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RESULTS OF TRIALS IN THE GROUND COVER DEMONSTRATION PLOTS

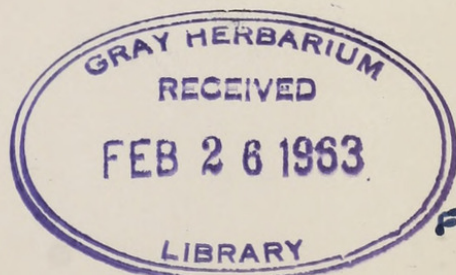
THE Ground Cover Demonstration Plots on the Arnold Arboretum's Case Estates in Weston, Massachusetts, were first laid out in 1950. Then, only about fifty different kinds of plants were tried, but as time went on, there was so much interest shown in these plantings that they were increased considerably. New ones are being added every year, and unfortunately, there are always some which do not do well and die as a result of severe winters. It is impossible to publish a list that is complete for any length of time, since numerous changes are constantly being made.

There are at least 165 different kinds of plants being grown in these plots now, and most of these are listed in this bulletin according to row number and position in the row. Row 1 is nearest to the high stone wall, and the plants are numbered from the Wellesley Street end, the first plant in each row being the closest to Wellesley Street.

The plots are in an open former cow pasture, mostly in the full sun, although the first row along the taller stone wall does receive shade about half the time. Otherwise, these plants are all given approximately the same care, with only a few being covered in the winter with pine boughs.

Late fall and winter are not the best times of the year to see these plots. Rather a visit might best be made in late spring after many of the plants have made a major amount of growth and while many of them are still in flower.

This list is published now so that the arm-chair gardener who makes plans during the winter for next spring's gardening activities, can become acquainted with the fact that this demonstration plot exists and is open to the public at all times. All the plots are labeled with the common and scientific name of each plant. It is here that one might come when in doubt as to just which ground cover to select for a certain area.



GROUND COVER DEMONSTRATION PLOTS, CASE ESTATES

(As of January 1, 1963)

h=herbaceous, usually dead above the ground every winter

e=evergreen foliage

*=these have proved good ground covers in these trials

Row & Plant No.	Scientific Name	Common Name
4-10	h Achillea 'King Edward'	'King Edward' Yarrow
3-10	h *Aegopodium podagraria	Bishop's Goutweed
1-27	h *Aegopodium podagraria 'Variegatum'	Silveredge Bishop's Goutweed
4-3	h *Ajuga reptans	Carpet Bugle
6-6	h *Ajuga reptans alba	White Carpet Bugle
4-4	h Ajuga reptans 'Variegata'	Variegated Carpet Bugle
4-2	h Ajuga genevensis rosea	Geneva Bugle
3-18	*Akebia quinata	Five-leaf Akebia
3-12	h Allium senescens glaucum	Variety of Onion
4-9	Alyssum petraeum	Goldentuft Alyssum
4-5	e Arabis alpina	Alpine Rockcress
3-6	e *Arctostaphylos uva-ursi	Bearberry
3-16	e Arenaria stricta	Rock Sandwort
4-22	e *Armeria arctica	Arctic Thrift
7-14	*Aronia melanocarpa	Black Chokeberry
5-11	h Artemisia 'Gray Mound'	Sagebrush 'Gray Mound'
2-10	Artemisia purshiana	Pursh Sagebrush
2-25	Artemisia stelleriana	Beach Wormwood, Dusty Miller
1-11	e *Asarum caudatum	British Columbia Wild Ginger
1-12	e *Asarum europaeum	European Wild Ginger
6-2	h Astilbe japonica	Japanese Astilbe
1-16	h Athyrium filix-femina	Lady Fern
2-6	e *Calluna vulgaris	Scotch Heather
4-1	h Campanula rotundifolia	Bluebell
6-21	e *Cerastium tomentosum	Snow-in-Summer
7-24	Chaenomeles japonica 'Sargentii'	Sargent Japanese Quince
1-13	h *Convallaria majalis	Lily-of-the-Valley
2-17	h *Coreopsis auriculata 'Nana'	Dwarf Eared Coreopsis
6-1	Cornus stolonifera 'Kelseyi'	Kelsey Dwarf Red Osier
5-1	*Cotoneaster adpressa	Creeping Cotoneaster
6-22	*Cotoneaster adpressa praecox	Early Creeping Cotoneaster
5-2	Cotoneaster apiculata	Cranberry Cotoneaster
4-17	*Cotoneaster horizontalis	Rock Cotoneaster
7-22	*Cotoneaster horizontalis	Rock Cotoneaster
4-16	Cotoneaster microphylla cochleata	Prostrate Small-leaved Cotoneaster
6-23	Cotoneaster microphylla	Small-leaved Cotoneaster
5-10	Cytisus decumbens	Prostrate Broom
5-4	Cytisus purpureus	Purple Broom

<i>Row & Plant No.</i>	<i>Scientific Name</i>	<i>Common Name</i>
2-18 e	<i>Daphne cneorum</i>	Rose Daphne
3-13 h	<i>Dianthus deltoides</i>	Maiden Pink
6-11 e	* <i>Dianthus gratianopolitanus</i>	Cheddar Pink
3-15 h	<i>Dicentra eximia</i>	Fringed Bleedingheart
7-5	<i>Diervilla lonicera</i>	Dwarf Bush Honeysuckle
7-6	<i>Diervilla rivularis</i>	Georgia Bush Honeysuckle
7-7	<i>Diervilla sessilifolia</i>	Southern Bush Honeysuckle
5-13 h	<i>Draba sibirica</i>	Siberian Draba
2-14 h	<i>Duchesnea indica</i>	Mock Strawberry
2-12 e	<i>Epigaea repens</i>	Trailing Arbutus
1-7 h	* <i>Epimedium grandiflorum</i>	Longspur Epimedium
2-5 e	* <i>Erica carnea</i>	Spring Heath
6-12	<i>Erigeron simplex</i>	
4-14 e	* <i>Euonymus fortunei</i> 'Colorata'	Purpleleaf Wintercreeper
4-11 e	<i>Euonymus fortunei</i> 'Gracilis'	Silveredge Wintercreeper
4-13 e	<i>Euonymus fortunei</i> 'Minima'	Baby Wintercreeper
3-14 e	<i>Euonymus fortunei radicans</i>	Common Wintercreeper
7-23 e	<i>Euonymus fortunei vegeta</i>	Bigleaf Wintercreeper
4-15	<i>Euonymus obovata</i>	Running Euonymus
6-14 h	* <i>Euphorbia cyparissias</i>	Cypress Euphorbia
5-20 e	* <i>Festuca glauca</i>	Blue Fescue
3-24 h	<i>Filipendula hexapetala flore-pleno</i>	Double Dropwort
7-3	* <i>Forsythia</i> 'Arnold Dwarf'	
1-14 e	* <i>Galax aphylla</i>	Galax
6-9 h	* <i>Galium mollugo</i>	White Bedstraw
3-3 h	<i>Galium verum</i>	Yellow Bedstraw
1-17 e	<i>Gaultheria procumbens</i>	Checkerberry, Wintergreen
4-7 e	* <i>Gaylussacia brachycera</i>	Box Huckleberry
3-1	<i>Genista pilosa</i>	Silky-leaf Woadwaxen
1-23 h	<i>Geranium sanguineum</i>	Blood Red Geranium
2-15 h	* <i>Gypsophila repens</i> 'Rosea'	Rosy Creeping Gypsophila
3-21 e	<i>Hedera helix</i>	English Ivy
3-19 e	* <i>Hedera helix baltica</i>	Baltic Ivy
3-20 e	<i>Hedera helix</i> 'Rumania'	Rumanian Ivy
5-14 e	<i>Helianthemum nummularium</i>	Sunrose
6-4 h	<i>Hemerocallis fulva</i> 'Kwanso'	Daylily 'Kwanso'
3-7 e	* <i>Herniaria glabra</i>	Common Burstwort
5-19 e	<i>Heuchera sanguinea</i>	Coral Bells
1-8 h	* <i>Hosta decorata</i>	Blunt Plantain-lily
1-2 h	* <i>Hosta lancifolia</i>	Narrow-leaved Plantain-lily
1-1 h	* <i>Hosta lancifolia</i> 'Albo-marginata'	Variegated Blue Plantain-lily
1-6 h	* <i>Hosta undulata</i>	Wavyleaf Plantain-lily
1-5 h	* <i>Hosta undulata</i> 'Univittata'	Wavyleaf Plantain-lily

<i>Row & Plant No.</i>	<i>Scientific Name</i>	<i>Common Name</i>
1-15	<i>Hydrangea petiolaris</i>	Climbing Hydrangea
2-7	<i>Hypericum buckleyi</i>	Blueridge St. Johnswort
3-9	h <i>Hyssopus officinalis rubra</i>	Red Hyssop
3-22	e <i>Iberis gibraltarica</i>	Gibraltar Candytuft
3-23	e <i>Iberis sempervirens</i>	Evergreen Candytuft
7-13	* <i>Indigofera incarnata alba</i>	White Chinese Indigo
7-8	* <i>Indigofera kirilowii</i>	Kirilow Indigo
4-23	h <i>Iris cristata</i>	Crested Iris
5-6	e * <i>Juniperus chinensis sargentii</i>	Sargent Juniper
5-3	e * <i>Juniperus horizontalis</i>	Creeping Juniper
5-5	e * <i>Juniperus horizontalis douglasii</i>	Waukegan Juniper
4-24	e * <i>Juniperus horizontalis douglasii</i>	Waukegan Juniper
6-7	e <i>Juniperus horizontalis glomerata</i>	Flat Creeping Juniper
5-7	e * <i>Juniperus horizontalis plumosa</i>	Andorra Juniper
5-16	e <i>Juniperus procumbens</i>	
5-24	e <i>Juniperus sabina tamariscifolia</i>	Tamarix Savin Juniper
1-19	h <i>Lamium galeobdolon</i>	Archangel Deadnettle
3-8	e <i>Lavandula officinalis 'Nana'</i>	Dwarf Lavender
3-17	e * <i>Leucothoe catesbaei</i>	Drooping Leucothoe
2-13	e <i>Liriope spicata</i>	Creeping Liriope
7-2	e * <i>Lonicera henryi</i>	Henry Honeysuckle
5-9	* <i>Lonicera japonica aureo-reticulata</i>	Yellownet Japanese Honey-suckle
7-11	* <i>Lonicera japonica halliana</i>	Hall's Honeysuckle
5-8	* <i>Lonicera japonica repens</i>	Variety of Japanese Honey-suckle
5-12	<i>Lonicera prostrata</i>	Creeping Honeysuckle
2-16	<i>Lysimachia nummularia</i>	Moneywort
6-13	e * <i>Mahonia aquifolium</i>	Oregon Holly-grape
3-11	<i>Mentha gentilis</i>	Red Mint
7-25	<i>Myrica pensylvanica</i>	Bayberry
1-21	h * <i>Nepeta hederacea</i>	Ground Ivy
2-8	h <i>Nepeta mussini</i>	Persian Nepeta
3-5	e * <i>Pachistima canbyi</i>	Canby Pachistima
1-4	h <i>Pachysandra procumbens</i>	Alleghany Pachysandra
1-3	e * <i>Pachysandra terminalis</i>	Japanese Pachysandra
1-25	e * <i>Pachysandra terminalis 'Variegata'</i>	Variegated Japanese Pachysandra
1-26	<i>Parthenocissus quinquefolia 'St. Paulii'</i>	St. Paul Virginia Creeper
4-25	h * <i>Phalaris arundinacea picta</i>	Ribbon Grass
4-20	h <i>Phlox stolonifera</i>	Creeping Phlox
5-15	h <i>Phlox subulata alba</i>	White Moss Phlox
4-18	h <i>Phlox subulata 'Crimson Beauty'</i>	Moss Phlox 'Crimson Beauty'

<i>Row & Plant No.</i>	<i>Scientific Name</i>	<i>Common Name</i>
4-19	h Phlox subulata 'Emerald Cushion'	Moss Phlox 'Emerald Cushion'
7-1	h *Pleiblastus distichus	Fern Bamboo
7-15	h *Pleiblastus variegatus	Variegated Bamboo
4-21	Polemonium reptans	Creeping Polemonium
6-3	h *Polygonum affine	Himalayan Fleeceflower
3-25	*Polygonum bistorta	European Bistort, Snakeweed
1-28	h *Polygonum cuspidatum compactum	Dwarf Polygonum
4-12	e *Potentilla tridentata	Wineleaf Cinquefoil
2-2	h Primula polyantha	Polyantha Primrose
6-16	h Prunella grandiflora rosea	Pink Bigflower Selfheal
6-15	h Ranunculus repens	Creeping Buttercup
7-12	*Rhus aromatica serotina	Late Fragrant Sumac
5-17	Rosa 'Max Graf'	Rose 'Max Graf'
5-18	Rosa paulii	Paul's Rose
7-9	*Rosa wichuraiana	Memorial Rose
3-4	Rubus laciniatus	Cutleaf Blackberry
2-4	e Sagina subulata	Corsican Pearlwort
7-10	Salix tristis	Dwarf Pussy Willow
4-8	e Santolina chamaecyparissus	Cypress Lavender-cotton
2-11	h Satureja alpina	Alpine Calamint
2-24	e Sedum acre	Goldmoss Stonecrop
2-22	e Sedum album	White Stonecrop
2-21	e Sedum album roseum	
2-20	Sedum ellacombianum	
5-22	e *Sedum spurium	Two-row Stonecrop
6-17	e *Sempervivum tectorum	Hens and Chickens
5-23	*Stephanandra incisa 'Crispa'	Dwarf Cutleaf Stephanandra
2-19	Symphoricarpos 'Hancock'	
6-18	h Tanacetum vulgare 'Alatanz'	Variety of Tansy
1-10	Teucrium chamaedrys 'Prostratum'	Dwarf Chamaedrys Germander
6-10	h Thymus lanicaulis	Woolly-stem Thyme
2-3	e *Thymus lanuginosis	Woolly-Mother-of-Thyme
1-24	e Thymus serpyllum roseum	Rose Mother-of-Thyme
2-9	e *Tiarella cordifolia	Alleghany Foamflower
1-18	Vaccinium angustifolium laevifolium	Smooth-leaf Lowbush Blue- berry
1-22	e *Vaccinium vitis-idaea	Shore Cowberry
6-20	h *Vancouveria hexandra	American Barrenwort
2-1	h Veronica incana	Woolly Speedwell
5-21	e Veronica chamaedrys	Germander Speedwell
5-5	h Veronica prostrata	Prostrate Speedwell
4-6	e *Vinca minor	Common Periwinkle
6-24	e *Vinca minor 'Aureo-variegata'	Yellow-blotch Periwinkle

<i>Row & Plant No.</i>	<i>Scientific Name</i>	<i>Common Name</i>
1-9 e	<i>Vinca minor</i> 'Multiplex'	Purple Double Periwinkle
6-8 h	<i>Viola</i> sp.	Violet
1-20 h	<i>Viola</i> 'Confederate'	
7-4	* <i>Xanthorhiza simplicissima</i>	Yellow Root

Unsatisfactory Ground Covers

(These have not proved successful in the Trial Plots of the Arnold Arboretum at the Case Estates during the last ten years.)

Acaena buchananii - died the second year.

Ajuga genevensis rosea - beautiful in flower, but does not spread well.

Ajuga reptans 'Variegata' - excellent for 2-3 years; then the species seeds in and must be removed by hand.

Alyssum saxatile - poor as ground cover.

Arabis alpina - must be replaced every few years.

Arenaria montana - dead 1960.

Arenaria stricta - poor, clump-like growth.

Arenaria maritima - 1951 - died out before 1962.

Armeria montana - does not spread well, plants show dead spots in center after a few years.

Artemisia stelleriana - too coarse in texture.

Asperula hirta - removed after one year, poor as a ground cover.

Asperula odorata - died in 3 years. Situation too dry and hot.

Athyrium filix-femina - only satisfactory in shade and moist soil.

Aubretia deltoides hendersonii - died in 2 years.

Campanula carpatica - planting must be replaced frequently.

Carex morrowii - not completely hardy.

Ceratostigma plumbaginoides - starts growth very late in the spring.

Coronilla varia - eventually died.

Corydalis lutea - could not become properly established.

Cotoneaster humifusa (dammeri) - not reliably hardy.

Cytisus decumbens - has not proved a vigorous spreader under our conditions.

Cytisus purpureus - ungainly.

Dianthus deltoides - grass easily seeds between plants.

Dianthus plumarius - grass easily seeds between plants.

Dicentra eximia - does not spread satisfactorily.

Draba sibirica – must be replanted every 3 years.
Duchesnea indica – large spots die every other year.
Euonymus fortunei radicans – very susceptible to scale.
Euonymus fortunei ‘Kewensis’ – very susceptible to scale, not for large areas.
Euonymus fortunei ‘Minima’ – very susceptible to scale, not for large areas.
Euonymus fortunei ‘Silver Queen’ – spreads very little; individual plants die.
Euonymus obovatus – untidy appearance.
Filipendula hexapetala flore-pleno – does not spread satisfactorily.
Fragaria vesca americana – dies every few years in this location.
Gaultheria procumbens – only satisfactory in moist acid soil in shade.
Gaultheria shallon – not hardy.
Geranium sanguineum – good only in moist soil and shade.
Genista tinctoria plena – must be replaced frequently.
Helianthemum nummularium – not reliably hardy.
Heuchera sanguinea – does not spread satisfactorily.
Hypericum buckleyi – makes an excellent mat-like growth, but does not root readily; hence spot killing occurs if ice settles on it in winter for long periods.
Hypericum calycinum – not hardy.
Hypericum repens – not hardy.
Hyssopus officinalis – poor growth.
Iberis – several species showed ungainly growth, making poor ground covers.
Iris cristata – excellent until iris borer takes its toll.
Lamium maculatum – dies after a few years.
Lavendula officinalis ‘Nana’ – grows in clumps.
Leiophyllum buxifolium – does not spread well.
Liriope spicata – excellent until grass seeds in after 3-4 years.
Lysimachia nummularia – excellent until grass seeds in after 3-4 years.
Mazus reptans – parts die periodically.
Mentha piperita – too ungainly for a neat groundcover.
Mitchella repens – not for dry soils in full sun.
Nepeta hederacea variegata – requires full shade and moisture.
Nepeta mussinii – too coarse.
Pachysandra procumbens – grows in slowly expanding clumps.
Parthenocissus quinquefolia – ungainly.
Phlox divaricata canadensis – died within 5 years.

Phlox stolonifera – replaced in ten years.
Phlox subulata – satisfactory for 3–4 years or until grass seeds in.
Polemonium reptans – has always performed poorly.
Primula polyanthus – requires shade and moisture.
Prunella grandiflora – dead in 4 years.
Prunella vulgaris – dead in 5 years.
Pulmonaria officinalis – dies repeatedly.
Ranunculus repens – double-flowered variety is not sufficiently vigorous. The single-flowered species might be satisfactory.
Rosa ‘Max Graf’ – too coarse in growth.
Rosa Paulii – too coarse in growth.
Rubus laciniatus – too coarse in growth.
Santolina chamaecyparissus – not reliably hardy.
Saponaria ocymoides – not satisfactory.
Sarcococa hookeriana – not reliably hardy.
Satureja alpina – poor growth in 3 years.
Satureja montana – poor under existing conditions.
Saxifraga marginata – died within 2 years.
Stachys olympica – died within 1 year.
Teucrium chamaedrys – growth and hardiness are erratic.
Teucrium chamaedrys ‘Prostrata’ – grows in clumps, does not spread.
Thymus serpyllum – good for small spots only, not large areas.
Tussilago farfara – very poor as a ground cover, since it dies to ground by summer. Our planting eventually died completely after about 10 years.
Veronica chamaedrys – clump-like growth.
Veronica filiformis – died within 2 years.
Veronica officinalis – has not performed satisfactorily under our conditions.
Vinca minor ‘Multiplex’ – a weak grower.
Viola ‘Jersey Gem’ – died within 2 years.

DONALD WYMAN



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