

Characteristics and Uses of Native Palouse Forbs in Landscaping

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Native plants deserve a place in the landscape. Many of them are at least as attractive as the ornamental plants used in gardens today. They provide a connection to the original landscape which is not available through introduced horticultural species. They are well adapted to the climate of the Palouse and will thrive with little extra water or fertilizer, thus conserving resources. Using native plants in your garden or yard will also help to preserve vanishing species of plants, insects, and wildlife.

The Idaho Native Plant Society has a very informative list of native trees, shrubs, grasses, and forest forbs and their uses in landscaping at

<http://www.idahonativeplants.org/guides/NorthIdahoGuide.aspx>

Before planting native species, here are a few things you should think about or be aware of:

Avoid commercial “wildflower” mixes unless they are specifically grown and provided by local producers. Most mixes are formulated for a very broad area and contain species which are not native to the Palouse or are simply not adapted to the environmental conditions of the Palouse Prairie. A few may even contain species which are invasive weeds.

Buy seed from local sources. Local seed is more likely to be adapted to the environmental conditions of your site. Local germplasm will also be less likely to undermine the genetic structure and adaptability of any nearby native populations. This is especially important if your yard or garden is in close proximity to indigenous populations of native plants.

Please do not pick the wildflowers! If you are fortunate enough to visit a native prairie remnant, resist the temptation to pick the flowers. Many of the native species do not make good cut flowers. Flowers are the reproductive structure of the plant, and many pollinators depend on the flowers for sustenance. Picking the flower removes the pollinator food source and reduces the amount of seed the plant can develop. That furthers the decline of species and ecosystems. Picking wildflowers is a selfish act which also deprives other people of the enjoyment of the blooms. It may aid weed dispersal and invasion of native plant communities. Instead, take some photos and leave the flowers for others to enjoy. Of course, one advantage of growing native wildflowers in your yard or garden is that you can ignore this advice there (but it still applies to wild populations).

Purchasing seeds or plants is the best way to obtain them. Remember that the Palouse Prairie is endangered to the brink of extinction and the small remnants remaining cannot support the loss of very much seed or genetic diversity. Many native plants are already having a tough time surviving in the few wild places left to them. If you decide to collect seed, do so responsibly. Following are some rules for responsible collection.

- Take only a few seeds. Plants need to produce a large amount of seed to perpetuate themselves because so many seeds are either genetically unadapted, are preyed upon by insects, birds, rodents, and diseases, or simply don't fall in a place suitable to germinate and survive.
- Know how to handle the seed properly before you collect it. Research the storage and germination requirements before hand so you do not waste the seed.

- Many of the plants are on private property. Get permission from the owner before entering. It may be illegal to collect plant parts on public property.
- Above all, NEVER dig plants from the wild. In some cases that is illegal and in almost all cases it is ecologically irresponsible. The plants have a very low chance of surviving such treatment and the hole that you leave on the site will probably be colonized by weeds. Moreover, you are removing from the gene pool an individual which has the unique genetic make-up well suited for the site. Thus, you will leave an enormous hole in the gene pool as well.

Nomenclature used in this document follows Hitchcock, C. Leo, and Arthur Cronquist. 1973. Flora of the Pacific Northwest. Univ. of Washington Press. Seattle, WA. Taxonomists are constantly tinkering with plant nomenclature and it is difficult to keep abreast of the changes. The PLANTS Database, <<http://plants.usda.gov/>> is a good source for many of the synonyms associated with the plants listed here. A very comprehensive source of synonyms is contained in the Missouri Botanical Garden's Tropicos Database at <<http://mobot.mobot.org/W3T/Search/vast.html>> We have included a few common names with each species, but common names are not standardized, are sometimes just made up translations of the scientific name, and can vary by region and individual. We did not attempt to include them all.

Detailed information on propagation of many native species can be found at <<http://nativeplants.for.uidaho.edu/network/search.asp?SearchType=Continental>>

Many of the species listed below can be seen in a landscape setting in the Palouse Prairie section of the xeriscape garden at the University of Idaho Arboretum. The UI Arboretum is located at 1200 W. Palouse River Drive in Moscow, Idaho. You can find more information at <<http://www.uidaho.edu/arboretum/index.html>>

Achillea millefolium is easy to grow from seed. Not invasive like many of the horticultural yarrows. Only weakly rhizomatous. May be short-lived but reseeds well. Can be spring or fall sown. Flowers in July. Be certain you have the native species and not one of the European imports. Other names include yarrow, western yarrow, *Achillea lanulosa*, *Achillea millefolium* ssp. *lanulosa*.

Apocynum androsaemifolium rarely produces seeds on the Palouse. Attractive plant in flower and the leaves turn bright yellow in fall. It is rhizomatous and could probably be grown from rhizome cuttings. Might be too aggressive for a landscape situation. Perhaps better used in a more wild setting where its aggressive growth could help stabilize a slope. Common name is spreading dogbane.

Arnica sororia could be used more. The yellow flowers are vibrant. Not easy from seed, but not real difficult either. It blooms in June, then goes dormant for the hot part of the summer. Weakly rhizomatous. Sow outdoors in pots in the fall. Transplant in early spring. Common names include foothills arnica, twin arnica

Aster occidentalis is a late blooming plant. Weakly rhizomatous, but its primary means of reproduction is seed, which it produces in prodigious quantities. Seeds germinate readily. It can be weedy, which makes it a good choice for a wilder natural but probably not a good plant in a small, formal garden. Flowers in mid to late July. Needs late season moisture. South facing slopes are too dry and hot. Common name is western aster

Balsamorhiza sagittata is very early flowering and attractive in bloom. The large leaves are interesting after flowering is completed. Commonly available both as seed and plants. Takes 4-6 years to flower from seed, but is very long-lived. Goes dormant with onset of warm, dry weather. Taprooted, can't readily be moved once in place. Leaves are grey-green because they are covered with short hairs. The leaves are all basal. Sow seeds outdoors in deep pots and leave them out there. Does

not grow in a warm greenhouse. Because they are taprooted, do not hold in pots too long. Plants are frequently available from native plant nurseries. Common name is arrowleaf balsamroot.

Besseya rubra is not one of the more attractive native plants, but still deserves a place in the early spring garden. Has a rather drab flower and is even more dull in fruit, but the foliage is interesting. Easy to grow from stratified seed but can't be grown in a greenhouse. Needs cool temperatures to grow, but leaves will stay green most of the summer if it has moisture. Other names include *Synthyris rubra*, red besseya.

Brodiaea douglasii is interesting when in flower, but does not flower every year. Might do better in a garden setting. Otherwise there is not much to it except a few long, linear leaves which dry up early, and a slender stem which looks like it can barely hold the flower up. Slow to grow from seed and needs to be grown outdoors. Does not survive in the constant warmth of a greenhouse. Plants may also be propagated from offsets of the corm. Flowers in May. Other names include *Triteleia grandiflora* var. *grandiflora*, Douglas' brodiaea, wild hyacinth.

Camassia quamash is a great early season bulb with a fantastic flower. Flowers in May. Bulbs are available commercially. Takes 4-5 years to flower from seed. Seedlings must be grown outdoors, will not survive in warm greenhouses. Rabbits and California Quail like to eat the plants, so they may be difficult to grow if you have either in your yard. Common names include camas or common camas.

Castilleja lutescens and the other locally native paintbrushes in general are tricky to germinate on a consistent basis and they need to be planted with a host, since they are parasitic on the roots of other plants. Seeds generally need 60-90 days of stratification. The paintbrushes seem like they would be great landscape plants, they hold their color for a long time. The culture of ***Castilleja cusickii*** and ***Castilleja hispida***, two other Palouse natives, is probably quite similar.

Clarkia pulchella should be a great garden plant. It is an annual which is easy to grow and self sows, but doesn't seem to be weedy. Plants grown without serious competition get big and bloom for a long time. The flowers are fantastic. Easy to grow from seed. Best sown in early spring, but can be fall sown. Disease can be a problem if it gets too much water. Grow it without irrigation. Common names include pink fairies, ragged robin, elkhorns clarkia, deer horn.

Clematis hirsutissima flowers are not too exciting, but the seedheads are interesting. Has been nicknamed the "Dr. Seuss plant" because the seedhead looked like a hairdo out of a Dr. Seuss illustration. We've grown a few of these but haven't figured out yet what makes them germinate. Sometimes available from mail-order nurseries. Common names include sugar bowls, leather flower.

Collomia grandiflora flowers are quite striking. They have a unique color that one rarely sees in anything else. Plants growing under low levels of competition grow quite large and bloom for a long time. Seeds are expelled explosively, so it can move around rapidly. It is an annual which can be sown in spring, usually does better with fall seeding. Common name is large-flowered collomia.

Collomia linearis is an annual. Plants growing under low levels of competition grow larger and bloom for a longer time than those one usually sees in the wild. It dries up earlier than *C. grandiflora* and is not as large. Flowers are a run-of-the-mill pink and smaller than *C. grandiflora*. It also expels its seed explosively, so can move around rapidly. Can be sown in spring, does better with fall seeding.

Common names include narrow-leaved collomia, tiny trumpet.

Delphinium nuttallianum might be a good early flower for the landscape. Not very easy to grow, but looks like it will reseed itself. Seeds need long stratification, might be best to fall sow seed in place. The flowers are nice, but the plant is rather scraggly. There is some seed on the market, but it is very expensive. Flowers in April. Common names include low larkspur, yellow pine larkspur, Nuttall's larkspur, upland larkspur, *Delphinium nelsonii*.

Gaillardia aristata seeds germinate without a lot of bothersome pretreatments. This one is just way too easy. It grows quickly, often flowers the first year. It will produce flowers into August if it has some moisture. Does seem to be short-lived, but reseeds itself. Voles may eat the crown over winter but only occasionally kill the plant. Sow in late fall or early spring. Common name is blanketflower or blanket flower

Galium boreale is a little more difficult to grow from seed, but still not real tricky. It has short rhizomes, but is not invasive. When growing in a garden situation, it flowers profusely, but the flowers don't last more than a couple weeks. Blooms in June. Seed will germinate without pretreatment, but may benefit from stratification. Divide the plants after 6-7 years to keep them flowering. It is not weedy like its cousin *Galium aparine*. Common name northern bedstraw.

Geranium viscosissimum should be a great garden subject. It grows quickly and flowers over an extended period as long as moisture is available. Flowers open in late May and will continue into July. Plants will go dormant during the heat of summer, but grow new leaves and sometimes flower during warm, moist autumns. Plants are large and robust. They compete well with other species. Seed is ejected forcefully, so it will move around. Sometimes susceptible to powdery mildew. Rabbits sometimes nip off the leaf stalks, but don't seem to eat much. Common name is sticky geranium.

Geum macrophyllum is not a particularly charming plant, although the leaves are interesting. It likes some shade, usually grows under hawthorn and other shrubs, or in the forest. May be weedy. Seeds germinate readily with 60 days of cold, moist stratification. Common name is large-leaved or large leaf avens.

Geum triflorum petals are yellow and nearly covered by the red sepals, but the plumed seed heads are pretty and the foliage is great. The foliage will stay green as long as there is moisture in the soil. Easy to grow from seed. Sow in spring. It can take up to four weeks to germinate, so keep the seedbed moist. Easier to grow in containers and then transplant to the garden. Flowers in late April and early May. Common names include prairie smoke, three-flowered geum or avens, old-man's whiskers.

Gilia aggregata is a tall, rangy plant with spectacular flowers. One of the common names is "skyrocket" and the flowers are certainly reminiscent of fireworks. Hummingbirds are attracted to the flowers. Will bloom all summer if moisture is plentiful. It is a biennial or short-lived perennial, so let it reseed. Should be a great subject in a naturalized setting. We don't have much data on seed germination, but fall seeding works. Flowers from mid June on throughout the season. Other names include *Ipomopsis aggregata*, scarlet gilia, skyrocket, fox fire.

Helianthella uniflora blooms about the time arrowleaf balsamroot is finishing up, so it prolongs the "yellow sunflower" season. Flowers in its second or third season, so it is quicker than balsamroot as well. Seed germination is variable, sometimes good, sometimes very low. It is tap-rooted, so does not take kindly to being transplanted. Flowers in June. Common names include false sunflower, Rocky Mountain helianthella, oneflower helianthella, Douglas' helianthella, little sunflower

Heracleum lanatum grows very large, sometimes over 6 feet tall, and thus may not be a good plant for small gardens. Probably better for semi-wild areas. Will grow in sun or shade where soils are moist. Flowers in mid to late June. Other names include *Heracleum maximum*, cowparsnip, cow parsnip, masterwort.

Heuchera cylindrica seeds need light to germinate, so they must be surface sown in the fall. They germinate well in pots, but sowing directly on the soil is risky. The leaves stay green all summer and even through the winter. The flowers are a rather bland white. Flowers in late May and June. Common names include round-leaf alumroot, roundleaf alumroot, lava alumroot.

Hieracium albertinum is certainly one of the best possibilities in local natives for a widely popular ornamental. Plants are covered with short, soft hairs. Looks especially great in the morning or evening when backlit by the sun. Its yellow flowers are rather common looking. Blooms in late June. No good information on seed germination requirements. Other names include western hawkweed, hairy Albert, houndstongue hawkweed, *Hieracium cynoglossoides*, *Hieracium scouleri* var. *albertinum*.

Iris missouriensis needs a moist site. This native iris puts the cultivated varieties to shame. Fresh seeds germinate well after long stratification, but old seeds are difficult to germinate. Grows from short, thick rhizomes, which can be divided to produce new plants. Blooms in mid to late May. Common names include western iris, western flag, western blue flag, Rocky Mountain iris, Rocky Mountain flag, Missouri iris.

Linum lewisii is easy to grow from seed. Needs to grow where it is not overtopped by other vegetation. Beautiful blue to purple flowers. Likes open areas in full sun. Sow in spring. Petals fall off upon picking, so it isn't good for cut flowers. Flowers open in the morning, drop their petals in the afternoon, then new flowers open the next day and repeat the cycle. Watch out for the non-native cultivar "Appar" which is a European flax. Don't grow Appar near stands of native flax. Other names include western blue flax, wild blue flax, prairie flax, Lewis flax, *Linum perenne* var. *lewisii*

Lomatium dissectum is the most prominent of all the lomatiums. Fine cut leaves and yellow flowers borne on plants 3 or more feet tall. Grows early and then goes dormant before hot weather arrives in summer. Grows readily from seed given extremely long stratification. Seed should be sown outdoors in pots or in the ground in late August or early September. Even then, some seeds won't germinate until after a second winter. Seedling growth is slow and it takes at least 2 years to grow to transplant size and another couple years to flower. Flowering plants may be too large for a small garden. Plant them in the back of the bed so they don't hide shorter plants. Blooms in late April. Common names include fern-leaved desert parsley, fern-leaved lomatium or biscuitroot.

Lomatium triternatum probably has the best looking flowers of all the local lomatiums. They are bright yellow and held on upright plants with unusual leaves. Brown striped seeds are interesting as well. Like all lomatiums, it goes dormant before hot weather, but it is probably the last of the local lomatiums to do so. Grows readily from seed after long stratification. Takes 2 years to grow to transplant size and another to flower. Blooms in May. Common names include nine-leaf desert parsley, narrow-leaf desert parsley, nine-leaf lomatium, narrow-leaf lomatium, Lewis' lomatium or biscuitroot.

Lupinus leucophyllus grows readily from scarified seed. Also reseeds itself well. Individual plants are short-lived. Seeds shatter forcefully and new plants will pop up around the garden. Blooms in June, slightly earlier than *L. sericeus*. Common name is velvet lupine.

Lupinus sericeus grows readily from scarified seed. Individual plants are short-lived but it reseeds readily. Seeds shatter forcefully, so it will move around. Blooms in June. Common name is silky lupine.

Penstemon attenuatus has both cream colored and blue flowered forms locally. All penstemons make good garden plants. They grow from stratified seed. Common names include taper-leaved penstemon, sulphur penstemon. Penstemons are also known as beardtongue or beard-tongue

Penstemon confertus has cream colored flowers that are smaller than *P. attenuatus*, but it looks very similar otherwise. It is differentiated mostly on technical characteristics. Blooms in early June. Common names include yellow penstemon or yellow beard-tongue.

Penstemon deustus has pure white flowers and serrated leaf margins which differentiate it from the other local species. It prefers rocky sites, but can be grown on deep soils where it does not have competition from other plants. The stalks do tend to droop over, so it might need support. Flowers in mid June. Common names include hot rock penstemon, lava penstemon, scorched penstemon or beard-tongue.

Phlox longifolia and *Phlox speciosa* both have masses of pink flowers covering well grown plants in mid to late May. Leaves are narrow and needle-like. The plants are woody at least near the base. Seeds are expelled explosively when they mature. Seed needs long stratification and cool growing conditions, but they are gorgeous plants when in bloom and still look good afterward. They are also known as long-leaf phlox and showy phlox, respectively

Potentilla arguta has white flowers on tall, upright plants. Easy to grow. Seeds germinate after a short stratification period. Plants are covered with glandular hairs which trap insects. There is some evidence that suggests the plants are able to digest the insect protein and thus obtain nitrogen from the insects. Flowers in late May and early June. Common names include tall, valley, or glandular cinquefoil.

Potentilla gracilis has slender branches which do not hold the bright yellow flowers upright as with *P. arguta*. Deeply dissected leaves and graceful stems make this a more attractive plant than *P. arguta*.

Grows easily from seed given a short stratification period. Flowers in June, slightly later than *P. arguta*. Common name is slender cinquefoil.

Sidalcea oregana has great looking pink flowers which attract hummingbirds. The stems may grow to 3 feet or more, but it does tend to fall over. Has a long bloom period when moisture is available. Blooms in July. Common names include Oregon checker-mallow, wild hollyhock.

Sisyrinchium inflatum has bright purple to blue flowers on grass-like plants which surely deserve a place in the garden or landscape. Blooms early in the spring. Grows easily from seed given stratification and cool temperatures. Takes several years to flower. Other names include grass widows, blue-eyed grass, *Olsynium douglasii* var. *inflatum*.

Solidago canadensis has masses of bright yellow flowers on tall (4-5 feet) stems. Blooms in late summer and early fall, which is rare among Palouse natives. Needs a moist site. It spreads by rhizomes and is probably too aggressive for a yard or garden. Might have a place in a more wild area. The tall stems tend to flop over when in bloom. Pinching back once or twice during the growing season will keep the plants shorter and stockier. Common names include Canada goldenrod, tall goldenrod.

Solidago missouriensis has masses of bright yellow flowers as well, but on short stems about 18 inches tall. Also blooms in late summer, but a little earlier than *S. canadensis*. Gets kind of floppy and untidy as the blooms mature. Pinching back may help reduce that. It spreads by rhizomes and is probably too aggressive for a small yard or garden. Can be grown in a more wild setting where other plants help keep it in check, and should be a good plant for bank stabilization and erosion control. It will grow on drier sites than its cousin *S. canadensis*. Common name is Missouri goldenrod.

Thermopsis montana looks like a lupine with bright yellow flowers. Likes slightly more moisture than it usually gets on the Palouse. Should do well in a garden where competition is less, although it might do a little too well in a formal situation. Probably better in a more wild setting. Easy to grow from scarified seed. Blooms in May and sets seed soon afterward, but the leaves will remain green all summer. Common names include mountain golden pea, mountain thermopsis, false lupine.

Veratrum californicum grows in areas that are wet in spring. We like this plant, but suppose most people find it ugly. It is poisonous, although deer will nibble at it. Seed germination is said to be tricky and the plants are slow growing, but we haven't tried it. Common names include California false-hellebore, white hellebore.

Wyethia amplexicaulis has bright yellow flowers similar to arrowleaf balsamroot. Leaves are glossy green and grow clasping on the stem. Blooms in early June after arrowleaf balsamroot is finished. Takes 4-5 years to flower from seed. Plants grown with low competition levels bloom profusely over an extended period. The seeds seem to have fewer insect predators than balsamroot. Common names include mule's ear, northern mule's ears, dwarf sunflower.

The preceding is a list of forbs which we believe are especially suitable for gardens and landscapes. There are many more native forbs and we certainly haven't tried them all. If you are interested in using a plant that you don't see on this list, please take a look at "**More Palouse Forbs for Landscaping.**"

"Characteristics and Uses of Native Palouse Forbs in Landscaping" and "More Palouse Forbs for Landscaping" are published on the website of the Palouse Prairie Foundation at <http://www.palouseprairie.org/>

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