Edible Weeds and Foraging

around Perth, Australia.

Written By Charles Otway from



ReEngineering Farm Ecologies

Practiced and taught in the field by Steve Aldridge from



natural movement & nature connection



Booklet and Acknowledgments

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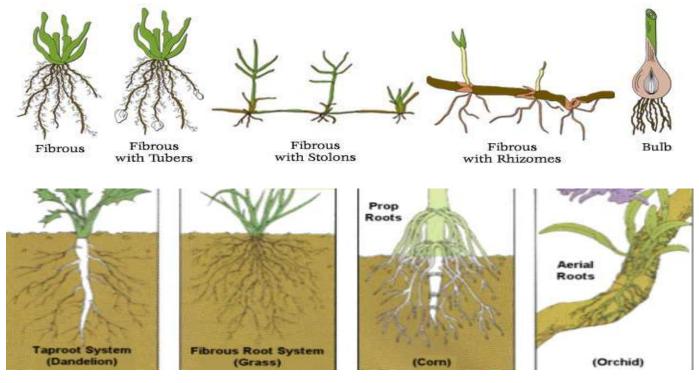
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Weed is a term humans have 'made up' for a plant that is growing where we (humans) would prefer it didn't grow.

Nature does not have weeds (it does not do weeding). Weeds are natures pioneers they are deliberately prolific, opportunistic, vigorous and short life cycled. To do them justice permies call weeds Pioneer plants (and dynamic accumulators). They are the first plant species to move into a damaged area of soil to 'fix' it for more complicated, sensitive plants and eventual succession to forests.

Shallow mat rooted weeds (annual grass, cape weed) are for tying down/stabilization cultivated soil and shading exposed soil. They stop the top soil blowing or washing away and create an opportunity for deep rooted weeds, legumes and other dynamic accumulators to bring up minerals and trace elements deficient in the top soil (initial germination and growing zone). Once a few generations of weeds have grown, seeded, died, composted and provided habitat for an accumulating little ecosystem, more advanced but sensitive plants can start to germinate (trees and shrubs).



Instead of fighting weeds while you garden take the time to learn to identify them and what they are trying to do. In the long run this observation and investigation is timesaving. It is also rewarding and empowering to learn their habits, function and which are edible and useful.

In the areas of Biodynamics and Permaculture a lot of time is taken and detail literature written to explain the purpose and uses of 'weeds' though they are more often called pioneer plants. This booklet is a 'pocket guide' to identifying Perth Edible Weeds, Garden plants and non destructive harvest bush foods, to learn more about the natural purpose and usefulness of weeds I advise further reading or courses in those feilds.

While this booklet is on edible weeds for Perth Western Australia, weeds are not native and invasive, so there is a good chance our weeds are your weeds, and so on.

I have done lots of research prior to putting new weeds in my mouth, truth is most weeds are edible, but if we dont know exactly what the plant is we should not be eating it and even if we know, trying it in moderation first. I advise taking edible weed walks because rather than just seeing a flat picture we can all see the real plant and taste it in the flesh together 'the power of the guide guinea pig', is not to be underestimated, people are rightly worried about eating food that may be poisonous.

So the purpose of this booklet is to get you looking at, thinking about and ultimately eating or medicinally



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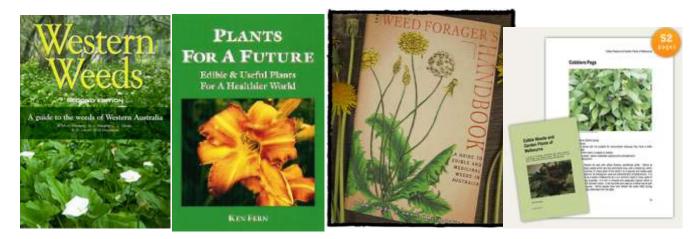
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using these readily available, mineral rich, plants. We should all be interested in nutrient dense food with low food miles that is 'farmed' sustainably, I assure you there is nothing better in this regard than weeds.

Feed the mind, before the mouth, always do your research and know exactly what weed your eating.

Identifying locally prevalent but not the 'top ten edible weeds' requires you to do some detective work. Get out in your garden find unknown plants and start trying to ID them with books, internet, and facebook groups. One book has greatly aided my identification of new edibles, a \$35 copy of, **Western Weeds – A Guide to weeds of WA** (<u>http://www.wswa.org.au/pps_publications.htm</u>). It is a naturalists weed guide so while having every 'weed' in WA at the time of publishing (2007), it doesn't tell you which are edible. Use it's pocket size, clear photographic identification and botanical names allow you to identify the plants you have. **Note this book is out of print until a new print run so try your library or second hand stores in the mean time.**

Once you know what the botanical name of the plant is or at least its family start searching its edibility and medicinal uses, it is both easy and truly astounding. The internet has much on edible weeds, not all of it is correct, so as per all research cross reference and make sure a few people are advising it as edible. Knowing where a weed originated can help us track its traditional uses, weeds from Australia have aboriginal knowledge and uses in the same way weeds from America have Iroquois Indian knowledge.



Two great resources once you have a weed name are Plants for a Future - It has a huge referenced database on all things edible and medicinal **and** those that are not worth it. - **http://www.pfaf.org** and **http://www.db.weedyconnection.com/** and Aus created database by Diego Bonetto. There is far more information on each plant than I can fit in this booklet take the time to look up each plants detailed edible and medicinal uses, you will be amazed !

There is plenty of great info and especially photos on the internet, search "edible weeds .au". A few books you could look for are; Self-Sufficiency and Survival Foods by Isabell Shipard, Doris Pozi's - Edible Weeds and Garden Plants of Melbourne, *The Weed Forager's Handbook: A Guide to Edible and Medicinal Weeds in Australia* by Adam Grubb and Annie Raser-Rowland, Wild Food A.B and J.W CRIB, and by the same authors Wild Medicine (good info on natives and weeds, very few pictures).

Wild Food Plants by Tim Low and Self-Sufficiency and Useful Bush Plants by Peter Bindon is a great indigenous food and medicine plant guide for Australia. Some weeds have been here a long time and have traditional uses i.e. catsear. The websites, http://www.eatthatweed.com/edible-weeds/ and http://edibleweeds.com.au/edible-weeds/facts/ are both excellent Australian sites with reliable information and blogs. There is an amazing article on 100 plus edible flowers.

Bushcare groups and Farmer Weed identification websites and galleries are excellent for plant identification.

On the Foraging front there is also a collaborative google Public Fruit Trees in Perth map here:



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https://maps.google.com/maps/ms?msid=206354188419166343422.00049b37e6cc15ff4446f&msa=0 This is a collaborative work, please respect others work and personal favourites and only take a little and be sure to add your own discoveries to the map to grow this into a fantastic community resource with everyone's help.

The trick with many leafy edible weeds is to eat the leaves before the plant starts to flower. If you have ever tried picking loose leaf lettuce after it starts to flower, in the hope of getting just a few more leaves before the plant is dead, you will know how bitter they can be. Eating weeds is best approached from a 'super food' perspective, most are highly mineralized and powerful plants, eating them alone may not be enjoyable, but, putting a handful of mixed weed greens in a salad greatly increased interest, nutrition and food security. Many of the tougher or strong flavored weeds/herbs can be used the traditional way of throwing plant material in a pot roast or drying to make a tea.

Currently we are fortunate that we can mix edible and medicinal weeds with normal vegetables to introduce ourselves gradually and learn the names and flavors along the way. The greeks used boiling/blanching and then olive oil frying with herbs (garlic/chilli/etc) to make everyday foraged greens more palatable. Take this gentle introduction opportunity now as you may find yourself relying solely on weeds later.

Eating weeds from public places in a high usage urban area does have some risks. Councils and many households use glyphosate and other chemicals to wage war on these free and hardy plants as they make path, parks and rosebeds untidy. Apply common sense, if a plant looks sick don't eat it, even if it hasn't been sprayed sick looking plants are not healthy food. Also bear in mind that plants like dandelions are hardy and perennial, they may have been sprayed multiple times so there could be higher levels of chemical buildup. Though this is not something to stop you foraging be sensible, ask questions of the council or owners, and if you want the plant but are concerned about its toxicity take it home and plant it in a pot, when it goes to seed or propagates you can grow those new toxin/risk free plants.

Another thing to note with consuming weeds is they are often higher in oxalic acids than most common vegetables. Warrigal greens, oxalis, docks, amaranth, fat hen, and purslane are all numerically high. While the body produces its own oxalic acid internally, as a high food intake, oxalic acid is considered an antinutrient, limiting the absorption of some nutrients, particularly calcium and iron. I dont tend to worry as weeds are high in all minerals so when oxalic acid comes with calcium and magnesium in the food it is not an issue. Oxalis and Docks, if eaten alone, should be consumed in limited amounts for this reason. If you need to consumer large quantities you can blanch for 2-3 minutes and discard water some of the mobile acid is removed in the water. Excessive oxalic acid can contribute to kidney stones, gout, and arthritis in some people. Normal vegetables also high in oxalates are chard, silverbeet, and spinach.

As we discussed before treat weeds as a super food, mix it with kale, root veggies, and other foods and you wont need the consider oxalic acid. 10% weeds in your diet would be a huge effort.

Many native bush tuckers and seaweeds etc might have restrictions on their harvesting, many are rare and essential parts of threaten ecosystems. Avoid harvesting native roots (lillys, yams, etc) and killing plants unless it a matter of your survival. No-one will miss introduced weeds and often thank you for removing them, so while a knowledge of indigenous edibles is essential we have concentrated on common garden escapes and agricultural weeds.

If you are not 100% sure what it is don't eat it. Good pictures, knowledgeable friends or local groups, and hands on foraging workshops are helpful. Join a Foraging and Edible Weed walk with Wild Movement Perth or other presenters, and/or send me a photo charles@terraperma.com.au are all good ways to get a safe ID. There are some great facebook groups for ID, Permaculture Perth is a good place to start.

If it looks sick don't eat it. If you are not 100% sure what it is don't eat it.

Try new weeds in moderation one at a time, we all have some odd allergies that may be unknown until we eat that new type of plant.



Edible Plants around Perth

To print a condensed version of the colour pictures of plants and names for laminating and field trips please see www.terraperma.com.au , this booklet is for reading.

English Dandelion – Taraxacum Officinale



The English dandelions are perennial plants meaning leaves will grow back if the taproot is left intact. When harvesting just pick individual leaves out of the centre of the crown. Dandelion leaves are generally eaten raw or boiled in salads, the flower petals, along with other ingredients, are used to make dandelion wine and the ground, roasted roots to make dandelion coffee. Transplant some to your garden beds as they grow more lush and palatable.

Dandelion leaves contain abundant vitamins and minerals, especially vitamins A, C and K, and are good sources of calcium, potassium, iron and manganese.

Catsear, Flat Weed and Hawkbits – Hypochaeris glabra /radicata and Leontodon taraxacoides



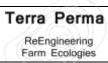
These are the not the famed English Dandelions, but are more widespread, and are still highly nutritious.

Bitterness of the leaves varies greatly (time of year, soil, sufferance), flowers are edible boiled and roots roasted. As with capeweed excessive consumption can cause calcium deficiencies with cattle so eat in limited amounts, a few leaves a day, the bitterness will ensure that anyway.

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Traditionally boiled/blanched, wrung out, fried in olive oil with garlic.

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False Hawkbit - Urospermum picroides.



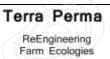
Another annual native of the Mediterranean, this member of the Daisy (Asteraceae) Family is often found in moist disturbed bushland. It a hairy stem and a distinctive hairy urn shaped flower head to distinguish it from Sow Thistle and bears bright yellow flowers during spring and early summer.

Traditionally eaten raw with olive oil or boiled/blanched, wrung out, fried in olive oil with garlic.

Sow Thistle - Sonchus - asper, oleraceus

A very common verge and garden weed growing well in poor, sandy, and dry soil, it produces yellow flowers, puffy seed-heads, and oozes white sap from broken stems (hence is often incorrectly called milk thistle). Leaves are best harvested before the plant bolts and goes to flower. Mild bitter flavor less so than dandelion or chicory, so great salad greens, if you are pushed for food, the whole plant can be blanched to reduce bitterness.





Guilford Grass - Romulea Rosea Australis



Sometimes called onion grass, the green plump 1 cm long fruit is a chewy sweet snack. I certainly ate it by choice as a child. When they exist in large numbers wait until winter rain then pull them out of the soft ground, the corms are also edible, they are similar to water chestnuts or could be dried and turned into flour. Leaves are also apparently edible but given the lawnmower can't cut them I shall pass at this point.

Sour Sob - Oxalis pes-caprae, and many others



The leaves have a tasty sour edge a bit like the sour in sweet and sour sauce, it can therefore make a great sour sauce.

While they are a tasty flavor to add to a salad and a good source of Vitamin C, they are also high in oxalic acid so unless blanching and draining water eat in moderation or occasionally. Other Oxalis family, wood sorrel etc are the same.



Dock or Sorrel - Garden Sorrel - Rumex *R. Acetosa - Sheep Sorrel - R. Acetosella - Curly Dock - R. Crispus*



Dock leaves have a sour flavour similar to kiwifruit or sour sauce, they may be puréed in soups and sauces or added to salads. The plant's sharp taste is due to oxalic acid, which is a toxin. But docks along with dandelions are the best plants for liver cleansing so take the good with the bad.

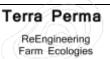
If you are eating a lot of any Rumex/Sorrel greens cook in water for 3-5 minutes and discard water dissolving/removing most oxalic acid. Oxalic acid stops calcium absorption and uses it up, creating kidney stones and other nasty's, so be aware of this issue.

Leaf Mustard *Brassica juncea*, Wild Rocket - *Diplotaxis* taxis, and Land Cress - *Barbarea verna* Brassica sp. Cardamine sp. (flickweed)



Many Brassicas are common garden edibles, but covered here as they are several hardy self seeding members of Brassica family whose leaves can add a hot peppery flavour to your dishes. As they self seed prolifically they are common in backyards. You can eat all parts or all Brassica sp, though roots may need cooking to remove flavour and then discarding (they are like bark)





BlackBerry Night Shade - Solanum nigrum



- The ripe berries (black and soft) are edible and very tasty, if you have ever had gooseberries they taste the same. Note: The green fruits will make you sick much like green plums but with added solanine. I eat these berries daily as the weed is prolific, it does not suffer from spider mites like its mainstream gooseberry counterparts, so its very handy producer in my yard. The berries are medicinally regarded as a tonic.

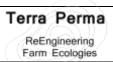
The leaves are eaten like spinach in some African cultures but unless desperate its best to avoid eating all Solanum family leaves unless cooked to neutralise solanine toxins.

Plantain - Plantago - Lanceolata and Major



Plantago Major is a great garden green, (but is less a weed than narrow Lanceolata) and while I grow and eat both occasionally I find it's a better chook and rabbit fodder. Lanceolata has narrow heavily ribbed leaves that are astringent, and while edible this plant should be consumed in a limited fashion in more of an herbal rather than food sense.





Chickweed – Stellaria Media



Chickweed common in winter/spring is a tasty nutty edible. Small low growing straggly and delicate weed up to 40cm high with soft lime green smooth ovate shaped leaves. The flowers are white and tiny and occur on downward pointing stalks.

It is similar to other inedible weeds, but the key distinguishing feature is a row of fine hairs on the stem that occur on one side and swap over to the other side between the leaf nodes.



Purslane (Pigweed) - Portulaca oleracea and PigFace - Carpobrotus (C. aequilaterus, C. edulis, C.

virescens)

A ground hugging succulent green/red herb very hardy and invasive when viewed as a weed, but charge your perspective this is the easiest growing, mild tasting plant you could grow. Purslane leaves are in Omega-3 fatty acid, and has stems high in vitamin C, also used as a cooling diuretic and blood cleanser. Use raw in salad, as a pot herb or try add handfuls of purslane sprigs to the juices in the roasting pan, once he had removed the roast for carving it is said the greens wilt and the sauce would acquire a sharper flavour and a thicken the sauce.





Clovers - Tifolium repens, pretense, glomeratum



This is a wild edible plant everyone knows. The clover leafs are delicious in salads or juices with a bean like flavour. Clovers are a valuable survival food, as they are high in protein, widespread, and abundant.

They are not easy to digest raw, but this can be easily fixed by juicing them. Dried flower heads and seed pods can also be ground up into a nutritious flour and mixed with other foods. Dried flower heads can also be steeped in hot water for a healthy, tasty tea.

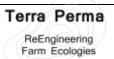
Nut Grass - Oenothera Spp



One of the most cursed word wide weeds, however the small hard nut-like tubers are edible and eaten raw or cooked. Don't bother with the rest of the plant parts. They often have a bitter taste, but have excellent nutritional value. It is uncommon here but the yellow nut grass is said to be the best tasting and was a food sources for native American peoples.



Edible Weeds and Foraging Around Perth.



Amaranth - wild - Amaranthus powellii



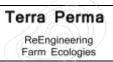
Several Amaranth species may be found as garden escapees. Green leaf amaranth as shown above will be most common. The leaves are best when young, they can be eaten raw, but taste better when steamed or sautéed. You might also find Loves Lies Bleeding has a spectacular red weeping seed head. All types are edible but leaf amaranths are best for leaves.

Wild Radish - Raphanus raphanistrum



Radish appears in spring en masse and is a forages dream, with an entirely edible offering. Young leaves - raw or cooked given a somewhat hot taste in salads or used as a potherb. Use young leaves in spring, older leaves soon become bitter. Seed - raw or cooked has a very pungent flavour, the seed can be ground into a powder and made into a paste when it is an excellent substitute for mustard. The sprouted seeds have a somewhat hot spicy flavour and are a tasty addition to salads. Flowers, white, yellow and sometimes pinkish, are eaten raw. The flower buds are used as a broccoli substitute, lightly steamed. Young crisp raw seedpods are great.





Evening Primrose - Oenothera biennis



Common evening primrose thrives in Perths sandy soil, and is often seen in flower by the seashore. The leaves have a peppery bite and can be eaten raw or cooked, though the best, most tender leaves are those on the leaf stalk. Some people may prefer them cooked since they're a bit coarse in texture when raw. The white taproot (often tinged pink at the top) can exceed a foot in length and is, if anything, slightly more assertive than most radishes. The buds are best cooked, but the flowers are best raw. It also has a myriad of medicinal uses, so go find it!

Prickly Lettuce – Lactuca Serriola -

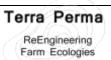


Called Wild Lettuce, or Prickly lettuce due to its impressive shark teeth spikes on leaf undersides and stems, this plant was one of those that the current lettuces where breed from.

They are common everywhere around Perth in similar areas to Sow Thistle especially roadsides, paved areas and urban zones.

The young leaves are an excellent vegetable, raw or cooked. Older leaves are coarse, spiky and very bitter.





Three Cornered Garlic - Allium triquetrum



Three-cornered leek, or onion weed, is a Mediterranean plant in the family Alliaceae, but can also be found anywhere wet enough and shaded. Many parts of the plant are edible and taste like garlic or onion. The plant spreads rapidly and is locally common/invasive, particularly in disturbed areas. The bulbs are obvious on the surface of the ground now as small white round single clove bulbs.

It is similar to poisonous bulb Snow Drops but is easily distinguished when you crush the leaves to experience the pungent garlic odour. Don't collect loose bulbs on the surface in summer unless you are sure of the location of the winter plants.

Mallow - Cheese Wheel Plant - Malva parviflora



Mallows are mostly a stewing green as the leaves are a little fuzzy and mucilaginous. Mallows are a good weed to start foraging as all types are edible and commonly found. Its a great starter is because there are no poisonous look-alikes, and it tastes good, without the mild bitterness typically found in many of the available wild greens.

The mucilaginous quality of the mallow leaves acts as a natural thickener for the lasagna.



Fat Hen – Lambs Quarters - Chenopodium album and Mexican Tea C. ambrosioides



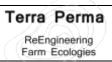
To most people a weed, to me a very useful hardy annual edible leafy garden plant. A large annual with edible leaves, summer shade, next seasons pea/bean poles, and seeds for the cooks if you let them go to seed. Easily control its weedyness by cutting out prior to seed set. Mexican Tea can be eaten raw despite the turpentine smell it tastes fine, it is said to be a cure for flatulence and is a common Mexican bean dish herb.

Cape Gooseberry – Physalis peruviana



Small lantern fruit pods with edible yellow/orange tangy fruit (eat ripe ones not green), this is not a weed, but is frequently self seeding up as the numerous tiny seed is carried by birds and deposited everywhere.

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Flax (Linseed) - Linum usitatissimum



Normally self seeding in areas when previously grown, you might find flax in your garden, and if not go to the whole food shops and plant some. Flax seed is edible and very good for you and the plant is easy to grow. It's also great wood oil.

Fennel - Foeniculum vulgare.



A garden escape, the weedy ones don't have a swollen bulb like the store ones, but grow easily and taste similar. It also produces lots of seed that is worth foraging for an aromatic anise flavored spice. Also a great predator bug feeder in the garden.



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Nasturtium - *Tropaeolum majus*



All parts of Nasturtiums are edible. The flower has most often been consumed, making for an especially ornamental salad ingredient; it has a slightly peppery taste reminiscent of watercress, and is also used in stir fry. The flowers contain about the same amount Vit C as parsley. The unripe seed pods can be harvested and dropped into spiced vinegar to produce a condiment and garnish, sometimes used in place of capers.

An essential garden plant it is also a winter living mulch, pest trap crop and beneficial insect attractant



Chicory – Cichorium intybus

Wild chicory leaves are edible but bitter. By cooking and discarding the water the bitterness is reduced, after which the chicory leaves may be sauteed with garlic, anchovies and other ingredients. The more cultivated varieties self seed also so it's a great plant to grow or forage.

Nettle and Pelatory- Urtica dioica (perennial roots), Urtica urens(annual) and Parietaria,



The annual nettle is most common germinting in winter and dying late spring. This plant has stingers, hairs of most nettle species contain formic acid, serotonin and histamine. Cooking will render the stings, and make a very healthy edible green, pot herb, tea or any other use.

Stings contain Formic acid (nutralise with a base - dock/braken/spit/bicarb), and face upwards, so pick moving hands upwards or just harvest with gloves, cook and enjoy.

Pelatory has many of the benifits of nettle but not the stings.

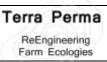
Sculpit (Strilotto)- Silene inflate (Sculpit), vulgaris (Bladder Campion)



Sculpit or Stridolo is a fast-growing, mild-mannered annual blending complex flavors of Chicory, Arugula, Tarragon and other favorite greens.

It's leaves are mild with a flavor all its own. Little known outside of Italy, Bladder Champion is often a garden escape and can be eaten the same when young.

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Poppy – Papaver hybridium, P. rhoeas, P. somniferum



Poppies have edible seeds, much tastier cooked. Somniferum while not allowed to be grown as it is the opium poppy is commonly found in gardens and is the commercial variety that provides the small black poppy seeds. Edible young leaves - raw or cooked

Stinking Roger – Tagetes Minuta



While not edible out of hand, the dryed leaves are made into a tea that has many beneficial properties. The plant is also a beneficial garden companion and mulch/compost filler.



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Madeira vine - Anredera cordifolia



Madeira vine is an edible weed similar to ceylon spinach but with a smaller edible leaves and underground edible rhizomes (aerial tubers are not edible). It is a very vigorous weedy climbing vine and provides copious amounts of food if utilized. Madeira vine bubils (the aerial seed-ish things) are used extensively in Chinese medicine as an anti inflammatory, anti ulcer and liver protectant



Warringal Greens (NZ Spinach)- Tetragonia tetragonioides

Warrigal greens or New Zealand spinach is a sprawling ground cover type plant which can as the name suggests be a spinach substitute, it needs to be blanched before eating to remove the oxalic acid which is toxic.



Pigface – Carpobrotus (C. aequilaterus, C. edulis, C. virescens)



More a coastal native than a weed, Pig face Leaves can be blanched and put in a light pickling solution. The flowers contain a sweet nectar which can be eaten. The fruits are good eating, among Australia's tastiest wild fruits. They turn purple when ripe around Christmas time, and the fleshy pulp can be squeezed out and eaten. The Bright lolly Pink flower is the aequilaterus, yellow flower is a natralised South African variety edulis, and the native virescens all are edible.

Brazillian Pepper Tree - Schinus terebinthifolius



Brazilian pepper is a sprawling shrub or small tree, reaching a height of 7–10 m, and often grouping in thickets. Although it is not a true pepper (Piper), its dried drupes are often sold as pink peppercorns, as are the fruits from the related species Schinus molle (Peruvian peppertree).

The seeds can be used as a spice, adding a pepper-like taste to food. They are usually sold in a dry state and have a bright pink color. They are less often sold pickled in brine, where they have a dull, almost green hue.



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Cudweeds - Gamochaeta and Gnaphalium



Plants are often small and dry so not often worth the effort from a food value but leaves can be used raw and cooked.

Traditionally boiled/blanched, wrung out, fried in olive oil with garlic.

Sandplain blue lupin - Lupinus cosentinii and Narrow Leafed blue lupin Lupinus angustifolius



Sandplain or WA Blue lupin (*Lupinus cosentinii*) retains the wild characters of bitter seed, hard-seededness and shattering pods. It is not used for grain production, but for summer grazing (although its seed is bitter, it belongs to a group of roughseeded lupins with lower seed alkaloid levels than other wild lupins) and soil improvement. Seed should be soaked and water discarded until bitterness is leached. Grain can be used as per sweet lupins.

Narrow Leafed blue lupin *Lupinus* angustifolius has been bred for sweet seed pasture green manure and stock feed (seed). Eat the seed cooked, if the seed is bitter this is due to the presence of toxic alkaloids and the seed should be thoroughly leached before being cooked. Used as a protein-rich vegetable or savoury dish in any of the ways that cooked beans are used, they can also be roasted or ground into a powder.



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Bullrush - Typha domingensis, orientalis (native), Typha latifolia (weed)



Note: aquatic plants are like sponges that soak up any chemicals, in urban drain areas they may be best avoided.

So commonly eaten wikapedia states " Typha has a wide variety of parts that are edible to humans. The rhizomes, underground lateral stems, are a nutritious and energy-rich food source. The content of protein is comparable to the one of maize or rice. These are starchy, but also fibrous, so the starch must be scraped or sucked from the tough fibers. Note if the plants grow in polluted water the rhizomes can accumulate lead or residues of pesticides and should not be eaten.

The outer portion of young plants can be peeled and the heart can be eaten raw or boiled and eaten like asparagus. The bases of the leaves can be eaten raw or cooked, in late spring when they are young and tender. In early summer the sheath can be removed from the developing green flower spike which can then be boiled and eaten like corn on the cob. In mid-summer, once the male flowers are mature, the pollen can be collected and used as a flour supplement or thickener.

Storksbill - Erodium- E. cicutarium, botrys, ccygnorum,



also known as Pinweed is an herbaceous annual, and in warm climates a biennial member of the Geranium Family. The entire plant is edible with a flavor similar to sharp parsley if picked young. Young leaves - raw or cooked as a potherb. Harvested in the spring before the plant flowers, they are tasty and nutritious. The leaves are added to salads, sandwiches, soups etc, they can be used in recipes that call for leaves of beet, plantain, sow thistle or amaranth. Young stems - raw. Root - chewed by children as a gum.



Fleabanes - Conyza - Canadian fleabane C. canadensis () and tall fleabane C. sumatrensis



Edible leaves in limited amounts (few in a salad) or more if cooked. More a medicinal PFAF states C. canadensis - valued most for its astringency, being used in the treatment of gastro-intestinal problems such as diarrhoea and dysentery. It is said to be a very effective treatment for bleeding haemorrhoids. The whole plant is antirheumatic, astringent, balsamic, diuretic, emmenagogue, styptic, tonic and vermifuge. Glyphosate resistant in Perth now so very common and hard to control.

Cobblers Pegs - Bidens pilosa



Not that common in Perth yet but a dominant species in east coast, Cobblers pegs is a source of food or medicine. The tender shoots and young leaves are used fresh or dried as a leaf vegetable, particularly in times of scarcity. The leaves are bitter to taste and not very palatable, but it is still widely eaten in Africa as a pot herb. It can be used in small amounts in cooked foods, with the bitterness being disguised by other foods. The plant's only real virtue is that it is so plentiful.

The plant is an accumulator of many minerals including cadmium. In fact, it can be specifically used to remove cadmium from contaminated soils. So It is a good idea not to harvest cobblers pegs from soils with a history of heavy phosphate fertilising or from industrial contaminated.





Goosegrass, Cleavers - Galium aparine



Another plant not that common in Perth hence not including in the colour slides but common species in east coast. It is however a very handy plant and worth acquiring, all parts of *Galium aparine* are edible and although the sharp hooks make it not very appealing raw, cooking softens them up so that they no longer cause cuts. The youngest shoots are the least bitter.

The seeds make a reasonable coffee substitute when dried for a week, then roasted in a hot oven for 5 minutes, ground and steeped in boiling water as you would for ground coffee beans. The leaves can also be dried and infused into a tea. Use 1 oz (28 grams) per pint (470mL) of boiling water. The number of medicinal uses attributed to the tea of this plant is almost as long as its list of common names and it is highly valued by many herbalists.

The roots of *Galium aparine* have been used to make a permanent red dye which has been used to colour cheeses. The stems of the plants can be roughly woven into a sieve for straining milk as practiced by the ancient Greeks and still in use today in parts of Sweden. Finally the crushed leaves also have the ability to curdle milk and can be used as a vegetable rennet in the making of soft cheeses.



Sweet Potato - Ipomea Batans

Most people know the tubers are a great root vegetable but you can also eat the leaves and if you ever see them flowers. Leaves have a coconut milk edge that compliments dishes normally using that.



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Wandering Jew/trad and Spiderwort - Commelina cyania and Tradescantia fluminensis



A very weedy cottage flower in wet overgrown conditions, the entire branch/leaf of these succulents is moist, crunchy and inoffensive, a little sea salt, olive oil and balsamic and it is pretty much the iceberg lettuce that everyone craves. *Commelina cyania* also called "the scurvy plant" because early settlers in Australia ate this vitamin C rich plant to alleviate scurvy.

Common Knotgrass - Persicaria or Polygonum sp



is a plant related to buckwheat and dock. It is also called birdweed, pigweed and lowgrass. Young leaves and plants - raw or cooked. Used as a potherb, they are very rich in zinc. Seed - raw or cooked. Rather small and fiddly to utilize, they can be used in all the ways that buckwheat (Fagopyrum esculentum) is used, also used as a tea substitute.

Modern herbalists use it to treat dysentery, excessive menstrual flow, lung disorders, bronchitis and jaundice, and gall and kidney stones. Not all of these uses are supported by scientific evidence. The plant is an astringent, coagulant, diuretic and expectorant.

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Skelton Weed - Chondrilla juncea



Young shoots are peeled, and eaten raw as a snack, basal leaves can be added to salads with dressing. Traditionally boiled/blanched, wrung out, fried in olive oil with garlic and chilli.

Broomerape - Orobanche sp.



Not often much of a feed but given it now a declarable weed we may as well eat out the infestations. commonly found parasite off Nasturtiums. Edible Uses: Root – roasted. Stem. Base of young stems roasted Medicinal Uses: The chewed plant has been used as a dressing on wounds. A poultice of the stems has been used in the treatment of ulcerated sores

Violets – Viola Sp.



All members of the Viola family are edible-I'm sure at some point you've seen the fancy fragile looking candied violets on a wedding cake-but there are a variety of other edible ways to use violets. Both the leaves and blooms are edible-they can be tossed in a salad, used to make violet tea, violet syrup, violet jelly, and even violet vinegar.The leaves are also medicinal and have been used for coughs, sore throats, and constipation. **Note: African Violet is not a true violet and not edible.**



Edible Weeds and Foraging Around Perth.



Doudlegee - Emex australis



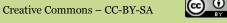
Beware the spiky seeds, one plant to remove/kill as you harvest. Brought in to Australia as a poor mans spinach you can eat the young leaves cooked. The leaves contain oxalates like standard spinach

Gotu Kola Centella asiatica and Penny Worts - Hydrocotyle sp



Note: aquatic plants are like sponges that soak up any chemicals, in urban drain areas they may be best avoided.

Gotu Kola is a common escapee aquatic areas edible herb. The leaves dont taste great but eat them. It is full of minerals and contains awesome phytonutrients known as triterpenoids. Triterpenoids promote collagen formation and have been shown to concentrate antioxidants into damaged tissue and increase the blood supply as well. It also contains Germanium essential for the regeneration of DNA and for maximising nutritional wellbeing in the body. Grow it and eat it in your garden if you can forage it !!

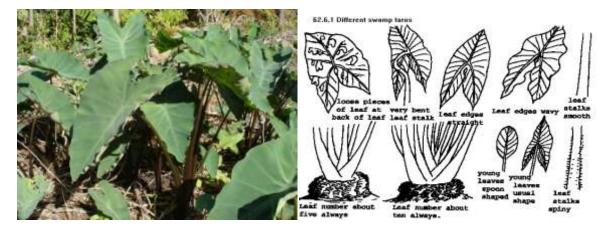


Canna - Canna indica var. edulis, syn Canna edulis



QLD arrowroot has edible tuber roots and useful leaves for cooking food wrapped in it. Besides boiling and roasting them, Andean indians also dry the starchy tubers and grind them into a powder which is used as flour. The powder has come to be known as "arrowroot"

Elephants Ear - Taro - Colocasia esculenta and Coco Yam - Xanthosoma sagittifolium



Taro is tricky, unless you know your varieties I would not harvest the tubers or leaves. There were reportedly 300 named varieties of taro under cultivation at one time in Hawaii. The most traditional food made from taro in Hawai`i is poi -- cooked, pounded taro root, often slightly fermented. **Not all taro is edible and it should not be eaten raw!** Ornamental varieties are apparently NOT edible. Colocasia esculenta and Xanthosoma sagittifolium are edible. Plant a tuber from the shop and grow it.

Most edible taro has irritating, needle-like crystals (oxalic acid), and must be cooked or cubed and soaked overnight to dissolve it (discard water). Undercooked taro root and taro leaves can cause extremely unpleasant itching in your mouth. Leaves also need to be cooked thoroughly. Remove the stems and fibrous veins before cooking. Try seasoning some fish and wrapping it in taro leaves, then tie leaves (or corn husks or parchment paper if the others are not available), then foil, and baking for an hour.



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Day Lily - Hemerocallis fulva,



Of the various *hemerocallis* friends and relatives thousands are edible, however **do not confuse with lilies, like the Easter lily, they are deadly**. Unlike true lilies, daylilies don't have bulbs, they have little tubers instead that look like miniature fingerling potatoes. Tubers taste like raw sweet potato. Or rather a sweet, raw potato, not a yam. Most sources say to sauté the unopened flower buds with a little butter or oil and call it a day. Sounded like a plan, especially since I wanted to really taste the plant, not any supplemental seasonings. So in they went, just lily buds, butter and salt. The flowers are OK. They are more for color than flavor, and they are said to thicken soups .

Fruit Salad Plant - Monsteria deliciosa



Fruits of plants of the Araceae (Arum family) often contain Raphides and Trichosclereids – needle-like structures of calcium oxalate so make sure you can identify this properly. **Only eat ripe fruit.** The fruit may be ripened by cutting it when the first scales begin to lift up and it begins to exude a pungent odor. It is wrapped in a paper bag and set aside until the scales begin popping off. The scales are then brushed off or fall away to reveal the edible flesh underneath. The flesh, which is similar to pineapple in texture, can be cut away from the core and eaten. It has a fruity taste similar to jackfruit and pineapple.



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Wisteria sinensis and other sp.



Flowers only. **The bark, seed and seedpod contains toxic a resin and a glycoside called wisterin**. They have caused poisoning in children of many countries.

The flowers have a sweet perfumed flavor and can be use flowers raw in salad, simmer for 5 minutes in soup or add to pancake batter or hot oatmeal.

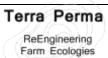
Rose - Rosa sp.



Specifically traditional single row petal roses like Rosa Rugosa as the best rose hips are the largest ones. There is a layer of hairs around the seeds just beneath the flesh of the fruit. These hairs can cause irritation to the mouth and digestive tract if ingested. Cut rose hip/fruit in half scoop out bitter seeds and eat raw or cook to produce a jelly once solids and seeds are strained off.

Petals are also edible but remove the base of each petal and use mainly as a garnish.





Fuchcia -



A common garden flower/bush, the fruit can be eaten out of hand. It has a subtle grape flavor with black pepper tossed in. If your fuchsia fruit is pleasant it can be used as most fruit. Blossoms are edible raw.

Grape - Vitis vinifera



Young grape leaves can be parboil in salt water or pickle them and stuff them with goodies and steam or pressure cook. Leaves can be steamed for 15-20 minutes and used as a cooked vegetable. Obviously the grapes are edible too when ripe.

Hybiscus - Hibiscus sp.



A common garden plant in Perth as a flower and recently screen (Cotton Wood), in the Mallow family, the young leaves, flowers can be eaten raw or cooked. They have a mild flavour and mucilaginous texture. The root is edible but very fibrousy and would often kill the plant.



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Flax Lilly - Dianella revoluta



There are 15 species of flax lilly in Australia. Six in NSW. All found in moist forests, woodlands and coastal dunes. Aboriginal people used the leaves for weaving dilly bags. All species are very similar in appearance and it was believed aboriginal people ate the berries but little is known about which ones are safe. It is generally believed that all species are edible in small quantities aside from D. tasmanica which is not edible and will cause a mild irritation if consumed. One way to spot this one is that it has noticeably larger fruits than other Dianella species.

Bracken Fern - Pteridium



Bracken Fern Fiddles - Young tender and new tips (fiddles) are compared to asparagus they should be cooked for 20-30 mins and the water discarded to remove the enzyme thiaminase. The roots (specifically horizontal thick roots) are edible but should be treated by soaking for 24hrs and then drying, then cooking and discard water again. **Consume in limited fashion**. Over consumption of fresh raw fiddle heads has been linked to stomach cancer. Roots are used to treat a variety of ailments. Adult leaves high tannin content can be used for tanning hides.



Edible Weeds and Foraging Around Perth.

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Coastal Weeds

Seaweed and Algae



While it is certainly a renewable resource I have not covered seaweed here please consult a local specialist or specialist text to determine the edible and harvestable details for you region. Harvesting seaweed even that on the beach is prohibited in many areas, it is part of a delicate beach ecosystem that over harvesting can destroy. Check with you local council often areas are swamped in weed so no one would mind. Most varieties of this sea vegetable are edible but may are not palatable, only a few blue green alagae types are toxic. Stick to the thick brown 'kelp' and you should find more than enough. Cooking time to make tender may be 10 minutes to an hour. Obviously they are high in salt and even after rinsing avoid other sources of salt. Seaweed is easily dried so you can make great use of this resource.

Dune Onion Weed - Trachyandra divaricata and ciliata



This perennial herb is a native of South Africa and is now widespread on the Swan Coastal Plain Trachyandra ciliata is used as a vegetable. The flowering stalks are harvested before the flowers open and can be steamed or boiled in much the same way as asparagus, or cooked in a stew. Trachyandra divaricata which is slightly more succulent looking than the other species can also be used medicinally – it has a soothing sap inside the stem and bulbous part of the root that can be used as a lotion for sores – much like many of the other bulbines, to which it is related.



Dune spinach – Tetragonia decumbens and implexicoma



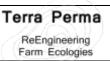
After rain, fresh new shoots and leaves can be eaten raw. The leaves are best cooked like spinach. A light boiling in fresh water will remove any excess salt. T. implexicoma also has salty, sweet fruit.

Peppermint-scented geranium - Pelargonium tomentosum,



The leaves and flowers have a strong mint scent and are used for flavouring cakes, puddings, pies, biscuits etc[183, 238]. A peppermint-flavoured tea is infused from the fresh leaves

All parts of the plant are astringent[4]. The fresh leaves are used externally as a poultice for bruises and sprains[238].



Ice Plant – Mesembryanthemum crystallinum



Its <u>leaves are edible</u>, as with some other members of the <u>Aizoaceae</u> family. Seeds can also be eaten. The crushed leaves can be used as a soap substitute and has some medicinal uses. It is rarely, if ever, grazed upon by domestic stock.



Native Bush Tucker

This foraging guide is not intended to cover Bush tucker for two main reasons.

There are many great guides and books on this topic already.

Native plants cannot be legally harvested without a permit and thus while worth knowing for survival are not as much of a solution to urban food and foraging as weeds.

Eating weeds is doing the world a favour, eating wild natives can be the last straw that breaks already struggling native ecosystems.

Websites:

http://www.sercul.org.au/our-projects/bushtucker/

https://tuckerbush.com.au/

www.petercoppin.com/factsheets/edible/nyoongar.pdf

http://www.petercoppin.com/factsheets/edible/ebusht.pdf

Books

Wild Food and Wild Medicine -

Noongar Bush Medicine - Vivienne Hansen and John Horsfall

Edible Weeds and Foraging Around Perth.

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VERY COMMON BUT NOT EDIBLE

These are here just to ID them as you will surely be asking:

Capeweed – Arctotheca calendula



Its best to avoid eating this unless desperate and even then cook it and use in moderation using the young leaves cooked as spinach substitute.

Spurges - Euphorbia sp



All the spurges have strong caustic white sap, some useful for burning skin lesions but not eating.



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VERY COMMON BUT NOT EDIBLE

Four Leaf Allseed - Polycarpon tetrphyllum



Fulmitory - Fumaria,



White and pink flowered Fulmitory (smoke weed) is common around Perth. Medicinal but not edible.

Funitory is a diuretic, laxative, diaphoretic and anti-spasmodic agent. The active constituents of funitory are the flavonoid glycosides, and isoquinolones alkaloid. The health benefits of funitory can be derived either as tea infusion, tincture, capsule or extract form. To make funitory tea, simply place 1 to 2 tablespoons of dried funitory herbs (use the above-ground flowering parts of the funitory) in a cup of boiling water. Then let the tea soak for about 10 to 15 minutes.



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VERY COMMON BUT NOT EDIBLE

Cape Lilac -



Bridal Creeper - Asparagus asparagoides,



Castor Oil - Very toxic seeds in pods that contain the deadly ricin poison dont eat any of this plant.







VERY COMMON BUT NOT EDIBLE

Paterson's Curse (Echium plantagineum).



Staggerweed - Stachys arvensis



Pimpernel - Anagallis arvensis, Lysimachia arvensis





Soil Indicator Weeds 1.1

Common Name	Botanical Name	Dry	Wet	Cultiv.	Uncultiv.	Low N	High N	Low K	High K	Low P	High P	Sand	Clay	Hard pan	Acid	Alkal.	Low Fert.	High Fert.	Salt
Agrimony	Artemisia maritima	×																	
Aster, sea																			×
Aster, swamp			×																×
Bellflower	Campanula sp.															×			
Bindweed, field	Convolvulus arvensis											×		×					
Bindweed, hedge	Convolvulus sepium		×																
Bracken, eastern	Pteridium aquifolium							×		×					×				
Buttercups	Ranunculus acris		×	×										×					
Buttercup, creeping	Ranunculus repens		×											×					
Celandine				×															
Chamomile, corn	Anthemis arvensss		×					×						×		×			
Chamomile, German	Chamomilla pecutita													×	×				
Chickweed	Stellaria media			x														x	
Chicory	Cichorium intybus			x									x					x	
Cinquefoil, silvery	Potentilla argentea	х													x				
Clovers	Trifolium sp.					x													
Clover, hop	Medicago Iupulina															х			
Clover, rabbit foot		x										x			x				
Clover, red	Trifolium protense									х									

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Common Name	Botanical Name	Dry	Wet	Cultiv.	Uncultiv.	Low N	High N	Low K	High K	Low P	High P	Sand	Clay	Hard pan	Acid	Alkal.	Low Fert.	High Fert.	Salt
Clover, white	Trifolium repens	x			x														
Cockle, white	Lychnis alba											x							
Coltsfoot			х										x		х				
Cornflower	Centaurea cyanus											x							
Corn marigold												x		x					
Cotton grasses	Eriophorum sp		x																
Daisy, English	Bellis perennis												х		x				
Daisy, ox eye	Chrysanthemum leucanthemum		х		х														
Dandelion	Taraxacum vulgare			x									х		x				
Docks	Rumex sp.		x												x				
Dock, broad leaved	Rumex obtusifosas		x										x						
Fat hen	Atriplex hastata																	х	
Foxtail, short awned	Hordeum jubatum		х																
Fumitory	Fumaria officinalis								x										
Goldenrods	Solidago sp.		х									х							
Grass, quack	Agropyron repens													x					
Groundsel	Senecio vulgaris			x														x	
Hawkweeds	Hieracium sp.														х				
Hellebore, false	Veratrum californicum		х																

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Common Name	Botanical Name	Dry	Wet	Cultiv.	Uncultiv.	Low N	High N	Low K	High K	P	High P	Sand	Clay	Hard pan	Acid	Alkal.	Low Fert.	High Fert.	Salt
Hemlock, poison	Conium maculatum		x																
Henbame, black	Hyscyamus niger																		
Henbit	Camium amplexicaule			x													x		
Horehound	Marrubium vulgare			х															
Horsenettle	Solanum carolinense			x			x					x							
Horsetails	Equisetum sp.		x										x		x				
Horsetail, field	Equisetum arvense		x									x							
Joe-pye weed			×																
Knapweeds	Centaurea nigra								×						×				
Knawel	Scleranthus annuus														×				
Knotweed, prostrate	Polygonum aviculare			×											×				
Lady's thumb	Polygonum periscaria		×												×				
Lamb's quarters	Chenopodium album			×														x	
Lettuce, prickly	Lactuca scariola			×															
Lupine	Lupinus sp.					×													
Mallow, musk	Malva moschata			×															
Mare's tail	Erigeron canadensis		×																
Mayweed	Anthemis cotula												x		×				
Meadow sweet	Astilbe sp.		×																

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Common Name	Botanical Name	Dry	Wet	Cultiv.	Uncultiv.	Low N	High N	Low K	High K	Low P	High P	Sand	Clay	Hard pan	Acid	Alkal.	Low Fert.	High Fert.	Salt
Medic, black	Medicago Iupulina					×													
Milkweed	Asclepius syriaca												×						
Mosses	Bryophyta sp.		×																
Mugwort	Artemesia vulgaris				x														
Mullein, common	Verbascum sp.				x										×		×		
Mustards	Brassica sp.													x	×				
Nettles, stinging	Urtica urens		×	×											×				
Pansy, wild	Viola sp.														×				
Parsnip, wild	Sium suave				×												x		
Peppergrass, field	Cardaria draba															x			
Pennycress	Thlaspi arvense													×		×			
Pigweed, prostrate	Amaranthus retroflexus	×																	
Pigweed, red root	Amaranthus retroflexus			×															
Pineapple weed	Matricaria matricarioides														×				
Pinks	Dianthus sp.					×													
Plantains	Plantago sp.		×	×									×		×				
Radish, wild	Bapranus raphanistrum				×										×		×		
Ragwort, tansy	Senecio jacobaea		×																
Rape	Brassica hapus					×													



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Common Name	Botanical Name	Dry	Wet	Cultiv.	Uncultiv.	Low N	High N	Low K	High K	Low P	High P	Sand	Clay	Hard pan	Acid	Alkal.	Low Fert.	High Fert.	Salt
Rape, bird														x					
Redshank	Polygonum periscaria		×																
Robin, ragged			×																
Rose family	Rosa sp.					×													
Rushes			×																
Salad burnet	Poterium sanguisorba															x			
Salep																x			
Scarlet Pimpernel	Anagallis arvensis															x			
Sea Plantain																			×
Sedges	Cyperaceae sp.		×																
Shepherd's purse	Capsella bursa- pastoris											x							×
Silver weed			×																
Smartweeds	Polyogonum scabrum		×																
Sorrel, garden	Rumex sp.		×												×				
Sorrel, sheep	Rurnex acetosella											×			×				
Sow thistle	Sonchus arvensis												×		×				
Speedwell	Veronica sp.	x		x															
Spruge, leafy	Euphorbia esula	x																	
Spurges	Euphorbia sp.			×															

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Around Perth.	

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Common Name	Botanical Name	Dry	Wet	Cultiv.	Uncultiv.	Low N	High N	Low K	High K	Low P	High P	Sand	Clay	Hard pan	Acid	Alkal.	Low Fert.	High Fert.	Salt
Spurges	Euphorbia sp.			×															
Spurry, corn	Spergula arvensis											×			×				
Stinkweed	Thlaspi arvense													×		x			
Strawberry, wild	Fragaria sp.														×				
Sundews															×				
Thistle, Canada	Cirsiurn arvense												x						
Thistle, nodding	Carduus nutans															x			
Thistle, Russian	Salsola pestifer	×																	×
Toadflax	Linaria vulgaris												×						
Vetches	Vicia sp.					×													
Water hemlock, spotted	Cicuta maculata		×																
Watercress	Nasturtium officinale		×																
Willow, black	Salix sp.		×																
Wormwood, biennial	Artemisia biennis				x				×								×		
Yarrow	Achilea millefolium							×											

