

GARDENING IN SHADY SPACES

Learn how to maximize the efficiency of your outdoor living-space by utilizing a once-overlooked area in beautiful, creative, ecological, and multifunctional ways!



SHADE & ITS INFLUENCE ON PLANTS

Types of Shade:

Dappled Shade: When shafts of sunlight penetrate the standing tree canopy, or those gaps between trees that allow light penetration.

Part Shade: A space with a partial or complete east or west aspect formed by a wall, building, tree or other shrub, or some other object such as a rock or fence. The sun reaches this spot for half of the day.

Full Shade: Less than 3 hours of direct sunlight each day, with filtered sunlight during the rest of the day. Occurs either: I. In summer only when foliage of overhanging deciduous trees and shrubs comes into leaf but when in the winter and spring, sun reaches through or II. During the whole year, when the dense evergreen branches of a tree or the presence of a building, wall, structure, etc. causes the sun to never reach the space and results in extended or year-long dry periods.

MAINTENANCE

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Full sunlight is not necessary to a large number of plants that will grow well in some form of shade, provided that other conditions, such as moisture & nutrient availability, are suitable. In other words, the success of your shade garden will of course depend on more than just choosing the right plants. In addition to their light requirements, plants need good soil, good drainage and sufficient water.



DESIGN

Approaches, styles, and intentions for designing your shade garden are infinite! This is where your creativity comes in, the other element essential to gardening in shady spaces. One general tip would be to "Think TLC: Texture, Layout, Color".



Gooseberry

:: SOIL & THE IMPORTANCE OF ORGANIC MATERIAL ::

Knowing your soil type is important because it provides more information about what plants will thrive there, as well as what you may need to do to prepare a more-fertile ground. You can purchase simple soil-testing kits from local garden supply stores.

When you are preparing the soil of your shade garden, be sure to supply an abundance of good organic compost and mulch. Organic matter, or compost, is the main food that supplies carbon and energy to soil organisms and is an essential part of healthy ecosystem functioning. Repeated applications of compost is especially important in the culture of shade plants grown in dry soils. The organic matter of compost loosens heavy clay soils, thus improving drainage. In sandy soils, organic matter will increase the water-holding capacity.

Be careful about not letting too much foliage (which supplies more nutrients) from nearby trees to collect on the ground, because too much leaf litter on your plants can entrap moisture and encourage a mold problem.

Compiled by **BURLINGTON PERMACULTURE**

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PROBLEMS ASSOCIATED WITH SHADE GARDENS

What it all comes down to is that shade gardens are really no more work than sunny gardens. However, there are a couple challenges to be aware of:

Disease: Be on the lookout for fungal diseases that can develop because of the damp conditions. To offset this, don't put plants too closely together and allow for good air circulation.

Insects: Snails and slugs will be attracted to the cool, moist shade. Trapping and hand picking will need to be done throughout the growing season.

Shade itself: You can lighten up full shade by removing lower branches of over story trees or reasonably relocating sun-hogging plants to other areas of the property.



WATERING

Shade plants must compete for their food, but also their water with surrounding plants. Therefore, it would be beneficial to begin a regular watering program to ensure every plant is getting the necessary moisture that it needs.

What is organic material?

Organic material binds mineral particles (nutrients) into a granular soil structure that is largely responsible for the loose, easy managed condition of productive soils. Soil organic matter consists of a wide range of organic (carbon-containing) substances including living organisms (biomass), carbonaceous remains of organisms who once occupied the soil, and organic compounds produced by current and past metabolism in the soil. Over time, organic material is lost from the soil. So, repeated application is necessary!

SHADE TOLERANT PLANTS

Generally, these plants have multiple functions, are hardy to zones 4-6, require moist, neutral, well-drained garden soils, and can withstand full, dappled, or partial shade.

Paw Paw - *Asimina triloba*, small tree. Native shade tolerant understory tree that produces large tropical-like fruits. Seeds have anti-tumor properties and leaves are naturally insect and disease resistant. 20-35' height and spread.

Gooseberries - *Ribes uva-crispa*, woody shrub. Can be eaten raw or cooked. Used in making pies, jams etc. If the fruit is allowed to remain on the plant until it is fully ripe and soft it becomes quite sweet and is delicious for eating out of hand. 3-5' height & spread

Comfrey - *Symphytum officinale*, perennial. Comfrey is the 'king' of dynamic accumulator – plants that mine subsoil nutrients, incorporate them into their vegetation and deposit them at the soil surface. An exceptionally vigorous plant, it is an amazing mulch producer. The young leaves can be eaten raw or cooked and the stems used as an asparagus substitute. 3-5'

Nettle - *Urtica dioica*, perennial. Young leaves can be eaten cooked as a potherb and added to soups etc. A very nutritious and medicinal food that is easily digested and is high in minerals (especially iron) and vitamins (especially A and C). Cooking the leaves, or thoroughly drying them, neutralizes the sting, rendering the leaf safe to eat. Another soil mineral accumulator, the leaves are also an excellent addition to the compost heap or as a living mulch around fruit trees, etc.

Wild Garlic, Ramsons - *Allium ursinum*, bulb. Leaves can be used in salads and cooked foods. Moderately strong garlic flavor, though this reduces as the leaves get older. The flowers have a slightly stronger flavor and can be an addition to salads whilst the small bulbs can be used just like garlic, similar health effects. Caution: Dogs get sick if they eat large amounts!

Elderberry - *Sambucus canadensis*, Native shrub. Fruits are edible either raw or cooked. It is often cooked and used in pies, jams, jellies, wine etc. The flowers are also eaten raw or cooked. The leaves and inner bark of young shoots are used as an insect repellent. A decoction of the leaves can be used as an insecticide. 6-12' height and spread at maturity.

Groundnut - *Apios americana*, Native nitrogen-fixing perennial vine. The tuber is edible raw or cooked, flavor somewhat like roasted sweet potatoes. Best harvested in Autumn, the tubers will store until at least the spring. Contains 17% crude protein – that's three times more than potatoes. As a nitrogen fixer, this plant helps build soil nitrogen levels. 4-8' height

Hazelbert - *Corylus cornuta*, shrub. Seed raw or cooked, is rich in oil. When kept in a cool place, and not shelled, the seed should store for at least 12 months. An edible oil is obtained from the seed. The whole seed can be used to polish and oil wood. Wood - soft, easy to split, not very rot resistant, beautifully veined. 12-20' height

Horseradish - *Armoracia rusticana*, perennial. Young root - raw or cooked. The grated root is used to make the condiment. This has a hot mustard-like flavor. The sauce is best used uncooked or gently warmed, heating it will destroy the volatile oils that are responsible for its pungency. The root is a rich source of sulphur. Young leaves - raw or cooked have a very strong flavor, nice added in small quantities to the salad bowl. Seeds - sprouted and eaten in salads.

Kiwi - *Actinidia kolmiktia*, woody vine. Yes Kiwi! The hardy kiwi, native to E. Asia flowers in June, and the seeds ripen from October to November. Fruit can be eaten raw, cooked or dried for later use. It contains up to 5 times the vitamin C of blackcurrants. The ovoid fruit is hairless and pale orange when fully ripe and is up to 1" in diameter. Young leaves - cooked. Used as a potherb or added to soups. No known medicinal uses. Can be propagated by cuttings. This vigorous climbing plant requires a sturdy trellis.

Thimbleberry - *Rubus parviflorus*, Deciduous shrub. Fruit - raw or cooked. It makes excellent jams and preserves. The fruit can also be dried for later use. Rich in vitamin C. Young shoots - peeled and eaten cooked or raw, can be prepared like asparagus. The shoots are rich in vitamin C. Flowers can be eaten raw. 4-6' in height and spread. Will tolerate full shade

Serviceberry - *Amelanchier spp.*, Small native tree. Edible fruit - raw or cooked. Rich in iron and copper. The leaves are a tea substitute. Used to treat a wide range of minor complaints. Plants have a spreading, suckering root system and are used in windbreaks and erosion control. Also great wildlife forage/habitat. Cultivated varieties exist. 5-15' in height & spread

Chokeberry - *Aronia arbutifolia/melanocarpa*, small shrub. The fruit is edible when fully ripe. Makes a good jelly and is also dried and used for making pemmican. The fruit is rich in pectin and can be added to fruits that are low in this substance when making jams etc. Also provides excellent wildlife forage. 2-6' in height.

Ostrich fern - *Matteuccia struthiopteris*, fern. This native fern emerges in early spring producing edible young fronds that can be eaten raw or cooked. Used before they fully unroll, they are thick and succulent, flavor can be compared to asparagus. Great for full shade

Wintergreen - *Gaultheria procumbens*, native evergreen perennial ground cover. The fruit can be eaten raw or cooked or used in pies, jams etc. Young leaves can also be eaten. Leaves can be used for tea. An essential oil can be made from leaves, used to flavor beer, sweets, chewing gum, perfumery, toothpastes and medicine. Very shade tolerant

Oregon Grape - *Mahonia aquifolium*, evergreen shrub. Edible fruit (raw or cooked taste like black currants) and flowers. Medicinal: natural laxative, improves digestion, gargle for sore throats, wash for bloodshot eyes; natural color dyes. 6' in height and spread.

Yellow Day Lily - *Emerocallis lilioasphodelus*, perennial. All aerial parts are edible. Leaves and young shoots - raw or cooked. Flower buds - raw or cooked. They taste somewhat like green beans. Flowers - raw or cooked. They can be dried and used as a thickener in soups etc. Medicinal. Plants form a spreading clump and are suitable for ground cover.

Hops - *Humulus lupulus*, perennial vine. Leaves can be eaten in salads. Medicinally, soothing, sedative, tonic and calming. Strengthens and soothes digestion, increasing gastric and other secretions. Used as a folk remedy to treat a wide range of complaints, including boils, bruises, calculus, cancer, cramps, cough and more. Flowers also used to flavor beer

Sweet cicely - *Osmorhiza claytonii*, perennial. Root - cooked and eaten as a vegetable. The root has been chewed or gargled as a treatment for sore throats.

Wu Wei Zi - *Schisandra chinensis*, Deciduous climber that twines itself around other plants. Red grape like fruit in 4" wide bunches. Eaten raw or cooked, sweet/sour used in teas to substitute ginseng, for every one male is required for every 5 females to produce fruit. Beautiful flowers. Medicinal: Good for overall health.

Wild Ginger - *Asarum canadense*, native perennial herb. The root and flowers are used as a ginger substitute. The root has a pungent, aromatic smell like mild pepper and ginger. Best harvested in autumn, it can be dried for later use. Many Medicinal uses. A useful ground cover for a shady position so long as it is not dry, spreading by its roots. Handle with Gloves!