots are edible boiled, changing the water to ease their pungency. Peel young leaves and treat likewise. The plants overwinter as rosettes.



- **Limes or Basswoods** (*Tilia*) are tall trees, up to 26m (85ft) high, which like damp woods, with large, heart-shaped, toothed leaves and clusters of scented yellow flowers. Young leaves and unopened leaf buds are edible raw; the flowers can be used in tea.



- **Hops** (*Humulus*), climbing plants of woody and scrubby places have long twisting stems, toothed leaves, deeply cut into three lobes, and green, cone-shaped female flowers. Peel, slice and boil the young shoots, brew up the flowers.



- **Thistles** (*Cirsium*) have spiny, often ridged stems, oblong or spear-shaped, prickly, deep-cut leaves and large brush-like heads of purplish flowers. Remove prickles and boil young leaves. Peel tender shoots and eat raw or boiled. Roots of younger, stem less plants can be cooked and the base of each flower head contains a nutritious 'nut' which can be eaten raw.



- **Saxifrages** (*Saxifraga*) grow to 90cm (3ft), usually much less, often liking open, rocky country, up into mountains. Most have rounded tapering or long-stalked leaves arcing from the base, often reddish stems and clusters of five-petaled flowers, usually white. Leaves edible raw or cooked.



- **Great Burnet** (*Sanquisorba officinalis*) reaches 60cm (2ft) in damper grassy places, with toothed, spade-shaped leaflets in opposite pairs and oblong heads of tiny, deep red flowers. Eat the tasty young leaves raw or boiled. Take an infusion for stomach complaints.



- **Redleg or Lady's Thumb** (*Polygonum persicaria*) reaches 60cm (2ft). With reddish mature stems, narrow, spear-shaped, usually dark-spotted leaves and spikes of tiny pink flowers. Often common on waste ground. Young leaves are edible raw or cooked like spinach.



- **Wild Rhubarb** (*Rheum palmatum*), found in open grassy places and margins from southern Europe east to China, resembles cultivated rhubarb, but its leaves are more ragged and dissected. The large flower stalks are edible boiled; other parts are harmful. Eat **ONLY** the stalks.



- **Bladder Campion** (*Silene vulgaris*), grows to 45cm (18in) in grassy places, is grey-green, with pointed oval, stalk less leaves, clusters of white flowers with a swollen balloon-like base. Boil the young leaves for **10** minutes.



- **Field Pennyress** (*Thlaspi arvense*) grows to 45cm (18in) in open grassy places, with broad, toothed, spear-shaped leaves clasping the stem, a head of tiny white flowers and distinctive, notched, coin-like seed pods. Leaves are edible raw or boiled.



- **Clovers** (*Trifolium*) abundant in grassy areas, recognized by their distinctive trefoil leaflets and dense rounded heads of small flowers, ranging from white through greenish-cream to shades of red. Leaves edible raw but better boiled.



- **Stork's Bill** (*Erodium cicutarium*) reaching 30cm (1ft), in open grassy places, is hairy, often pungent, with fern-like, twice-cut leaves and heads of tiny, five-petaled pinkish to white flowers whose fruits form a long, twisting 'bill'.



- **Burdocks** (*Arctium*), medium to large, bushy plants of open waste areas, have floppy oval leaves, often arching stems and many purplish thistle-like flower heads that develop into clinging burs. Eat leaves and peeled stalks raw or boiled. Boil pitch of peeled root. Change the water to remove bitterness.



- **Violet** (*Viola*) are small flowers found in many areas, including damp and wooded ones. Veined, crinkly, often heart-shaped leaves rise on long stalks with flowers in shades of blue-violet, yellow or white, made up of five unequal petals. Cook young leaves. Rich in vitamins A and C.



- **Corn Salad** or **Lamb's Lettuce** (*Valerian el la locusta*) grows to 10-20cm (4-8in) in bare rocky and grassy places. Well-branched, with oblong, stalk less leaves and clusters of tiny lilac-bluish flowers; its leaves are edible raw or cooked like spinach. A particularly useful plant to know because it appears from late winter onwards.



- **Ox-eye daisies** (*Leucanthemum*) often common in open areas, average 90cm (3ft) tall, with narrow dark green, lobed leaves, the lower ones rounded, and large white and yellow daisy-like flowers. Overwinters as a rosette. Eat young leaves (a lighter green) raw.



- **Cuckoo Flower** or **Lady's smock** (*Cardamine pratensis*) grows on damp ground to 50cm (20in) with many small leaflets in opposite pairs, roundish on the basal ones which form a rosette, and clusters of lilac or white, four-petaled flowers. Young leaves are tasty raw, older ones rather peppery.



- **Brooklime** (*Veronica*) grows in shallow water and swamps. Its creeping to upright stems carry pairs of thick, oval, toothed leaves, from the stalk bases of which spring 7-25cm (3-10in) spikes of four-petaled blue flowers with two prominent stamens. Eat young shoots before flowering and leaves after. Slightly bitter (especially the European form **V. beccabungaj** but eat like watercress.



In spring and summer young shoots are tender and easy to pick. Some can be eaten raw, but many are better gently cooked, especially Solomon's seal, Willowherb, Cat's-tail and bracken. Wash them in clean water, rub off any hairs and boil in a little water so that they cook mainly in the steam.

Leaves are very rich in vitamins and minerals. Together with young shoots they are the survivor's easiest source of food. Most will taste better cooked but do not overcook them or you will destroy the vitamins they contain: C, E, K, B and large amounts of A.

- **White Mustard** (*Synapsis alba*) grows to 60cm (2ft), with a hairy stem, crinkly, deeply lobed leaves and pale yellow flowers; in waste and grassy places in Eurasia. The young, peppery leaves and flowers are edible raw; the whole plant is tasty cooked. Pick young specimens.



- **Shepherd's Purse** (*Capsella bursa-pastoris*) may reach to 60cm (2ft), with a rosette of lobed, spear-shaped leaves and a spike of small white flowers; common in waste places. Boil the leaves, which taste like cabbage, and mix with other plants.



- **Primroses** (*Primula*) are found in grassy and shady places. Identified by their rosette of crinkly, tapering basal leaves and long-stalked, five-petaled flowers which range from pale to bright yellow and, in some forms, pink. All parts are edible but the young leaves are best part to eat. The primulas include the Cowslip (3a) and the Oxslip (3b).



- **Dandelions** (*Taraxacum*) occur in many forms almost everywhere. Look for the large, yellow to orange flower head or the rosette of deeply lobed leaves. Eat the young leaves raw; boil the older ones, changing the water to remove their bitter taste. Boil the roots or roast for coffee. Dandelion juice is rich in vitamins and minerals.



- **Chicory** (*Cichorium intybus*) is common in grassy and waste places. It grows 1.3m (4ft), with thick hairy, deeply basal leaves and leafy spikes of clear blue dandelion-like flowers. Prepare as Dandelion.



- **Wild Sorrel** (*Rumex acetosa*) is common in waste and grassy places, reaching 1m (3ft), with long, arrow-shaped leaves and spikes of tiny reddish and green flowers. Gather young plants. Their mineral-rich leaves are edible raw but cooking will reduce the sharp taste.



- **Buckwheat** (*Fagopyrum esculentum*) occurs in open grassy places in most temperate parts. Its 60cm (2ft) stems are usually red, with spear-shaped leaves and clusters of small pink or white flowers. Its seeds make good edible grain.



- **Curled Dock** (*Rumex crispus*) grows to over 1m (3ft), with long narrow, wavy-margined leaves and whorls of small greenish flowers; in grassy and waste places. Boil the tenders leaves from young plants, changing the water to remove the bitterness. Rubbing with dock leaves will soothe nettle stings. There are many other Docks temperate and tropical; prepare as here but use sparingly.



Some plants have edible stems, although many are too woody to eat. If they are soft, peel off the outer, stringy parts, slice and then boil. The inner pith of some stems is nutritious and sweet, elder, for example. In this case the stem must be split open and the pulp extracted.

Stems produce fewer nutrients for the survivor than the roots, shoots and leaves so put them at the bottom of the food choices and exploit their other uses. Fibrous stems, like those of stinging nettles, make good twine.

- **Good King Henry** (*Chenopodium bonus-henricus*) is spiky, to 60cm (2ft) tall, with dull green triangular leaves, sometimes reddening, and spikes of tiny greenish flowers; common on waste ground. Leaves and young shoots are edible raw or boiled as spinach; peel the shoots to remove the stringy parts.



- **Fat Hen or Lamb's Quarters** (*Chenopodium album*) is spiky, to 1m (3ft) high, with often reddish stems, dull green, mealy, oval to spear-shaped leaves and spikes of tiny greenish flowers; abundant on waste ground. Cook the tasty leaves like spinach.



- **Chickweed** (*Stellaria media*) is straggling, to 30cm (1ft) high, with a line of hairs on the main stem, pointed, oval leaves and tiny white, five-petaled flowers, common in waste places. Boil the delicious tender leaves.



- **Watercress** (*Roripa nasturtium aquaticum*) occurs, often abundantly, by running fresh water. It is creeping, semi-aquatic, with shiny leaves in opposite pairs and small, white, four-petaled flowers. Do NOT confuse with Water Hemlock. Leaves and stems are edible raw but boil if the water looks contaminated.



- **Rosebay Willowherb or Fireweed** (*Epilobium angustifolium*) is found in open woods, waste and rocky places. It is tall, to over 1.5m (5ft), with spear-shaped leaves in opposite pairs and a spike of brilliant pinkish flowers. Young leaves, flowers and stems are edible raw but better boiled. Mature stems have a sweetish inner pulp.



- **Sweet Cicely** (*Myrrhis odorata*) is sweet-smelling, grows to 1.5m (5ft), with slightly hairy and often purplish stems, feathery, fern-like leaves flecked with white and heads of tiny white flowers; in open woods, bare and rocky places in Europe. Do NOT confuse with Hemlock. Roots, stems and leaves taste of aniseed and can be boiled.



- **Dead-nettles** (*Lamium*) are smaller than Stinging Nettles, with heart-shaped leaves and no stinging hairs, and white (7) or pinkish-purple (7a) flowers. Prepare as Chickweed.



- **Stinging Nettles** (*Urtica*) are abundant for most of the year. Look for the toothed, narrow oval leaves covered in stinging hairs and the spikes of green flowers. Pick young growth or young plants 15-20cm (6-8in) high - BOIL for minimum six minutes to destroy the formic acid in the hairs. Leaves can be dried and stored; crushed stems provide fibres for rope.



- **Plantains** (*Plantago*) are common in most areas. Ribwort or English Plantain (*Plantago lanceolata*) has spear-shaped leaves and much shorter flower-spikes than the Greater Plantain; it likes dry ground. Prepare as Greater Plantain.



- **Buck's-horn Plantain** (*Plantago coronopus*) is small, star-shaped, with narrow, jagged leaves and shorter flower-spikes; in dry sandy and rocky places, often near the sea. Prepare as Greater Plantain.



- **Greater or Rat's-tail Plantain (P major)** has broad, oval leaves and distinctive upright spikes of tiny yellowish-green and brown flowers; in waste and grassy places. Prepare the rather bitter young leaves like spinach; use their expressed juice for wounds, or a decoction of the whole plant for chest complaints.



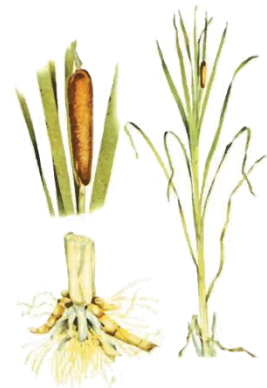
FLOWERS

The flowers of some plants are edible. These include limes or basswoods, roses, hops, elder, primrose and camomile. But they are only a seasonal supply and contain few nutrients compared with other parts of the plant. They are best used for teas and in medicinal infusions.

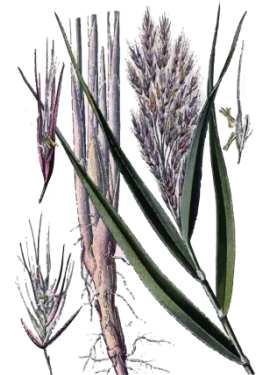
- **Galingale, Nutgrass or Chufa (Cyperus)** grows to 1.5m (5ft), with three-angled stems, long, strap-like leaves and a forking, clustered olive- brown flower head turning yellow with fruit; in and by fresh water almost everywhere. Peel and boil its nutty tubers, or dry and grind for flour or a coffee substitute.



- **Cat's-tail or Reedmace (Typha)** grows to 2-5m (6-15ft), with long, narrow, greyish leaves and a conspicuous, dark brown, sausage shaped flower head; in and by fresh water. The rootstock and stems are edible raw or boiled; cook leaves like spinach and young shoots like asparagus. The pollen can be mixed with water to make dough and baked or cooked on a griddle or the end of a stick.



- **Reeds (Phragmites)** grow to 4m (13ft), with greyish-green leaves and spreading, brownish-purple flower heads on tall canes, in and by fresh water almost everywhere. Cook the edible root; punctured canes exude an edible, sugar-rich gum.



- **Flowering Rush** (*Butomus umbellatus*) grows to 1.5m (5ft), with very long, strap-like, three-angled leaves arising from the roots and pink, three-petaled flowers; in and by fresh water in Eurasia. Peel and boil the edible rootstock.



- **Bracken** (*Pteridium aquilinum*) is common almost everywhere often in large clumps. Older fronds are harmful; eat ONLY the strong-tasting young shoots, or 'fiddlesticks', drawing off their woolly parts and boiling for half an hour. Eat sparingly. The roots are edible boiled or roasted.



- **Sweet Flag** (*Acorus calamus*) grows to 1.3m (4ft), with three-angled stems, wavy-margined, spear-shaped, strap-like leaves and a finger-like flower spike arising from the stem; in and by fresh water. Slice the pungent, aromatic rootstock and boil down to syrup.



Many familiar kitchen herbs grow wild. Their smells help to identify them. They can be dried and will keep well — but do not dry them in direct sunlight or they lose their essential oils.

- **Tansy** (*Tanacetum vulgare*) grows to 90cm (3ft), with toothed dark green, feathery leaflets and a cluster of button-like, bright yellow flowers, in waste and grassy places. It has a Strong-smelling, with a hot, bitter taste. Use sparingly as a potherb, poisonous in quantity, leaves and flowers make a wormifuge tea. Its smell keeps flies away.



- **Marjoram** (*Origanum vulgare*) is slightly downy and grows to 60cm (2ft), with small, oval, stalked leaves and clusters of small purplish-pink flowers; in warmer, dry, grassy places in Eurasia, introduced elsewhere. A sweet-tasting herb for stews; use an infusion for coughs and digestive complaints; chewed leaves relieve toothache.



- **Ramsons** (*Allium ursinum*) is one of many wild garlics. It has broad, light green leaves like a Lily-of-the-valley and a cluster of white star-like flowers at the top of the stem; in woody places in Eurasia, revealed by its strong garlicky smell. Use any part as a potherb.



- **Borage** (*Borago officinalis*) is round stemmed, hairy, to 30-60cm (1-2ft), with pointed oval leaves, blue star shaped flowers and a cucumber smell; in waste grassy places in Eurasia. All parts are edible raw or cooked, use an infusion for fevers. The stems produce salt when cooked.



- **Wild Angelicas** (*Angelica*) grow to 1.5m (5ft), with hollow stems, sometimes purplish, broad, toothed leaves in opposite pairs and heads of tiny greenish, white or pink flowers; in damp grassy and woody places. The aromatic leaves, stems and roots are edible boiled; use an infusion for colds or externally for stiffness. Do NOT confuse with Water Hemlock.



ROOTS AND TUBERS

Roots and tubers are invaluable survival food. They are full of nutrition, particularly starch. All roots should be thoroughly cooked if in any doubt as to their identity.

- **Bistorts** or **Knotweeds** (*Polygonum*) average 30-60cm (1-2ft) with narrow, triangular leaves and a slender spike of pink or white flowers; in grassy and woody places, into the far north. Soak roots to remove bitterness, then roast.



- **Spring Beauties** (*Montia*) average 15-30cm (6-12in) with a pair of oval, long-stalked leaves halfway up the stem and small white or pink flowers; in disturbed, especially sandy, places. Dig out tubers with a sharp stick, peel and boil. Young leaves are edible and supply vitamins A and C.



- **Silverweed** (*Potentilla anserina*) is small, creeping, with silver-white undersides to its segmented leaves and solitary, five-petaled yellow flowers; in damp places. The fleshy roots are edible raw but better cooked. Use an infusion of the leaves externally for hemorrhoids and internally for digestive complaints.



- **Sweet Vetch or Liquorice Root** (*Astragalus glycyphyllos*) is straggling, to 30-60cm (1-2ft), with small oval leaves in opposite pairs and greenish- cream flowers; in grassy, scrubby and sandy places. The root is edible raw, tasting of carrots when cooked.



- **Wild Parsnips** (*Pastinaca sativa*) are hairy, pungent, averaging 1m (3ft), with toothed leaflets and dense heads of tiny yellow flowers; in waste and grassy places. The roots are edible raw or cooked.



- **Comfrey** (*Symphytum officinale*) is coarse, hairy, growing to 1m (3 ft), with spear-shaped leaves tapering on to the stem and clusters of cream or mauve bell-shaped flowers; in ditches and damp places. The root is edible raw or cooked. Other parts are medicinal (see **Natural Medicine in Health/** Do NOT confuse with Foxglove.



- **Salsify or Oyster Plant** (*Tragopogon porrifolius*) averages 60-90cm (2-3ft), with long, grass-like leaves running down on to the stem and large, solitary, purple, dandelion like flowers; in dry waste places. The bulb-like root and young leaves are edible cooked.



- **Woolly Lousewort** (*Pedicularis lanata*) is hairy, low-spreading, with rose-pink flowers and a yellow root edible raw or cooked; widespread on the northern American tundra. CAUTION: some other louseworts are poisonous.

Roots are at their starchiest between autumn and spring. In spring some of the starch converts into sugar to sustain new growth. Some edible roots can be several centimeters thick and a meter or more in length. Tubers are swollen, bulb-like roots - a large one may sustain a survivor for a long time. Don't forget edible bulbs, like the onion - but beware, some bulbs, including the Wild Onion-like Death Camas of North America are poisonous.



Many roots are particularly tasty roasted. Parboil them until they are just becoming tender, then roast on hot stones in the embers of a fire. Some, including Galingale and Dandelion (see earlier illustrations), are fine substitutes for coffee when roasted and ground. Others, such as Wild Calla, can be ground and used as flour.

The root of Comfrey is particularly valuable. It is so rich in starch that after boiling it sets as hard as plaster of Paris and makes an ideal splinting agent for broken limbs.

- **Star of Bethlehem** or **Starflower** (*Ornithoglossum umbellatum*) averages 10-30cm (4-12in), with grass-like leaves with a white midrib arising from the roots and white, six-petalled flowers, each petal green-striped; in grassy areas. The root is harmful raw and MUST be cooked. Avoid other parts.



- **Wild Onions** (*Allium*) occur in most parts, easily detectable by their smell. Long, grass-like leaves arise from the base; a cluster of six-petalled pink, purplish or white flowers tops the stem. The edible bulb may be up to 25cm (Win) underground.



- **Lords and Ladies** or **Cuckoopint** (*Arum maculatum*) grows to 15-40cm (6-16in), with dark green, arrow-shaped, sometimes dark-spotted leaves and a purple finger-like flowering organ enclosed in a pale leaf-like hood from which red berries arise, in shady and woody places in Eurasia. The root is harmful raw and MUST be cooked. Do NOT eat any other part.



- **Hog-peanut** (*Amphicarpa bracteata*) occurs in moist places in North America: twining, vine-like, thin-stemmed, with light green oval leaves and lilac to white flowers. Extract each seed from its brown pod (underground) and boil.



- **Groundnut** (*Apios americana*) is small, vine-like, with oval, sharp-pointed light green leaflets and maroon to brownish flowers; in moist, usually woody places in North America. Peel the small tubers then roast or boil.



- **Jerusalem Artichoke** (*Helianthus tuberosus*) resembles a Sunflower, very tall, hairy, with large, rough, oval leaves and large, disc-like yellow flowers; wild in waste ground in North America, widely introduced elsewhere. The cooked tubers are delicious. Do not peel them or you lose food value.



AQUATIC AND WATERSIDE ROOTS

- **Wild Calla or Bog Arum** (*Calla palustris*) is small, with long-stalked, heart-shaped leaves and a greenish finger-like flowering organ enclosed in a leaf-like hood pale on the inside, from which red berries arise; always by water. The roots are harmful raw and MUST be cooked. AVOID OTHER PARTS.



- **Arrowheads** (*Sagittaria*) are aquatic, averaging 30-90cm (1-3ft), with large leaves varying from sharply arrow-shaped to spear-shaped and sometimes strap-like below the water, and flowers with three rounded petals; always by fresh water. Tubers are edible raw but much better cooked.



- **Water Chestnut** (*Trapa natans*) is aquatic, with diamond-shaped floating leaves and divided, feathery submerged ones, and small white flowers; widespread in fresh water in Eurasia. The grey, hard 2.5cm (lin), two-horned seeds are edible raw or roasted.



It is best to cook all roots before eating, as some are harmful raw - not just well known ones, like the tropical cassava and taro, but many temperate species. Most roots will need cooking to make them tender enough to eat. Scrub in clean water and boil until soft. Some potato-like roots have their vitamins and minerals near the surface of the skin and so should NOT be peeled. Roots will cook more rapidly if you cube them first. Use a sharpened stick to test them. If it goes in easily they are ready.

MIT

From summer on, fruits and nuts are one of the survivor's most important foods. Many will be familiar in their cultivated forms or from the traditional hedgerow harvest. Some are abundant, even on the tundra of the far north.

- **Barberry** (*Berberis vulgaris*), found in scrub and dry moorland grows to 3m (9ft), with oval leaves, yellow flowers and fierce thorns in groups of three on its stems. Its bright red, very acid berries are rich in vitamin C.



- **Wild Roses** (*Rosa*) are found in most temperate areas. They resemble straggly, un-showy garden roses with thorned stems and simple white or pink flowers. Their hips (seedcases) contain more vitamin C than any other fruit. Chew to extract the juices and obtain maximum vitamin content, or crush and boil in water until only syrup is left.



- **Brambles (Blackberries) and Wild Raspberries** (*Rubus*) occur in scrub, woods and on open ground; leaves toothed and flowers white or sometimes pinkish in blackberries. Look for straggly bushes with arching thorny stems and juicy segmented berries, which ripen from green through red to purplish black berries, borne in late summer. Raspberries, less straggly and with fewer prickles, ripen to a rich red earlier in the summer. All are edible raw. Bramble canes can be used to pull rabbits out of sleeper holes.



- **Dewberries** (*Rubus*) are like brambles but their berries are smaller and with fewer segments than the blackberry.



- **Wild Strawberries** (*Fragaria*) are small, scrambling plants of dry grassy places and woodland whose fruits resemble small cultivated strawberries. You may have to look under the leaves to find the sweet, delicious fruit. Some kinds occur high in mountains. The fruits are rich in Vitamin C and best eaten fresh.



- **Hawthorns** (*Crataegus*) are spiny shrubs or small trees found in scrub and waste places, with deeply lobed leaves, clusters of white or pink flowers and, in autumn, reddish fruits. Their flesh is creamy and edible raw. Young spring shoots are edible, too.



- **Crab Apples** (*Malus*) are short, rather spiny trees of scrubland and woods, with oval, toothed, often downy leaves, usually reddish-brown twigs and white, pink or red flowers. Fruit, often very bitter, looks like the cultivated apples. It can be sliced and dried for storage. Too many of the yellowish-green (sometimes red), pectin-rich apples will produce diarrhea and are best cooked with other fruits.



- **Wild Cherries** (*Prunus*) occur in woodland in most areas, growing to 24m (80ft) with small, pale green to reddish leaves, usually shiny reddish-brown bark, and white or pinkish flowers. The fruits are red or black depending on the kind; some kinds taste sour.



- **Blackthorn or Sloe** (*Prunus spinosa*) is a large bush, growing to 4m (13 ft) with dark brown twigs, long thorns, oval leaves and white flowers, in woodland and scrub over Eurasia. The small blue-black fruits are very acid and better cooked down to a jelly.



Fruits supply essential food values, particularly vitamins A, B2 and C. They are the staple diet of many animals and birds — so, where you find fruit, you will find animals too.

- **Bilberries, Cranberries, Cowberries and Huckleberries** (*Vaccinium* and *Gaylussacia*) are abundant on northern moors, bogs tundra, and sometimes in woods. Variable in size, but all are woody and shrubby with smallish oval leaves and small globe-shaped flowers varying from white to pink or greenish. The cranberry prefers marshy ground, the closely related, ground-hugging Cowberry (or Mountain Cranberry, **2**) grows on moors. The spherical berries may be black (Bilberry, **1**), dark blue (Huckleberry), mottled red (Cranberry) or red (Cowberry). They are edible fresh, cooked or dried for storage like raisins. The woody stems make useful fuel.



- **Chokeberries** (*Pyrus*) are North American shrubs growing up to 2.4m (8ft) but usually much less, with spear-shaped, finely toothed leaves and five-petalled, pinkish or white flowers; in wet or dry woody areas, or on swampy ground. The red, purplish or black spherical berries, which grow in clusters, are excellent raw, dried or jellied. Do not confuse with the poisonous Buckthorns (**Rhamnusj**).



- **European Elder** (*Sambucus nigra*) occurs in scrub and woods, growing to 7m (23ft) with spear-shaped toothed leaves and clusters of tiny whitish flowers. The bunches of small purplish-black berries are best cooked down to a syrup. There are similar edible elders in other parts, but avoid the smaller ones as their red berries may be toxic.



- **Juniper** (*Juniperus communis*) occurs in mountainous and northern areas, a woody shrub 5m (15ft) tall or a small prostrate bush with grey-green, needle-like leaves. Avoid young green berries; the ripe blue-black ones are best cooked with other food.



- **Rowans or Mountain Ashes** (*Sorbus*) are common in woody and rocky places, growing to 15m (50ft) with smooth greyish bark, small toothed leaflets, white flowers and clusters of small orange berries. These are edible but sharp-tasting raw and can be cooked down to a jelly.



- **Wild Mulberries** (*Morus*) average 6-20m (18-60ft), with oval leaves, sometimes deeply lobed, flowers on catkins, the red or black fruits look like large blackberries, 5-7cm (2-3in) long. They are edible raw. Found in woody areas in many temperate parts.



- **Grapes** (*Vitis*) are straggly, high-climbing, with large, heart-shaped coarsely toothed leaves, greenish flowers and bunches of amber to purplish grapes. It is very widespread in the warmer parts of the world. As well as the fruit, young leaves are excellent boiled.



PRESERVING FRUIT

Fresh fruits soon go off, but they can be kept by making them into jellies. Most kinds contain an ingredient called pectin, which reacts with the acid in the fruit to help it settle into a jelly after boiling.

TO MAKE JELLY

First boil the fruit and then simmer until mushy. Some fruits have less pectin than others. These can be supplemented by adding another fruit rich in pectin, such as Crab Apple. The boiling action kills off any bacteria that would turn the fruit. Allow to cool and keep in a clean, if possible airtight, container.

Some fruits can be dried for storage, although this will take a week to ten days. Lay them in a single layer on a sheet, not in direct sunlight, and protect them from any moisture — both rain and dew.

MTS

Nuts supply proteins and fat.

- **Pines** (*Pinus*) are the familiar cone-bearing trees with clusters of slim evergreen needles; in most temperate and northerly areas. Heat mature cones are releasing the seeds. They are tasty raw but delicious roasted. Roasted nuts can be ground for flour and can be stored. Young catkin-like cones are just about edible boiled. Needles and bark are also edible.



- **Walnuts** (*Juglans*) grow to 30m (90ft), with leaves composed of many toothed, narrow leaflets and furrowed bark. The blackish brown nuts are at first enclosed in a thick green husk. They grow in most temperate areas. One tree can yield up to 58kg (1401b) of nuts. Walnuts contain 18% protein, 60% fat and provide 6600 calories per kilo (3000 per pound)!



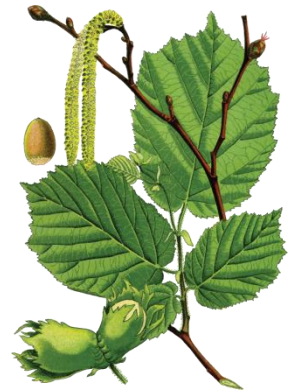
- **Butternut** (*Juglans cinerea*) is another North American relative, smaller, with more greyish bark and oblong, sticky fruit husks.



- **Pecan** (*Carya illinoensis*) reaches 36m (120ft), with dark ridged bark and many small leaflets in opposite pairs, in moist places in North America. The oval, thin-husked nuts are richer in fat than any other vegetable product.



- **Hazels** (*Corylus*) are tall shrubs of thickets and waste ground, with toothed, oval to heart-shaped leaves and brownish-yellow catkins. The highly nutritious nuts come in ovoid, leafy, bristly or hairy husks.



- **Sweet Chestnuts** (*Castanea*) has a range from 5-30m (15-90ft), spreading, with large, toothed hairless leaves and bearing catkins, in wooded areas. Nuts, in some forms 2-3 together, are borne in globe-shaped, thick prickly green husks. Smash open husks, peel nuts, boil and mash. Do not confuse with Horse Chestnut which has large palmate leaves, like the fingers on a hand, and poisonous nuts.



- **Beeches** (*Fagus*) are very tall and spreading, with smooth light-ish bark and thick-veined, wavy-margined sharp oval leaves; in broad-leaved woodland. Nuts small, triangular, 2-4 in each hairy husk depending on the species. They are Protein-rich; edible raw, roasted or crushed for oil.



- **Oaks** (*Quercus*) occur in great variety in wooded areas. Many have deeply lobed leaves but all bear unmistakable acorns. Shell them and boil several times, changing the water to ease their bitterness, or steep in cold water for 3-4 days. Alternatively, bury them with ash and charcoal, watering from time to time. Then roast; roasted acorns make good flour or coffee substitute.



- **Pistachios** (*Pistacia*) grow wild in warmer parts from the Mediterranean east to Afghanistan; introduced elsewhere. Trees are, up to **10m** (30ft), with many small oval leaflets and clusters of nuts with a green kernel and reddish skin. Eat raw or parch on fire embers.



- **Almonds** (*Prunus*) grow wild in warm, arid parts of Europe and Asia, widely introduced elsewhere. Resemble large peach trees, with sprays of blossom, small spear-shaped leaves and clusters of nuts in green leathery husks. Avoid bitter ones, which contain prussic acid.



Extract oil from rich nuts such as beech. Crack open, separate meat from shells. Boil gently in water, skimming off the oil as it rises to the surface or allow it to cool and separate. Store somewhere cool and dry, preferably in an airtight container. A yield of 270ml (3fl oz) of nutritious oils can come from 450g (11b) of nuts.