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Ground Covers for North Dakota

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NORTH DAKOTA STATE UNIVERSITY



Perennial Candytuft

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COOPERATIVE EXTENSION SERVICE
NORTH DAKOTA STATE UNIVERSITY
FARGO, NORTH DAKOTA 58102

GROUND COVERS FOR NORTH DAKOTA

Many situations in the landscaping of both home and public properties call for a cover of plants other than grass in some areas because of slope, shade, difficulty of mowing or esthetic reasons, such as the need or desire for a contrasting texture.

Although landscape designers may in some instances mass shrubs in such areas and call them ground covers, the home gardener, when he uses the term ground cover, usually means a low, spreading mat no more than 6 inches in height. It is with such a restriction that the plants listed here are described.

CULTURE

Some ground cover plants perform well only in full sun, while others are well adapted to partial or even complete shade. The recommended plants are listed accordingly. However, all plants will benefit by the normal cultural practices that all cultivated plants deserve, good soil preparation, fertilization when indicated and watering to establish the plants and to bring them through unusual dry periods.

Before planting, soil should be worked sufficiently to prepare a planting bed that will compare with normal gardening areas. Particular care should be taken to eliminate perennial weeds. Steep slopes may require heavy applications of organic matter, a stubble mulch or equivalent, or rock terracing, to prevent erosion until the cover is established. Fertilization is best based on actual soil tests or past history and cultural practices. Watering should be sufficient to help the plants root and to encourage growth during drouth periods.

Cultivation is not necessary and may even be harmful to many ground covers that root wherever they touch the ground. Weeds should be pulled by hand until the ground cover has taken over. Avoid disturbing the soil.

WOODY GROUND COVERS

Creeping Juniper (*Juniperus horizontalis*) Dense mats of fine, green or bluish foliage, 4 to 8 inches tall. Sun or very light shade. A hardy native of southwestern North Dakota that, although somewhat slow, is excellent on sunny banks. The taller growing (10 to 12 inches) Andorra juniper is a usable variety commonly available in nurseries. Space 2 to 4 feet apart.

Perennial Candytuft (*Iberis sempervirens*) Small, leathery leaves and clusters of white flowers in the spring, 5 to 7 inches tall. Sun or very light shade. Although hardy, this species may suffer some freezeback in exposed sites with no snowcover. Evergreen. Space 10 to 15 inches apart.

The varieties "Purity" and "Snowflake" have whiter flowers than the species. The related species, *I. jordeni* and *I. pygmaea*, appear worthy of trial.

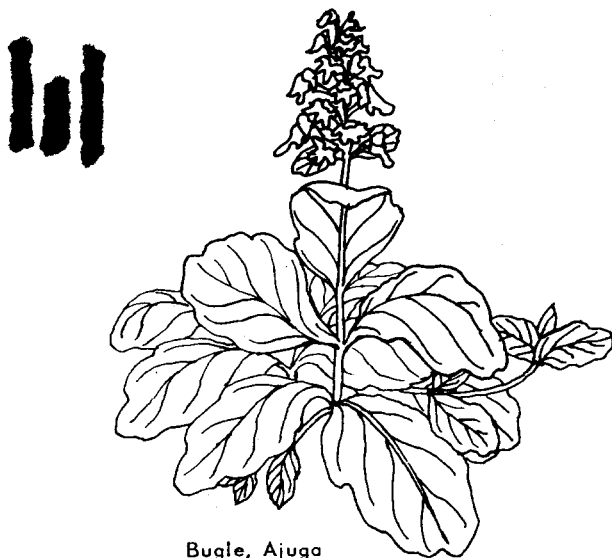
Canby Pachistima (*Pachistima canbyi*) Small, leathery evergreen leaves that resemble miniature holly leaves, 5 to 8 inches tall. Sun or part shade. The species is hardy and performs well in the International Peace Gardens, although some

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loss of foliage must be expected in sites with severe exposure. The species will not survive in heavy, poorly drained soil but is excellent ground cover in well drained sites. Space 15 to 18 inches apart.

HERBACEOUS GROUND COVERS

Bishop's Weed, Goutweed (*Aegopodium podagraria*) Variegated green and white leaves, 6 to 8 inches tall. Shade. Hardy, vigorous spreader. Space 12 to 18 inches apart.



Bugle, Ajuga

Bugle, Ajuga (*Ajuga reptans*) Green, bronze or variegated green and white forms available, low creeping spreader, 2 to 5 inches tall. Sun or shade. May freeze out in dry sites without snow protection. Space 10 to 12 inches apart.

Wild Ginger (*Asarum canadense*) Heart shaped, velvety green leaves, 3 to 6 inches tall. Shade. Hardy but not a vigorous spreader in prairie soils, failing to form a mat. Recommended only as specimen plants.

Lily of the Valley (*Convallaria majalis*) Bright green, upright leaves and fragrant white flowers in May, 6 to 8 inches tall. Shade or partial shade. Hardy and vigorous with moisture. Space 8 to 12 inches apart.

Snow-in-Summer (*Cerastium tomentosum*) Soft, silvery-gray leaves and white flowers to 6 inches tall. Sun or part shade. An attractive spreader that may provide foliage color contrast with greener covers such as Creeping Phlox or Juniper.

Crown Vetch (*Coronilla varia*) Hardy, vigorous cover, 2 to 2½ feet tall. Much too tall to be recommend-

ed for home use. The variety "Penn Gift" has been highly advertised but is not suitable for home garden use.

Maiden Pink (*Dianthus deltoides*) Slender, bluish, grasslike leaves and small white, pink or reddish flowers, 3 to 5 inches tall. Sun, well drained soil. Although this species forms good low mats, older plants may show open centers and do not become good permanent ground covers. Space 10 to 18 inches apart.

Grass Pinks (*Dianthus plumarius*) Bluish, grasslike foliage, more coarse than Maiden Pink and with rose-like flowers. Sun, well drained soil. Older plants become unkempt and develop open centers. Not recommended as a permanent ground cover. Space 1 to 2 feet apart.

(*Dianthus arenarius*) Very fine, deep green grasslike leaves and lacy white or pink flowers, 3 to 4 inches tall. Sun, well drained soil. Plants are tidy, well shaped mounds, spreading slowly. Best treated as specimen plants. Space 10 to 15 inches apart.



Lily of the Valley

Cypress Spurge (*Euphorbia cyparissias*) Rich green, very fine leafy stems, 8 to 12 inches tall. Sun. Although this plant is occasionally used in gardens, it is too tall and does not spread well to form a mat. May be used in rock gardens but not recommended as a ground cover.

Moneywort, Lysimachia (*Lysimachia nummularia*) Round, bright green leaves and occasional yellow flowers, 2 to 3 inches tall. Sun or shade. Hardy,

vigorous and may become a weed in lawns if not restricted. Space 12 to 18 inches apart.

Creeping Charlie (*Nepeta hederacea*) Rounded green leaves, 2 to 6 inches tall. Although this has been used as a ground cover, it is a NOXIOUS WEED and should not be planted.

Japanese Spurge (*Pachysandra terminalis*) Glossy green, somewhat coarse leaves, 6 to 8 inches tall. Shade. Although this may persist in North Dakota, it is borderline in hardiness and seldom spreads sufficiently to form a good ground cover.

Creeping Phlox (*Phlox subulata*) Fine, green awl-like or almost needle-like foliage and drifts of white, pink, lavender or reddish flowers in early spring, 3 to 4 inches tall. Sun, well drained soil. An excellent showy ground cover for well drained soils but winter kill may be severe without snow cover and total in heavy, wet clay soils. Space 1 to 2 feet apart.



Mountain Phlox

Mountain Phlox, Woods Phlox (*Phlox divaricata*) Green foliage and lavender (occasionally white) flowers on branched stems to 1 foot. Shade or sun. Although this species is a little tall, hardiness, spring color and ability to spread in shade recommend it for use. After the May bloom, mow or shear once unless seedlings are desired. Space 12 inches apart.

Artic Phlox (*Phlox borealis*) Fine, emerald green leaves and rose flowers, 2 to 3 inches tall. Sun. Although similar to Creeping Phlox, this new and somewhat rare species is doubtless hardier and frequently used in Saskatchewan and Alberta. Native to Alaska. Space 12 inches apart.

Dwarf Polygonum (*Polygonum reynowtria*) Coarse, green foliage (reddish in autumn) and reddish

late summer flowers to 18 inches tall. Sun. Coarse, weedy looking and too tall to be recommended in spite of frequent advertising for ground cover purposes.

Buttercup, Ranunculus (*Ranunculus repens*) Rounded, glossy green leaves and waxy, yellow flowers to 12 inches tall. Sun or part shade. Too tall and straggly to be recommended as a good ground cover. Space 12 to 18 inches apart.

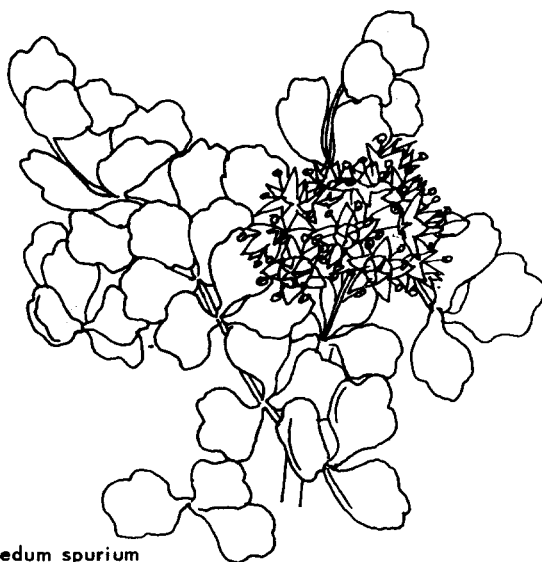
Bloodroot (*Sanguinaria canadensis*) Large, rounded and lobed leaves and 1 to 2 inch white flowers in early spring, 5 to 8 inches tall. Shade. A hardy native of wooded areas that provides an excellent texture contrast with small-leaved ground covers.

Sedum, Stonecrop. Numerous species and varieties of sedum are usable as ground covers. Many of them need additional test for North Dakota conditions. Among those that may be recommended are:

Sedum acre. Very fine, green, fleshy leaves and small yellow flowers, 2 to 3 inches tall. Sun. Very hardy, exceptionally fine texture. Space 8 to 12 inches apart.

S. alba. Fine succulent leaves, slightly more coarse than *Sedum acre*, and small white flowers, 2 to 4 inches tall. Sun. Very hardy. Space 10 to 15 inches apart.

S. hybridum. Small, lobed, green leaves and bright yellow flowers aging to reddish seed-pods, 4 to 6 inches tall. Sun. Quite common, very hardy and highly recommended. Space 1 to 2 feet apart.



Sedum spurium

S. spurium. Small rounded leaves and medium pink flowers, 6 inches tall. Sun. Very hardy and vigorous but spreading slightly slower than S. hybridum. The variety "Coccineum" has rose flowers. Space 12 to 18 inches apart.

S. "Dragon's Blood". A variety of S. spurium with reddish-tinged leaves and red-purple flowers, otherwise the same as the species. The variety "Purple Beauty" is similar or identical. Sun. Space 12 to 18 inches apart.



False Solomon's Seal (Smilacina stellata) Arching, leafy stems with small clusters of whitish flowers, 10 to 15 inches tall. Part or full shade. A common native of wooded areas that, without competition, will spread and form dense patches. Although somewhat tall for a choice ground cover, this species may be used as a contrast with lower growing covers.

Thyme (Thymus serpyllum) Very small green leaves forming a fine textured low mat 2 to 4 inches tall with small, lavender flowers. The foliage is generally fragrant when crushed. Sun. This is a highly attractive, dense ground cover but may suffer winter kill in very dry, exposed sites that lack snow cover. The variety lanuginosus has woolly leaves and the variety album has white flowers. Space 18 to 24 inches apart.

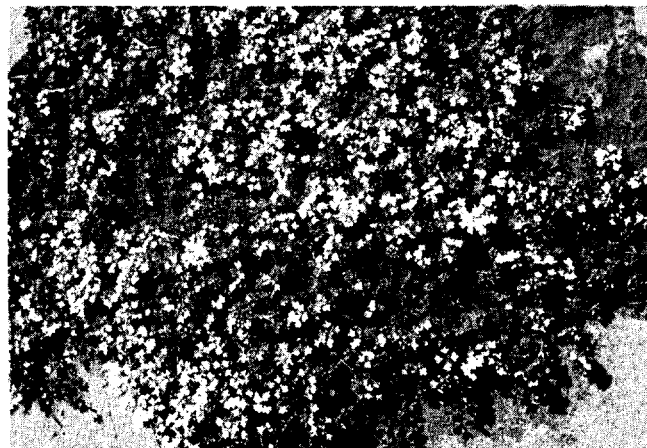
Thymus odoratissimus and T. lanicaulis, closely related species, are worthy of trial. The former has highly fragrant foliage.

Vinca, Myrtle (Vinca minor) Glossy, leathery, ever-green leaves and ½ to 1 inch lavender blooms on a creeping mat, 2 to 5 inches tall. Part shade to full shade. This species is capable of rapid growth with moisture, spreading and rooting freely, has survived 15 years in a dry shaded site but may kill out in very dry, exposed sites. A choice ground cover when established. "Bowl's" variety has larger blooms and a white flowered form is known but not common. Space 18 to 24 inches apart.

A related species, V. herbacea, that roots only at the tips of the stems is worthy of trial.

Violet, white (Viola canadensis) Heart shaped, green leaves and white flowers, 6 to 12 inches tall. Part or full shade. This hardy native is somewhat tall for a first rate ground cover but hardiness, rate of spread and complete adaptation to shaded areas are sufficient to recommend its use in large areas. Space 12 to 15 inches apart.

Other species of violets such as V. papilionacea (Common Blue Violet, freely spreading by seed in moist soil) and V. eriocarpa (Yellow Wood Violet) are worthy of consideration. Many hardy cultivated varieties such as the Confederate Violet (blue and white), Freckles (white, blue speckled) and Rosina (purplish-rose) may be used in limited numbers but often do not spread sufficiently to produce good cover when used alone. The Altai Violet (V. altaica), an Asian introduction with 1 inch purple flowers and which spreads by underground rhizomes, appears worthy of further trial.



Thyme