Natural Dyes-Sources and Colors they Produce

Source	*Latin Name*	Use this part	For this color	Additional information
Alder	*Alnus* spp	Bark Twigs Cones	Grays and blacks With iron: browns and yellows	Excellent source of black color; cool, hot and all in one dye vat; Modifier: iron: black
Alfalfa	*Medicago sativa*	Seeds	Yellow	
Alkanet	*Alkanna tinctoria*	Root	Soft purple browns and mauve grays	Available commercially. Can be planted in a dye garden; Alcohol, acetone or methylated spirits will extract the red dye; Use 75-100%; Hot dye bath only; produces an unpleasant odor; pH dependent; Red extracted with alcohol is used in cosmetics; modifier: Iron
Amaranth	*Amaranthus retroflexus*	Flowers	Pinks	
Annatto	*Bixa orellana*	Seeds	Orange	Available commercially; used to color scrambled eggs; soak seeds in vinegar for at least a week; Obtain a yellow apricot color with no mordant by adding a teaspoon of washing soda to the seeds, simmer and let cool before adding fibers. Soak in the cool solution until you have the desired color. Cool, Hot and all in one dye vat.
Apple (crab)	*Malus* spp	Bark	Alum: Red/yellow	Cool, Hot and all in one dye vats; can use eating apple prunings also. Leaves produce different colors during the season.
Artichoke	*Cynara cardunculus*	Plant parts	Yellows	
Ash (and mountain ash)	*Fraxinus* spp *Sorbus* spp	Leaves and bark	Yellows, beiges and grays	Hot or all in one dye vat; Modifier: Iron
Aster (Chinese)	*Callistephus chinensis*	Flower heads	Light greenish yellow	Annual; can be planted in the dyer's garden
Avocado	*Persea americana*	Skins	Fleshy pink; corals to rose-browns	Can be used without mordant; wash and clean any residue flesh inside the skin to prevent molding in the drying process
Bamboo	*Bambusa* spp	Prunings or fallen leaves	Golden yellows and creams	
Baptisia	*Baptisia australis*	Leaves and flowering stems or flowers alone	Alum: luminous green	*Baptisia tinctoria* (false indigo) is smaller and the flowers are not as blue as *B. australis*
Barberry	*Berberis vulgaris* *Berberis thunbergi*	Root, Leaves Stems	Greenish Bronze gold on wool Leaves: ash	Berberine, a yellow crystalline alkaloid is in the bark; leaves are full of tannin; can be planted in the dyers garden as a shrub; cool, hot and all in one dye vat
Barberry (Holygrape root)	*Mahonia* spp	Any part of the plant-bark gives	Alum: Yellow orange	Colors are not fast on cotton; very strong and permanent on animal fibers; hot and all in one dye

		best color		vat only; Modifier: copper will improve fastness; copper: light olive greens; over dyed in an indigo vat it will produce turquoise
Basil (Purple)	*Ocimum basilicaum* var *purpurascens*	Leaves	Unpredictable	Can be planted in a dyer's garden; shear off the tops and use promptly (every 3-5 weeks). Anthocyanins dissolve easily in water, but do not attach to the material well. pH dependent. Vinegar will give purples, mauves and browns; ammonia will give shades of greens.
Bay	*Laurus nobilis*	Leaves	Yellow	Use fresh or dried
Bayberry	*Myrica pensylvanica*	Leaves Bark Stems	Red	Can be planted in the dyer's garden as a shrub; hot and all in one dye vat only
Beans (black)	*Phaseolus vulgaris*	Beans	Teal blue/green	Soak overnight and use liquid to dye fabric
Bee Balm	*Monarda0 di00dyma*	Red flowers	Peach/rose	
Beech	*Fagus sylvatica*	Bark	Orangey pinks	
Beetroot	*Beta vulgaris*	Tops Roots	Tops Dark brown Yellow Roots-deep red	Can be planted in the vegetable dyers garden; Modifier: iron: dark brown
Birch (Silver or Yellow)	*Betula pendula* *Betula lutea*	Twigs Prunings Fallen bark Leaves	Beige to pinky shades; Shades of yellow from leaves	Not the paper birch bark that peels; need the inner bark to dye with; leaves picked in July: golds and browns when boiled for a short time; prolonged boiling produces deep oranges and tans; catkins give corals and orange-pinks; leaves can be used fresh or dry; best is the yellow birch; cool, hot and all in one dye vat
Birch (white)	*Betula* sp	Inner bark	Brown	
Blackberry	*Rubus fruticosus*	Fruit (crushed) Leaves Roots Twigs	Fruit: Strong purple Leaves and twigs shades of red; Shoots: alum-black	Weed gathering; known as bramble in UK; can be planted in the dyers garden as a shrub; leaves and roots are a good source of tannin; frozen berries work on mordanted material; but fresh produce brighter shades. Cool and hot and all in one dye vat; Modifiers: copper-black; tin-dark ocher
Blackthorn	*Prunus spinosa*	Shoots Soles (fruit)	Shoots: greeny yellow Soles: gray and purple	Cool, hot and all in one dye vat; gather from the wild
Bloodroot	*Sanguinaria canadensis*	Roots	Orange reddish orange	Can be planted in the dyers garden; perennial member of poppy family; roots are poisonous so be careful. If you ingest a little-vomiting; if you ingest a lot-fatal; chop and pound roots before using; soaking roots in alcohol may produce stronger colors; roots contain red resin
Borage	*Borago officinalis*	Flowers, roots	Flowers blue; roots	

			purple	
Blueberries	*Vaccinium corymbosum*	Berry	Purple/blue	
Bog myrtle, sweet gale	*Myrica gale*	Leaves Twigs	Mustard yellow-olive green	Traditional source of yellow dye in Scandinavia; rub the leaves in your fingers and smells like eucalyptus, a good way to identify the plant.
Bougainvillea	*Bougainvillea glabra*	Flower bracts	Beige to golden browns Alum: beige	Modifier: tin bright gold brown
Bracken	*Pteridium aquilinum*	Leaves (young) Stems Grasses	Yellow green	Hot and all in one dye vat only
Brazilwood (Sappanwood)	*Caesalpinia echinata* *C. brasiliensis* *Haematoxylon brasiletto*	Heartwood	Shades of red, pinks and purples; Alum: dark red to violet on wool, dark salmon red on silk.	Commercially available; pH dependent; vinegar: oranges; washing soda: blue red colors are improved if extracted with alcohol 20-100%; exhausting will produce paler pinks. Dry the chips after dyeing and they can be reused. Hot dye bath only. Modifier: copper-medium brown; copper and alcohol=orange on wool; coral with ammonia; plum purple on wool, dark lavender on silk; pinch of iron-dark purplish to gray brown; pinch of tin +OH dark orange on wool; pinch of tin +soda ash-dark mauve on wool; +logwood=red violet; + sandalwood=bronze red on wool +indigo=Purple on wool
Broom (Scotch)	*Cytisus scoparius*	Bark; all parts	Yellow/brown; minty greens and yellows	Weed gathering; can be planted in dyers garden as a shrub. Contains scoparin, which appears in pale yellow crystals that are soluble in hot water
Broom Dyers, Dyers Green wood, woadwaxen Greenweed Juniper plant	*Genista tinctoria*	Flowers, Leaves (young) Stems Shoots (fresh)	Yellow/yellow green Alum: light yellows with a brief simmer.	Can be planted in the dyer's garden as a shrub; does not transplant well; flower second year. Contains luteolin (as does weld). Use as an over dye on indigo, woad, etc. available commercially similar to weld; use 7-10%; hot or all in one dye vat. Modifier: Iron: Gold/olive green
Broom Sedge (Grass)	*Andropogon virginicus*	Leafy shoots in summer or early fall; can use the whole plant	Yellows to golds on alum mordanted wool, silk or cotton	Native grass in Eastern US; Use fresh or dry leaves for later use; simmer as little as 10-15 minutes gives light clear colors; simmering longer gives darker but drab colors used in over dyeing indigo
Buckthorn (Persian berries)	*Rhamnus infectoria*	Bark Berries	Bark: Beige or tan Berries: Yellows	Pick berries before they turn black; available commercially; Use 10-25% dyestuff. The Maiwa website says 2-6%: cool, hot and all in one dye vat. Unripe berries-bright yellows; black give deeper more mustard tones.

Buckwheat	*Fagopyrum esculentum*	Fermented stems	Blues	
Burdock	*Arctium lappa*	Flowers	Yellow/wheat	Commercially available
Butterfly weed	*Asclepias tuberosa*	Powdered root	Yellowish brown	Can be planted in the dyers garden
Butternut	*Juglans cinerea*	Seed husks	Orange	
Cabbage (red)	*Brassica oleracea*	Whole	Lavender to Blue/purple Slate greens	Can be planted in the vegetable dye garden; pH dependent; be sure to use a pH neutral soap when washing; washing soda will bring out the blue green, vinegar reddens and iron darkens the original shade after dyeing.
Camellia	*Camellia japonica*; *C. sasanqua*	Leaves	Pink magenta with lemon and salt	Can be planted in the dyer's garden;
Cane	*Arundinaria macrosperma*	Stalks and reeds	Yellows or green on wool	Grasses on riverbanks;
Carob	*Ceratonia siliqua*	Pod (boiled)	Gray on cotton	
Carrot	*Daucus carota*	Leaves (young) Stems Roots	Tops: Yellow green Roots: Orange	Can be planted in the vegetable dyers garden
Catalpa	*Catalpa speciosa*	Pods	Dark brown	
Catnip	*Nepeta cataria*	Plant parts	Yellows	
Cedar (red)	*Juniperus virginiana*	Root	Purple	
Celery	*Apium graveolens*	Leaves	Yellow/wheat	Can be planted in the vegetable dyers garden
Chameleon plant	*Houttuynia cordata*	Entire plant	Golden yellows	
Chamomile	*Matricaria chamomilla*	Flower heads	Shades of yellow	Available commercially
Chamomile (dyers) golden marguerite	*Anthemis nobilis* *A. tinctoria*	Leaves Flower heads	Flower heads: typical yellows Leaves give unusual shades of green; use the flowers and leaves separately	Can be planted in the dyers garden; seed-can be dried; flower heads can be picked and dried; leafy green parts have lots of dye also; active constituent of plant is a volatile pale blue oil that becomes yellow with time; do not use on cotton; for strong colors use 50-100%; Cool, hot and all in one dye vat
Cherry (tree)	*Prunus serotina*	Berries	Shades of pink	
Cherry (wild)	*Prunus avium*	Bark	Beige or tan	
Chestnut	*Castanea sativa*	Nuts	Warm browns	Available as powder commercially 5-10%
Chokecherries	*Prunus virginiana*	Berries	Shades of red	
Chrysanthemum	*Chrysanthemum coccineum, C. frutescens, C. maximum, C. morifolium*	Flowers	Yellow	Chartreuse with baking soda

Clover (red)	*Trifolium pratense*	Whole blossoms Leaves Stems	Alum: gold	Available commercially
Chokeberry	*Prunus virginiana*	leaves	Blue-purple-black-gray	
Cochineal	*Dactylopius coccus*	Dried insects	Reds and pinks	Available commercially available; not satisfactory on cotton; discovered by Spaniards in Mexico in the early 1500s and used as a face dye; coloring comes from carminic acid; pH dependent; use 3-8%; color comes from a fluid stored by the insect as a defense against predators and is extracted from the dried husks of the insect; sensitive to acids and minerals so for best results use rainwater or distilled water
Coffee	*Coffea arabica*	Grinds	Brown	Does not produce fast colors on cotton
Comfrey	*Symphytum officinale*	Leaves	Light to deep greens to browns	Can be planted in the dyer's garden; hot or all in one dye bath only; use the spent dye bath to fertilize plants
Coneflower, black eyed Susan	*Rudbeckia fulgida*	Flowers Leaves Stems	Leaves and stems shades of gold and dull orange flower heads give shades of olive greens and brownish green; keep separate	Can be planted in the dyer's garden or gathered in the wild; use fresh or freeze; hot or all in one dye vat only. Flowers alone will produce different shades. Pour boiling water over the material and soak over night. Simmer for 1-2 hours and steep in the dye liquid for another day or so. If processed too quickly you will get tans rather than olive green and golds. Modifiers: Iron and copper will deepen the shades.
Coral bells	*Heuchera* sp.	Leaves	Blue purple	
Coreopsis (Dyers)	*Calliopsis tinctoria*	Flowers Stems Leaves	Dye each part separately Tops: yellow, gold and brown If soak overnight more intense colors	Can be planted in the dyers garden; in sunflower family- use fresh, dry or freeze; add baking sod°a or ammonia and colors will be madder reds; hot or all in one dye vat; modifier: iron; pH dependent (alkaline)
Coreopsis (giant)	*Coreopsis gigantean*	Flower heads	Alum: Orange	Can be planted in the dyers garden; not suitable for cotton; bright and permanent; available commercially; hot or all in one dye vat
Coreopsis (tickseed)	*Coreopsis grandiflora, C. lanceolata, C. verticillata*	Flower heads Whole plant	Flower heads: Shades of yellow; whole plant will produce tans, gold, orange rust and brown	Use fresh; pH dependent: ammonia aftermath will intensify colors; works best on wool or silk; colors are pale on cotton; After first dye, take out material add washing soda and put back for a few minutes=red!; hot or all in one dye vat; native to Great Plains;
Cornflower	*Centaurea cyanus*	Petals	Alum : shades of blue/purple	Can be planted in the dyers garden
Cosmos (yellow)	*Cosmos sulphureus*	Flower heads	Shades of orange	Use fresh, dried or freeze; pH dependent ammonia or baking soda will shift color to red or brick red; hot or

				all in one dye vat; modifiers: Iron Copper: gray browns
Cotton flowers	*Gossypium* sp.	Flower heads	Brass, yellow, tan, yellow	
Cow parsley	*Anthriscus sylvestris*	Leaves (young) Stems	Yellow green	
Crocus	*Crocus sativus*	Petals stems	Petals blues, stamens orange	
Cutch (catechu)	*Acacia catechu* *Areca catechu* *Uncaria gambir* (vine)	Dried Heartwood Pods	Warm browns Cinnamon nutmeg and clove	Asiatic trees-most are found in Australia, available commercially; colors are fixed by oxidation so don't leave the material in the dye bath. Don't overheat the dye bath either. The vine is found in India; use leaves and twigs Use 20-50%; deeper colors can be obtained by adding caustic soda; pH dependent soda ash and hydrogen peroxide will change colors; can make successively paler colors using the exhaust dye bath. Cool, hot and all in one dye vat; difficult to exhaust; source of tannin for vegetable fibers; Modifier: Iron
Daffodil	*Narcissus*	Faded Flower heads (faded)	Alum: Yellow	Can be planted in the dyer's garden; Hot and all in one dye vat only. Can soak in water until enough for dye bath.
Dahlia	*Dahlia*	Flower heads	Flower heads: Yellows, golds and oranges and rusts; Leaves: olive green; Tuber: oranges or yellows	Can be planted in the dyers garden; not suitable for cotton; white flower heads don't dye. Cool, hot or all in one dye vat
Dandelion	*Taraxacum officinale*	Roots Flower heads	Root: Red or brown Flower heads: yellow	Can be gathered in the wild; available commercially; hot or all in one dye vat only; can be used as a food dye. Best used fresh.
Delphinium	*Larkspur*	Flowers	blue	
Dock (Sorrel, Yellow, curly, bitter or butter)	*Rumex obtusifolius, R. acetosa*	Roots Leaves Flower heads	Dock: Shades of brown; yellow Sorrel: Leaves-Pale yellows, greens Roots-reddish browns and pinks	Can be gathered in the wild; hot or all in one dye vat only; leaves and roots can be used fresh or dried. Iron modifier can be used.
Dogwood	*Cornus florida*	Fruit Bark Root	Fruit-green blue; Bark-red; Root-red to violet	
Elder	*Sambucus* sp *S. nigra*	Bark Leaves Berries Flower heads	Bark-black; leaves-green; berries-blue or purple Lavender Bright pinky purples-	Available commercially; can be planted in the dyers' garden as a shrub; hot or all in one dye vat only; dyes from berries fade quickly; using leaves colors change according to the season; do not freeze. pH dependent;

			which may fade to greens or browns Leaves: tans, browns, yellows and golds to grays.	vinegar reddens the color, washing soda will give greens; not very colorfast or washfast.; salt in the berry dye bath may produce more blues. Modifier: iron blackens the color
Elder (ground)	*Aegopodium podagraria*	Leaves	Bright yellows to dark greens	Can be gathered in the wild.
Elm	*Ulmus* sp	Bark Leaves	Bark: coral pink and rusty orange; leaves yellow and tan	Cool, hot or all in one dye vat; leaves can be used dried or fresh.
Eucalyptus	*Eucalyptus gunnii*	Bark	Alum: beige	Cool, hot or all in one dye vat; Modifiers: copper earthy tan; tin: coffee
Eucalyptus	*Eucalyptus* sp	Leaves (young) Stems	Yellow green; umber to gold Alum: yellow-orange	Colors vary according to season harvested; can be used dried or fresh; Modifiers: Silver dollar eucalyptus: tin copper-bright brown
Fennel (Bronze)	*Foeniculum vulgare*	Flower heads Leaves Whole shoots	Yellow/brown; Alum: light yellow; The weed; bright yellow and greens	Basically four kinds of fennel- can be gathered in the wild; perennial in many pars of the world Florence fennel (edible bulb) Can be used in the vegetable dyers garden; sweet fennel (seeds); will host the Swallow tail caterpillar; Use fresh; Modifiers: copper-orange yellow; tin-bright yellow;
Fern	*Pteridophyta* sp	Fronds	Yellow green	Ferns gathered up North worked well on silk and wool, very light on cotton
Fig	*Ficus carica*	Leaves	Bright yellow and green Verdant green with iron	The sap in the stems is toxic
Fir (Colorado)	*Abies concolor*	Bark	Tan shade	
Fir (grand)	*Abies grandis*	Bark	Pink	
Fruit (Cherry, Plum, Peach, Almond, Apricot)	*Prunus* sp	Leaves Bark Fruits (Some)	Yellows and greens except cherry bark-pink	Use prunings or fallen branches; leaves can be harvested from late spring to early fall; use fresh or dry; crush fruits and simmer in a small amount of water-use a low heat or cool dye bath for the fruits.
Fustic	*Maclura (Morus) tinctoria*, *Chlorophora tinctoria*	Logs with bark removed made into chips and then pulverized	Yellows and golds	Available commercially; native of tropical America AKA “smoke tree”; probably the best yellow dye found in nature. Use 50% dyestuff for all fibers If liquid use 4-6%; do not overheat; color will turn to a dull brown; cool or hot dye vat; can reuse the wood chips once they are dried
Geranium/cranesbill	*Geranium macrorrhizum*	Leaves, flowers	Leaves greens and golds; purple flowers purple/violet	
Golden rod (goldenrod)	*Solidago canadensis*	Flower heads Root	Shades of yellow/wheat; Leaf: tans and browns; Flower heads: bright	Available commercially; gather in the wild; can be planted in the dyer’s garden; longer simmer will produce dirtier colors-do not overheat; use flower

			yellows and golds Root: Yellow	heads fresh and crush (produces a clearer yellow); can be used as an overdue with indigo; not lightfast on cotton; use 7-10%; cool, hot or all in one dye vat only
Gorse	*Ulex europaeus*	Flower heads	Yellows and golds	Traditionally used in Scotland for tartans
Grapes	*Vitis* sp	Skins	Purple/blue	Oregon grapes, too
Grass (Little Blue stem)	*Andropogon scoparius* *Schizachyrium scoparium*	Leafy shoots in summer or early fall	Alum: Yellows to golds	Native grass in Great plains; use fresh or dry leaves for later use; simmer as little as 10-15 minutes gives light clear colors; simmering longer gives darker but drab colors
Grass (Pepper)	*Lepidium ruderale*	Whole plant tops when in full bloom	Alum: light to golden yellows	Looks like weeds; garden cress (*Lepidium sativum*) can be used also; colors are pure and clear with no tinge of green
Grass (Sour)	*Oxalis pes-caprae*	Flowers and leaves	Bright yellows	Gather in the wild; known as a weed "Bermuda buttercup"; can be used without mordant; sensitive to modifiers; pH dependent: baking soda will create a bright orange instead of yellow
Hawthorn	*Crataegus* sp	Flowers Berries Twigs Leaves	Yellow or beige	Hot or all in one dye vat; works best on animal fibers
Hazelnut	*Corylus avellana*	Leaves catkins	Leaves green; catkins khaki-brown	
Heather	*Calluna vulgaris*	Leaves Stems	Yellow/Wheat; Alum: greenish yellow	Can be planted in the dyer's garden as a shrub; gather heather just before flowering; can be used fresh or dried; hot or all in one dye vat
Henna	*Lawsonia inermis*	Leaves (dried) Stems	Brown toward red-orange	Commercially available; in the Loosestrife family; 50% on mordanted fibers will yield a rich brown; no need to make an extract; just add to dye bath; simmer until the color desired. NOT pH dependent. Hot and all in one dye vat only; red henna is the one used for dyeing. Modifier: Iron: browns
Hibiscus (Hardy) (Rose mallow)	*Hibiscus* sp	Flower heads	Dark red or purple; lilac, mauve, green, gray, brown, black; dried flowers-dark red or purple	Pick red or rosy red flowers every day or two. Pink give gold and tans and the white don't dye. Dry or refrigerate for a week; pH dependent vinegar and ammonia will change colors; hot and all in one dye vat only.
Hickory	*Carya tomentosa*	Leaves Nut hulls	Yellow	Need lots of leaves, use boiled and salted
Holly (grape)	*Malonia aquifolium*	Root (finely chopped)	Buff to yellow	Can be planted in the dyers garden as a shrub; contains berberine, a yellow alkaloid

Hollyhock	*Althaea (Alecea) rosea*	Petals; remove calyces	Brown; deep purple black; dark rose, red or black petals give most interesting dyes; light colored flower heads yellows golds and browns. Darker shades of lilac, purple, mauve, gray-green and brown.	Can be planted in the dyer's garden; cultivated since 1573; pick flowers every 2-3 days; store in refrigerator for a week or 2; pH dependent: vinegar and ammonia will shift colors; cool, hot, all in one dye baths; can be used fresh or dried; soak flowers overnight
Hops	*Humulus lupulus*	Leafy shoot in summer or fall with or without flower clusters	Tan, yellow, gold, olive, khaki and brown	Japanese hops (*Humulus japonicus*), an annual are used for dyeing in Japan; dyeing with dried strobiles (conelike seed heads) may give different results
Horseradish	*Armoracia rusticans*	Tops	Yellows/ brown	
Horsetail	*Equisetum arvense*	Shoots	Alum: pink-tan	Weed gathering; Modifiers: copper: tan; tin-camel tan
Huckleberry	*Gaylussacia brachycera*	Berries	Lavender	Gather in the wild.
Hydrangea	*Hydrangea macrophyla*	Flower heads	Soft yellow green	
Hyssop	*Hyssopus* sp	Plant parts	Greens	
Indigo	*Indigofera tinctoria; Indigofera suffruticosa*	Leaves (only in mid summer)	Blues-purples	Can be planted in the dyer's garden. *I. suffruticosa* is native to Mexico and the Caribbean. *I. tinctoria* is the best for dyeing but hard to grow. *Baptisia* (false indigo) does not dye well; needs hot weather; plants don't travel well so use seeds; dye stock solution can be frozen; cool and all in one dye vat only
Indigo (false)	*Baptisia australis*	Leaves	greens	
Indigo (Japanese) (Dyers knotweed)	*Polygonum tinctorium Fallopia japonica*	Leaves only	Deep blue or brassy tans	Harvest leaves from midsummer until frost; remove up to 1/3 of the leaves and pick every week or two. This is an annual; other *Polygonum* species will give yellow or tan dyes; use fresh and process as indigos ("balling process"); after dyeing blue, you can redye and get golds, khaki and browns; note: *F. japonica* gives brassy tans; *P. tinctorium* gives blues (similar to indigo); cool and hot dye vats only; young leaves give the most intense blue. Cover leaves in the pot, pour cold water on them and bring to a simmer for 1 hour. The sherry colored liquid can then be processed as you do for indigo.
Impatiens	*Impatiens*	Flowers	Reds, pinks, peach	

	wallerana			
Iris	*Iris douglasiana*	Roots	Shades of gray/black Black iris: alum: dark bluish purple	
Ivy	*Hedera helix*	Leaves Black berries	Shades of yellows/greens Beiges	Use chopped leaves; pH dependent; Acid-pinks; alkali yellows; hot or all in one dye vat
Jasmine	*Jasminum officinale*		Light yellows and pale greens	Can be planted in the dyer's garden
Juniper	*Juniperus communis*	Berries (crushed) Needles Twigs	Olives and browns	Available commercially. Natural Mordant; berries will not dye cotton; can use leafy shoots in dye bath. Gather dry branches; burn over a wide container, catch only the needle ashes and add 1 cup of ashes to 2 cups of boiling water; be careful; ashes and water are a type of lye and caustic. Hot and all in one dye vat only.
Kamala	*Mallotus philippensis*	Fruit of the evergreen tree	Oranges and yellows	Available commercially.
Kale	*Brassica oleracea*	Leaves	Teal green	
Kermes	From insects	Scale insects	Scarlet color (kermes)	Insects feed on kermes oak and red dyes are contained in the female eggs sac. Very rare.
Lac	*Laccifer lacca*	Insect	Crimson, burgundy rich purples	Use 5-20% the female Lac insects invade host trees and the insect secretes a resin that contains the red dye. When harvested, the resin in taken off the branches and is know as stick lac; available commercially; very sensitive to pH changes. pH dependent: addition of alkali will yield plum purples and the add; for bluer purples over dye lac with indigo. Modifier: Iron: blackened purples
Lady Bedstraw (yellow)	*Galium verum*	Root Flowers	Root: Brick, red and coral Flowers: yellow	Invasive; plants must be established at least 2 years before harvesting the roots not pH dependent but malt, yogurt and enzymes will change colors. Cool, hot or all in one dye vat
Larch	*Larix pinaceae*	Needles	Alum: green	
Larkspur	*Delphinium ajacis*	Juice of petals	Alum: glue	Can be planted in the dyer's garden
Laurel (Mountain)	*Kalmia latifolia*	Leaves	Yellow tan	Can be planted in the dyers garden as a shrub; cherry laurel has cyanide so should be avoided; contain tannic acid; does not dye cotton
Lavender	*Lavandula* sp	Flowers Leaves Stems	Flowers: Shades of pink; Alum: gray pink Leaves and stems: Alum: Yellow	Can be planted in the dyer's garden; flowers: shades of pink with a little mint and lemon juice (will activate alkaloids) to produce a bright pink; will retain fragrance; equal weight of dye material to fiber; Modifier: iron=greens to grays

Lichen	*Parmelia* sp	Lichen	Gold- Alum: orange yellow British soldiers: Pink, wine or brown; Yellow, rust and brown; occasionally olive green on wool	Fermented in two parts water to 1 part ammonia or urine-pinks and purples not strong on cottons; over dye with Indigo-blue green; dry first before storing; requires no mordant
Lilac	*Syringa* sp	Twigs	Yellow orange	
Lily (Day)	*Hemerocallis* sp	Old blooms	Shades of red/purple	Can be planted in the dyer's garden
Lily (water)	*Nymphaea alba*	Rhizomes Leaves	Rhizomes: Browns Leaves: Honey olive	Blue grays when rhizomes simmered with iron and acid for 2 days
Lily of valley	*Convallaria majalis*	Leaves	Lime	Can be planted in the dyer's garden as a perennial (from a tiny corm)
Lobelia	*Lobelia sp*	Flowers	blue	
Logwood	*Haematozylon campechianum*	Wood	Purple; unmordanted will be brown; Alum: lavender gray;	Available commercially. Dyes quickly when pot is fresh; exhausts fast; used to dye silk black, a color hard to get with natural dyes; tree is native in Mexico, Honduras, the West Indies, and South America; wood contains quercetin and tannin which when exposed to oxygen and an alkaline base will produce reds, blues and purples; liquid is rare but used at 2%; powder is 15-20%; likes hard water; can add chalk; do not over heat or color will lack clarity and luminosity; dry the chips for further use; wool tends to fade; hot dye vat only; Modifiers: copper: lavender gray or bluer hues, tin: grape violet; iron or copper will increase colorfastness; iron gives dark purples and black; copper will give bluer hues
Lupine	*Lupinus* sp	Flower heads	Alum: green; purple flowers: copper-celadon green	Modifier: tin: grass green
Madder	*Rubia tinctorium* *Rubia cordifolia* *Morinda citrifolia*	Plant tops	Shades of red; yellows and browns; iron darkens; tin brightens and yellow.	Can be planted in the dyer's garden (Zone 6); bloom second or third year; young parent roots are the best for dying but the plants should be at least 3 years old before harvesting. Roots lifted in fall; a portion retained for replanting. If you simmer too long you will lose color-it will be brown; native to Asia Minor; contains alizarin; which is insoluble in water but soluble in alkaline solutions; use alum acetate; hard water is the best; do not overheat (higher temps produce brown colors); pH dependent, temp and mordant will change the colors; use a concentrated

				dye bath; cool, hot and all in one dye bath; alkaline modifier-pinker; acidic will brighten and make yellower; modifiers; iron: brown shades; copper: salmon pink shades. Clear reds need alkaline water.
Madrone Pacific tree	*Arbutus menziessi*	Bark	Red	
Magnolia	*Magnolia grandiflora*	Dried leaves	Browns and tans	
Mahonia spp	*Mahonia* spp	Fruit Leaves	Fruit blues; leaves greens	
Maple	*Acer ginnala* *Acer palmatum*	Red Leaf Buds Dried leaves (Amur) Inner bark (Red maple) Leaves (Japanese)	Buds: Red brown when dried; Amur maple leaves: Black, blue, brown; Red maple : shades of blue/purples; Japanese maple leaves: deep pinks to grays;	Light green leaves: bright golds and reds; dark red leaves: crimson or bronze; Japanese leaves modifier: steel gray with iron mordant
Marigold	*Calendula officinalis* *Tagetes erecta* or *T. patula*	Flower heads Leaves-mature and somewhat withered	Shades of yellow; Leaves: soft and bright yellows and golds; Flower heads: yellow gold and orange;	Available commercially; can be planted in the dyers garden; annuals; can be used fresh, dried or frozen; 20-30%; hot or all in one dye vat; can be mixed with other yellow producing flowers; modifier: copper modifier will produce greeny yellows; iron-olive green and browns
Marigold (Marsh)	*Caltha palustris*	Petal juice	Yellow	Can be planted in the dyer's garden as a perennial bog or marsh plant
Marjoram	*Origanum majorana*	Plant tops	Yellow and gold to orange brown and gray	Can be planted in the dyer's garden; wild marjoram flowers will be red or purple if they are fermented; sweet marjoram is the one you want to dye with; can be used fresh or dried. Shear tops of plants every 4-6 weeks
Milkweed	*Asclepias* spp	Whole plant	greens	
Mimosa	*Mimosa* sp	Flowers	Yellow	
Mint	*Mentha* sp	Leaves	Tans to teal greens	Can be planted in the dyer's garden; Iron modifier will produce mint greens
Moosewood	*Acer pensylvanica*	Leaves	Green with cu and ammonia	
Mulberry	*Morus* sp	Berries Bark	Berries: royal purple Bark: cream on wool	
Mulga	*Acacia baileyana*	Flowers Seed pods	Flowers: yellow Seed pods: green; alum: gray brown;	Tropical evergreen; modifier: copper: cocoa brown, tin: beige
Mullein	*Verbascum* sp	Leaf Root	Pale yellow	Sun loving perennial; flannel plant, candlewick plant, velvet plant; Fuzzy hairs are itchy

		Blooms		
Munjeet	*Rubia cordifolia*	Whole plant (dried)	Reds	Native to Himalayas
Myrobalan	*Terminalia chebula*	Nuts	Light buttery yellow	Ground nuts; tree from Nepal, India, Sri Lanka, Burma, Thailand, Indochina and south China; mordant; good foundation for over dyeing 15-20% for a soft buttery color used 20-30%
Nasturtium	*Tropaeolum majus*	Flowers		Can be planted in the dyer's garden; can be printed to silk fabric using stone and block of wood to press flower's pigment into the cloth
Nettle	*Urtica dioica*	Leaves Stems Roots	Early summer: creams, gray blues, dark greens Late summer: yellow greens beige and brown Shards: beiges to yellow greens	Available commercially; can be planted in the dyer's garden; gathered in the wild; nettle stems have been spun into linen-like thread In Germany this cloth is known as *nessel tuch*; leaf: use 200% dye stuff; fresh produces more color (leaves and stalks); hot or all in one dye vat only; leaves gathered before they flower will produce lovely shades of yellowy green; later gathering will produce tans. Leaves can be dried. Copper and iron modifiers can be used.
Oak	*Quercus* sp	Acorns: Grind, Inner bark Seed cups Galls	Acorns: Light beiges to grays and Browns Inner bark-yellows Seed cups: Black Bark: Tan or oak color; buffs and browns Galls: Black	Commercially available; can be used as a mordant; gather in the wild; core of the fruit, tannins from the dark outer skin as well as the acorn cup; soaking and simmering parts separately or together will produce a rich mordant liquid. Cool, hot and all in one dye vat; Mediterranean oaks (*Q. coccifera* and *Q. ilex*) are known for hosting the kermes insect (source of red dye). Quecitron from *Q. velutina* is famous for fast and bright yellow; galls can be used as a mordant-high in tannic acid; galls are created from wasps when they lay eggs on oak branches; enhances colorfastness and color; sawdust of the inner bark will dye yellows 10-20%; leaves give brighter color if used fresh; modifiers: galls + Iron=black; excess heat will dull colors; acorns remove shells, soak or boil
Olives	*Olea europaea*	All including pits-ground and/or chopped Leaves	All: Pink salmon-no mordant Leaf: Light yellow no mordant Alum: bright yellow	Can use a tannin mordant; modifier: iron: teals from a dye bath using all parts; just leaves and Iron will produce a dark green
Onion (red)	*Allium cepa*	Skin	Medium green (lighter than a forest green)	Can be planted in the vegetable dye garden; skins can be added to other dye baths to add color i.e. to madder-yield more oranges; when over dyed in indigo will produce greens; can use iron or copper

				modifier
Onion (yellow)	*Allium cepa*	Dry outer skins	Yellows and golds Alum: dull yellow	Can be planted in the vegetable dye garden; use 30%-200% dyestuff; Over dye with indigo and you will get different greens; while you can use this without a mordant, mordants increase the range of colors and will be color fast; cool, hot and all in one dye baths: modifier: Copper: gold yellow; tin: bright gold yellow; alum + tin: orange
Orange (Osage, Bois d'arc or Hedge apple)	*Maclura pomifera*	Heartwood, inner bark, wood shavings or sawdust; yellow colored wood	Pale yellow	Commercially available; grows in SW US; used by Navaho Indians in rugs; can be used fresh; 15-25% add a few copper pennies to the dye bath to brighten the yellow. If using liquid, you only need 2-5%. Soak material overnight to get a stronger dye; can re-use for a lighter color. Cool or hot dye vat only.
Oxalis (yellow)	*Oxalis stricta*	Flower heads some stems	Alum: Fluorescent yellow on wool	
Pansy	*Viola* sp	Flowers		
Paprika	*Capsicum annum*	Ground spice	Light yellow to light orange	
Peach	*Prunus persica*	Leaves	Alum: Yellow green	The leaves contain cyanide so be careful; Cool, hot and all in one dye vat only
Pear	*Pyrus communis*	Bark Leaves	Bark: pinky shades in cool dye bath; pinky brown when simmered Leaves: yellows and olive greens	Cool, hot and all in one dye bath; leaves can be mixed with other fruit leaves for an interesting dye. Can use prunings; leaves best used fresh.
Pecan	*Carya illinoensis*	Hulls	Brown	
Plantain	*Musa* x *paradisiaca*	Plant parts	Green	
Plum	*Prunus americana*	Flower heads Leaves Root	Leaves: Alum: fern green; Root: Reddish, rusty brown	Gather in the wild; leaves contain cyanide so be careful; Modifiers: copper-gray-khaki; tin-khaki
Pokeweed	*Phytolacca americana*	Berries	Shades of red/purple	Uncooked roots, purple parts of stems and berries are poisonous; pH dependent: adding acid makes nice reds
Pomegranate	*Punica granatum*	Rind	Alum: anywhere from orange and khaki green; Yellow without mordant	Skins can be used as a mordant as it is high in tannins; age of fruit changes the color-the less ripe the fruit; the greener the yellow-used in painted medieval illuminated manuscripts; 5-8% for extract 15-20% for powder; cool, hot and all in one dye bath only; often mixed with turmeric to make the color brighter. Can be used fresh or dry. Modifiers: Iron-green;
Poplar	*Populus nigra*	Leaves	Yellow	Ornamental tree; in the US "Lomardy Poplar";

			Alum: muted green with Lombardy: Alum-gray green	Modifiers: tin-lime green, grays and blacks
Poppy (California)	*Eschscholtzia* sp	Flower heads Roots	Bright yellow	Can be planted in the dyer's garden; Modifiers: Golden flowers + tin=golds
Princess feather	*Amaranthus hypochondriacus*	Flower heads	Hopi red dye	Can be planted in the dyer's garden; purple amaranth
Privet	*Ligustrum vulgare*	Leaves Twigs Prunings	Yellow green	Can be planted in the dyer's garden as a shrub
Purple loosestrife	*Lythrum salicaria, L. virgatum*, etc.	Plant tops	Browns Alum: black	Fresh or dry for later use; cannot be sold in Minnesota
Quebracho tree	*Quebrachea lorentzii*	Heartwood	Coral, warm red brown, yellow or green	Depends on species; from tree native to jungles of South America; use 5-10%: pH dependent: use alkali or iron mordant to deepen colors; rich in tannins browner shades are obtained on alum-mordanted wool, while silk tends to pick up dusty pink shades of color
Queen Anne's Lace	*Daucus carota*	Plant tops Stalks Leaves	Yellow/wheat; dusky blue-grays, vibrant dark greens	Weed gathering; hot or all in one dye vat
Radish	*Raphanus raphanistrum*	Tops	Yellows and browns	
Raspberry	*Rubus* sp	Fruit	Red: Shades of pink Others: purple/blue	Commercially available as a leaf
Rhododendron	*Rhododendron* sp	Leaves	Yellows, oranges and shades of green	Can be planted in the dyer's garden as a shrub
Rhubarb	*Rheum* sp	Leaves Roots	Yellow to greenish bronze to copper Roots: Yellow	Contain oxalic acid-which can be used as a modifier after dyeing a mordanted material to make the dyed color greener; cool, hot and all in one dye vat; leaves are poisonous. Heat produces mustard color; simmer produces a yellow. Roots are not poisonous and can be used fresh or dry. If drying cut into smallish pieces while fresh. Alkaline modifier will turn the dye liquid bight red and fibers will be a coral red shade. Iron modifier will create olive greens.
Rose	*Rosa* sp	Hips Flowers	Hips: shades of red Flowers: shades of pink	Can be planted in the dyer's garden; available commercially
Rosemary	*Rosmarinus officinalis*	Leaves Stems	Greens to Browns Yellows	Can be planted in the dyer's garden
Rue (Syrian)	*Peganum harmala*	Seeds	Yellow/wheat	Glows in black light; Mediterranean native
Rue (meadow)	*Thalictrum* sp	Whole plant	Yellow	
Safflower	*Carthamus*	Flower heads	Flower heads soaked in	Can be planted in the dyer's garden. Flowers should

	tinctorius		alcohol: Red Untreated flower heads: yellow Cotton or silk: pinks Boiled flower heads: yellows and gold	be picked at sundown because the dye is unstable and the dyes are produced 10 hours after flowering. Fresh produce better results than dried, but the flowerettes (not the whole flower head) should be dried quickly and kept in the dark-need lots; annual member of the thistle family; not as color fast as fustic or weld; note: to get red, you have to extract the yellow dye. Do not use on wool. Magical-first color from petals is yellow and then reds are obtained by changing the pH to alkaline and then back to slightly acidic. Cool, hot or all in one dye vat. Over heating (more than 45 minutes) will produce mustard colors.
Saffron	*Crocus sativus*	Stigma	Stigma: Yellow Petals: Blue/green	Can be grown in the dyer's garden (corms); stigmas are laid on perforated trays above charcoal fires, a process known as "roasting".
Sage (Common)	*Salvia officinalis*	Leaves	Yellow or yellowish-green Alum: yellow ocher Copper: yellow ocher Tin: Lemon yellow	Can be grown in the dyer's garden; chief constituent is a volatile oil
Sanderswood (Saunderswood, redwood, red sandalwood)	*Pterocarpus santalinus*	Heartwood chips or powder	Red	Available commercially; insoluble in water-slightly fluorescent; extract with alcohol or alkalis; leave in dye bath for stronger colors; hot dye bath only
Sassafras	*Sassafras albidum* or *S. variifolium*	Leaves Bark Root	Leaves: Orange Bark or root: orange brown	
Sawwort	*Serratula tinctoria*	Whole plant except roots	Yellows, browns, oranges	Use fresh or dried
Scabiosa	*Scabiosa columbaria*	Flower heads	Bright yellows with a greenish tinge	Can be planted in the dyer's garden. May produce blues if treated like woad
Smartweed	*Polygonum hydropiper*	Leaves Stems	Yellow	
Smoke tree	*Cotinus coggygria*	Roots Stem	Yellow almost orange	Can be planted in the dyer's garden; wood from this tree is akin to fustic
Spinach	*Spinacia oleracea*	Leaves	Greens	Can be planted in the dyer's vegetable garden
St. John's Wort	*Hypericum perforatum*	Whole plant Flowers Leaves	Whole plant soaked in alcohol: Red Flowers and leaves: Gold yellow Flower tops in the fall: green and brown	Can be planted in the dyer's garden; use only the newly opened flowers and use them fresh; One book says they can be dried. Different colors will be produced…greens, mauve red, overnight gray, tan, etc.; black glands of the inflorescence contain a red dye; not the translucent dots seen on the leaves. It is a spreader; poison to live stock. Red is hard to

				achieve-soak whole plant in alcohol; hot and all in one dye vats only; different colors from the same vat
Stag Horn Moss	*Lycopodium clavatum*	Moss	Alum: yellow	
Strawberries	*Fragaria* x *ananassa*	Berries	Shades of pink	
Sumac (stag horn)	*Rhus glabra*	Leaves Berries Bark	Berries: red Bark: drab browns and slate Leaves: Orange Fruit Red leaves-shades of gray/black Inner pith of bark: bright yellow Bark: drab browns and slate	Can be planted in the dyer's garden; rich in tannin and can be used as a mordant; when dried, contains up to 35% tannin per weight-good source of tannin; brightens and extends colorfastness for most vegetable based fibers; cool, hot and all in one dye vat; note: black or white berries are poisonous. Do not overheat
Sunflower	*Helianthus annuus*	Flowers Seed oil	Citron yellow; greenish gold, beige and tan	Can be planted in the dyer's garden; best is Hopi Black Dye which gives dark blues, blacks and purples from seed; ineffective on cotton; pH dependent will become more yellow if treated with an alkaline solution; can use dried flowers
Tansy	*Tanacetum vulgare*	Flower heads	Shades of yellows, golds and greens	Can be planted in the dyer's garden; can be used as a food dye; use fresh or dry for later use; pH dependent: ammonia will change the colors; separating leaves from flowers and using two baths may produce different colors; alum mordanted wool modified with iron makes olive greens; Ok to dry for later use. Hot or all in one dye vat only; iron modifiers may be used.
Tea	*Camellia* (*Thea*) *sinensis*	Leaves	Light brown	Not colorfast on cotton
Tea (New Jersey)	*Ceanothus americanus*	Roots Leaves	Yellow	Can be planted in the dyer's garden. Native prairie plant (deer will eat it, however.)Nitrogen fixing
Tormentil	*Potentilla erecta*	Roots	Apricots and browns	Gather in the wild (in England and Finland)
Tulip Tree	*Liriodendron tulipifera*	Leaves	Gold	Not satisfactory on cotton
Turmeric	*Curcuma longa*	Roots or Spice	Spice: bright Yellow Roots: shades of yellow-stronger than spice Lye Dip: orange or red	Fugitive dye-as washed and exposed to light it will change from bright to muted shades; on silk: red brown with alkalis and neutralize with lemon juice to correct the red tones; Can be used without a mordant; cool, hot or all in one dye vat; same family as ginger; used with logwood to dye ostrich feathers; with cochineal scarlet; used to color foods.

Wallflower	*Cheiranthus cheiri*	Leaves Petals (dried)	Greens, yellows and golds	Picking fresh petals will stain hands blue black; colors depend on mordant
Walnut	*Juglans nigra* *Juglans regia*	Leaves Hulls	Leaves: Alum-tobacco gold Hulls-Deep brown; Alum-light brown;	Gather in the wild; do not need a mordant; crushed hulls, collected green, can be used fresh or green; hulls can be purchased commercially; color seems darken when the green hulls are covered with water and stored away from light. Wear gloves; butternut is in this family; if using dried material, mordanted wool will give a better color. Cool, Hot and all in one dye vat; Modifiers: leaves; copper: cinnamon brown; tin: gold-brown; hulls copper-dull brown; tin-bright brown
Weld (Dyers rocket)	*Reseda luteola*	Leaves (young) Stems	Yellow green/bright yellow pale and dark yellows, golds; rosettes will give prettier, clearer colors Alum: strong acid yellows	Can be planted in the dyer's garden. Biennial; does not transplant well, suggest sowing in place in autumn; some say start new weld plants in spring but since it doesn't transplant well. Zone 3; Use fresh or dry; best results were obtained using small plants before they start to branch. 7-10%; can make lighter colors with successive exhaust baths; good for over-dying with indigo to give a bright leaf green; cool, hot and all in one dye vat; Yellows best in cool bath; heat produces mustard colors.
Willow (goat)	*Salix caprea*	Leaves Bark	Yellow/wheat	Native to Europe; cool, hot or all in one dye vat; iron can be used as a modifier
Woad	*Isatis tinctoria*	Fresh leaves from first growth	Blue	Can be planted in the dyer's garden; noxious weed in some western states; lots of species but this is the dye one; best if seed sown in garden; cut back when in seed otherwise it will take over. Use fresh. After dyeing with blue, you can use the same leaves and get shades of pink or pinkish beige. Cannot dry so use "balling" technique; 400% dry leaves; must be treated similar to indigo; cool, hot and all in one dye vat
Yarrow	*Achillea* sp	Leaves Flowers	Yellow, golds and green shades	Can be planted in the dyer's garden; hot dye bath; used fresh or dried;
Yew (Japanese)	*Taxus baccata*	Heartwood Shavings Leaves	Browns; oranges; tan Shavings: yellows Leaves: tan	Available commercially
Zinnia	*Zinnia elegans*	Flower heads-mixed colors	Beiges, tans and browns	Can be planted in the dyers garden; pick flowers before they fade and use fresh; darker colors yield more dye than others but no need to separate colors