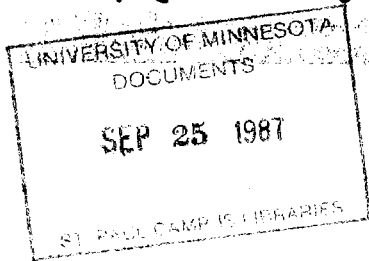


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LEON C. SNYDER

Herbaceous Ground Covers

Webster defines a ground cover as a planting of low plants that covers the ground in place of turf. An herbaceous ground cover is one that dies to the ground each fall. Our interest in ground covers at the arboretum dates back to the start of the arboretum. A contract with the Minnesota State Highway Department, started in 1962, to study plants suitable for highway slopes gave us the opportunity to observe many plants under a variety of conditions. This research is continuing in a special ground cover area in the arboretum. When completed we will have 114 ground cover beds, each 7 x 14 feet in size. A metal edging is used to confine each plant material.

Success with ground covers will depend on the selection of the right kinds for each site. Some require full sunlight, others prefer shade. Some are drought resistant, others need a moist soil. A few require an acid soil. Few ground covers will grow without adequate soil preparation and hand weeding will be required during the period of establishment. Attention also must be paid to maintaining soil fertility and to watering during dry periods. Be sure that the area to be covered is free of quackgrass and other perennial weeds before planting.

Most ground covers are propagated vegetatively either by division or by rooting softwood cuttings. Where large areas are to be covered you may want to start with a few plants and increase the plants before planting the entire area. It is generally best to purchase small, potted plants when buying from a nursery or garden center.

Many of the plants in our collection need further evaluation before they can be recommended. There are still some that have not been tested. The following species and cultivars show promise. We suggest that you visit the arboretum and become acquainted with this collection if you are interested in ground covers.

Ajuga reptans (Carpet Bugle) - This broad-leaved plant spreads quickly and makes a bold ground cover. The spikes of bluish-purple flowers add interest. Plant where there will be an adequate snow cover or use a winter mulch. Plants will kill out if exposed during an open winter. Several colored foliage cultivars are being tested. 'Bronze Beauty' and 'Burgundy Lace' show promise.

Asarum canadense (Wild-ginger) - This is a native plant that will form a dense mat when grown in partial shade. The leaves are dark green and heartshaped. Purplish red, tubular flowers are borne in the spring under the leaves.

Aegopodium podagraria 'Variegatum' (Silveredge Goutweed) - This ground cover can become quite invasive and its use should be limited to difficult sites where little else will grow. It thrives in shade and competes well with tree roots. The white margined leaves can liven up a dark, shady spot. The flowers are not showy and should be removed.

Coronilla varia (Crown vetch) - Much has been written about the crown vetch. Many of our national garden magazines advertise divisions of the plant for sale. We have grown most of

the strains and they all appear about equal in performance. It has done well at the arboretum and in test plantings around the state. The plants are vigorous, growing 12 to 18 inches tall. The lavender, pea-like blossoms cover the plants in July and early August. A planting can be started either from seed or from divisions. A yellow-leaved form has appeared in our arboretum plantings. It may have some merit as a ground cover.

Dianthus caryophyllus 'Aqua' (Aqua Clove Pink or Carnation) - This selection of Dianthus was found growing in a Colorado farmyard by Glenn Viehmeyer of the North Platte, Nebraska Experiment Station. We have included this in our Regional Plant Trials and reports indicate that it is adapted over a wide range of conditions. The grass-like foliage is silvery-green and plants spaced 10 inches apart will soon form a dense mat. Small, white carnation-like flowers appear in June. These are very fragrant and can be cut for flower arrangements. Remove the faded flowers to improve the appearance. It may be advisable to remove the mat of old foliage early each spring with a rotary mower.

Dianthus deltoides (Maiden Pink) - This plant forms a carpet of fine textured, dark green foliage. In May and early June the plants are covered with small pink flowers. Excellent as a ground cover in rock gardens and for limited areas. Not highly competitive against invasion by perennial grasses.

Globularia nana (Prostrate Globedaisy) - This delightful little rock garden plant forms dense mounds only a few inches tall. The tiny leaves are dark green and closely spaced to form a dense carpet. Our plants have not flowered. Not recommended for large areas.

Hosta spp. (Plantain lilies) - The hostas make excellent ground cover plants for shaded areas. There are many species and cultivars to choose from. Spacing should be from one to four feet depending upon the mature size of the plants. We have a fine collection at the arboretum if you are interested in becoming better acquainted with them.

Lotus corniculatus (Birdsfoot Trefoil) - This yellow flowered member of the pea family makes an excellent ground cover in a sunny location. The double flowered form 'Double' is denser than the species and produces reddish yellow flowers that are fully double.

Phlox borealis (Arctic Phlox) - We first observed this species on the campus of the University of Saskatchewan where it was being used as a ground cover plant. Plants were obtained and these have been increased. The dark green, nearly evergreen leaves form a dense carpet about four inches high. Plants spaced from 10 to 12 inches apart will soon fill in and make a uniform cover. In May the plants are covered with small magenta colored flowers. We consider this to be superior to the more common *Phlox subulata*, although the flower color may be inferior.

This archival publication may not reflect current scientific knowledge or recommendations.
Current information available from University of Minnesota Extension: <http://www.extension.umn.edu>.

Polygonum affine (Himalayan Fleeceflower) - This low growing fleeceflower with its spikes of pink flowers in mid-summer is one of the better Polygonums. Plants spaced a foot apart will soon form a solid mat.

Polygonum reynowtria (Fleeceflower) - This rank growing plant has been widely planted in recent years. In late summer, when the plants are covered with the reddish flowers and fruits, it is rather attractive. The plant spreads like quackgrass and can be quite invasive. Do not plant near the flower border. Requires good soil and does best in full sun.

Potentilla tridentata (Wineleaf cinquefoil) - We first observed this plant growing in rock crevices along the North Shore of Lake Superior. Plants were obtained and these developed very nicely under cultivation. Nurserymen soon started to propagate it and it is now generally available. The plants spread by underground rhizomes and plants spaced a foot apart will soon form a dense, uniform cover.

Potentilla verna 'Dwarf' (Dwarf Spring Cinquefoil) - This low, mat forming cinquefoil makes an excellent ground cover in full sun. The bright yellow flowers add summer interest. Plant about 10 inches apart.

Sedum spp. (Stonecrops) - The sedums are sun loving, drought resistant plants suitable for planting in a dry rock wall, a rock garden, or on a south facing slope. There are many species and cultivars on the market. We are in the process of evaluating about 40 of these in our ground cover area at the



Potentilla verna 'Dwarf'

arboretum. We have had two winters with above average snowfall since these were planted so we do not know how some of them will survive in an open winter.

Vinca herbacea (Herbaceous Periwinkle) - Unlike the evergreen **Vinca minor**, **V. herbacea** drops its leaves in the fall. It appears to be fully hardy and may prove useful where you have difficulty in wintering **V. minor**. The blue flowers are quite similar to those on **V. minor**.

Viola spp. (Violets) - We have many species and cultivars of violets that can be used for ground cover purposes in shady areas. They are especially lovely in the spring when they are in bloom but the foliage is attractive all summer.

Tiarella cordifolia (Foam Flower) - This native wildflower likes a moist, shady site. The leaves are heart-shaped and upright spikes of small white flowers add springtime interest.

Waldsteinia fragarioides (Barren Strawberry) - This native plant makes an excellent ground cover. Its rhizomatous habit aids in forming a dense growth. The leaves resemble those of the strawberry. The small yellow flowers add interest.



Potentilla tridentata (Wineleaf cinquefoil)

Issued in furtherance of cooperative extension work in agriculture and home economics, acts of May 8 and June 30, 1914, in cooperation with the U.S. Department of Agriculture. Roland H. Abraham, Director of Agricultural Extension Service, University of Minnesota, St. Paul, Minnesota 55101

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