

GNOSIS
1100-110102

Perennial Landscape Plant Evaluations 1991

by

Patricia J. Wagner

Horticulturist

Patricia S. Holloway

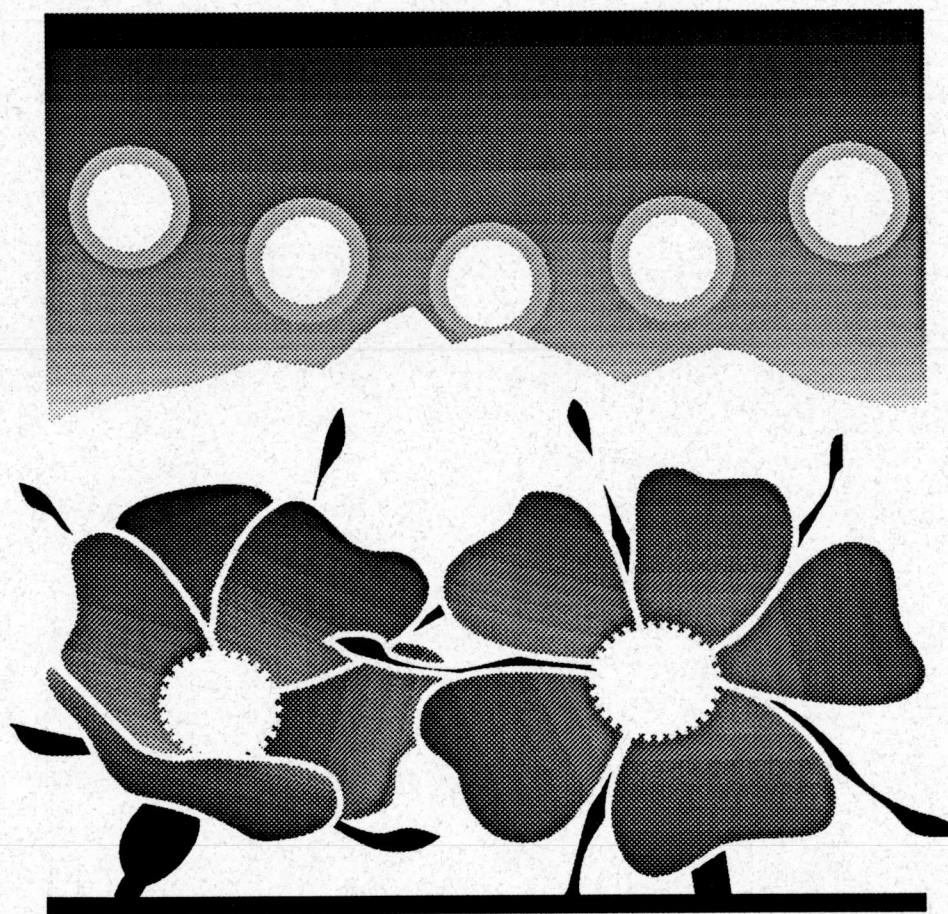
Associate Professor of Horticulture

Grant E.M. Matheke

Horticulturist

Sally Berry

Master Gardener
and Garden Volunteer



GEORGESON BOTANICAL GARDEN

"Circular (UNIVERSITY OF ALASKA FAIRBANKS.

Agricultural and Forestry Experiment Station)

School of Agriculture and Land Resources Management

ALASKA
S
33
E22
no.88
c.2

Circular 88

May 1992

RASMUSON LIBRARY
University of Alaska - Fairbanks

Perennial Landscape Plant Evaluations 1991

by

Patricia J. Wagner
Horticulturist

Patricia S. Holloway
Associate Professor of Horticulture

Grant E.M. Matheke
Horticulturist

Sally Berry
Master Gardener
and Garden Volunteer

Introduction

In 1989, a systematic evaluation of woody and herbaceous perennial landscape plants was begun at the University of Alaska Fairbanks Georgeson Botanical Garden (64° 51' N, 147° 52' W). The purpose of this research is to identify hardy perennials capable of surviving in subarctic environments; to evaluate the ornamental potential of these plants; and to fulfill a growing demand for information on hardy landscape plant materials by home owners, commercial growers, and landscapers.

The collection includes both indigenous and non-indigenous species that were obtained as plants or propagules from wild stands, botanical gardens, plant materials centers, and commercial nurseries in North America and the circumpolar North (Appendix 1). When available, ten plants of each herbaceous perennial ornamental will be evaluated for a minimum of five years, and five plants of each woody landscape plant will be evaluated for 10 years. Subsequently, hardy perennials will be propagated and tested at other locations throughout the Interior and released for commercial propagation.

Plants are grown in the Herbaceous Perennial and Woody Ornamental Test Garden in the Georgeson Botanical Garden (see map on the last page) on a south-facing slope, elevation 475 - 487 feet. Soils are Fairbanks silt-loam that have been under cultivation since about 1910. Soils were amended with 1-2 inches of Lemeta peat in 1988. All plants receive full sun (a shade house will be completed in 1992) and are watered with overhead irrigation as needed. Weed control is primarily by hand and rototiller. In May 1991, Surflan® herbicide (60 gal/A) was applied to established plantings, but additional hand weeding was necessary. Unless otherwise noted, plants received no special winter protection such as mulching or screening.

Weather data is compiled annually from a U.S. Weather Service station (elevation 475 ft) located approximately 350 ft west of the test garden. A summary of pertinent weather statistics for 1989 through 1991 is shown in Table 1.

Plant Evaluation Tables

The information is summarized in three tables. Table 2 lists all the plant materials currently being evaluated. Table 3 lists all plants that have been evaluated but did not survive the minimum five-year evaluation period for herbaceous perennials and grasses or the minimum ten-year evaluation period for woody landscape plants. Table 4 lists current year's plantings that have not yet been evaluated for winter survival. Each of the three tables is further divided into three sections: herbaceous perennials, ornamental grasses and woody landscape plants.

Explanation of Tables

SCIENTIFIC NAME : The following references listed in order, were consulted for scientific names:

L.H. Bailey Hortorium. 1976. *Hortus III*. MacMillan Publishing Co., NY.

Fernald, M.L. 1970. *Gray's Manual of Botany*. 8th ed. D. Van Nostrand Company, NY.

Hultén, E. 1974. *Flora of Alaska and Neighboring Territories*. Stanford University Press, CA.

Harkness, M.G. and D. D'Angelo, eds. 1986. *Bernard E. Harkness Seedlist Handbook*. Timber Press, Portland.

Bluebird Nursery, Inc. 1990. Catalog. Clarkson, NE.

SOURCE : This column lists the private individual, botanical garden, agency, organization or commercial business that provided the plants or propagules. Complete names and addresses for the commercial sources and organizations are listed in Appendix 1.

NUMBER OF PLANTS : The total number of plants evaluated.

WINTER INJURY : A visual rating of winter injury was recorded each spring beginning in 1990. Data represent an average rating for the total number of plants evaluated using the scale listed below. Data are cumulative over all the years plants were evaluated.

0 = no visible injury

1 = slight winter injury

2 = moderate winter injury, recovery likely

3 = severe setback from winter injury, recovery questionable

4 = winterkilled

HEIGHT AND SPREAD : The maximum height and spread of herbaceous perennials and ornamental grasses and the average height and spread of woody landscape plants was recorded each summer. Some plants showed a significant difference in height between foliage and flowers/seed pods. For these plants, the first number listed is the foliage height, and the number in parentheses is the flower/seed pod height.

FLOWERING PERIOD : The flower symbol ☼ in each column denotes the weeks in each month when plants were flowering. For ornamental grasses, only the first observation of flowering is noted because the flowers are insignificant and the seed heads are usually present until snowfall. The fruit symbol 🍏 in the woody landscape plants section indicates the weeks when ornamental fruits are present.

FROST TOLERANT : A plus sign in each column indicates that the foliage or flowers of a particular plant showed no obvious damage after the first frost (+29°F on Aug 27 1991). A negative sign indicates frost damage.

PLOT LOCATION : The number in this column indicates the plot in the test garden where the specific test plants are located. Refer to the map on the last page of this publication for the physical location of each plot.

NUMBER OF YEARS SURVIVED : The total number of years that one or more of the plants being evaluated survived. Causes of plant death could be winterkill, improper site conditions, inadequate or improper field management practices, or mechanical injury. Suspected cause for a particular species or cultivar, if known, is listed in code in the comments section. Codes are defined in a footnote at the bottom of each page.

Acknowledgments

We gratefully acknowledge the assistance of the following employees and volunteers who helped plant and maintain the research test gardens:

Judy Binkley
 Karen Binkley
 Michael Brase
 Phillip Bruden
 Virginia (Ginger) Gauss
 Tryntje Helfferich
 Brad Hodges
 Eli Kilapsuk
 Melinda (Milly) Korth
 Judy Lynch

Table 1. Weather records for the test years.

| | Season | | |
|--|---------|--------|-------------------|
| | 1989 | 1990 | 1991 |
| Average temperature °F | | | |
| May | 46.7 | 52.2 | 48.9 |
| June | 57.8 | 59.6 | 60.8 |
| July | 62.9 | 64.1 | 59.7 |
| August | 58.8 | 58.4 | 53.0 |
| September | 47.6 | 44.3 | 47.9 |
| Seasonal temperature extremes | | | |
| Maximum | 86 | 90 | 93 |
| Minimum ¹ | -55 | -49 | -42 ³ |
| Growing season | | | |
| Last spring frost | May 24 | May 23 | May 16 |
| First fall frost | Sept 15 | Sept 8 | Aug 27 |
| Frost-free days | 114 | 108 | 103 |
| Rainfall (inches) ² | 6.70 | 13.20 | 6.28 |
| Snowfall (inches) ¹ | 71.4 | 131.6 | 40.0 ³ |
| ¹ September through April of following year ² May through September ³ September through December only | | | |

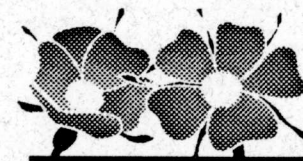


Table 2. All plant materials evaluated in 1991.

| SCIENTIFIC NAME | COMMON NAME | SOURCE | DATE PLANTED | NUMBER OF PLANTS | WINTER INJURY* | HEIGHT (in) | SPREAD (in) |
|--|----------------------|----------|--------------|------------------|----------------|-------------|-------------|
| HERBACEOUS PERENNIALS | | | | | | | |
| <i>Achillea millefolium</i> 'Summer Pastels' | Common Yarrow | AAS | Aug 90 | 10 | 0.5 | 22 (30) | 15 |
| <i>Anemone multifida</i> | Argentine anemone | ANPS | Aug 89 | 8 | 1.5 | 9 | 13 |
| <i>Anemone (Pulsatilla) patens</i> | Pasque flower | M.Earp | Aug 89 | 10 | 2.4 | 6 (15) | 9 |
| <i>Amica frigida</i> | | C.Parker | Aug 89 | 10 | 2.8 | 6 | 12 |
| <i>Amica latifolia</i> | Broadleaf anemone | ANPS | June 90 | 10 | 0.1 | 6 (12) | 11 |
| <i>Amica Lessingii</i> | | ARGS | June 90 | 10 | 0.5 | 20 | 32 |
| <i>Amica louiseana</i> | | NEWSFS | June 90 | 10 | 3.7 | 8 (18) | 8 |
| <i>Artemisia campestris</i> subsp. <i>borealis</i> | | ARGS | Oct 90 | 10 | 1.4 | 5 (28) | 9 |
| <i>Artemisia eriantha</i> | | ARGS | Oct 90 | 3 | 3.0 | 4 | 7 |
| <i>Bergenia cordifolia</i> 'Redstart' | Heartleaf bergenia | Park | Sept 89 | 10 | 2.2 | 8 (12) | 15 |
| <i>Bergenia cordifolia</i> 'Rose' | Heartleaf bergenia | Park | Sept 89 | 10 | 2.4 | 12 (18) | 20 |
| <i>Campanula rotundifolia</i> | Harebell | ANPS | Aug 89 | 9 | 3.2 | 12 | 10 |
| <i>Cerastium Beeringianum</i> | | C.Parker | Aug 89 | 10 | 0.5 | 5 (10) | 22 |
| <i>Cerastium tomentosum</i> | Snow-In-Summer | T&M | June 90 | 10 | 1.1 | 9 | 32 |
| <i>Chrysanthemum arcticum</i> 'Roseum' | Arctic chrysanthemum | NCRPIS | Aug 90 | 10 | 2.9 | 16 | 20 |
| <i>Chrysanthemum arcticum</i> 'Schwefelglanz' | Arctic chrysanthemum | NCRPIS | Aug 90 | 9 | 2.7 | 17 | 21 |
| <i>Dianthus arenarius</i> | Sand pink | ARGS | June 90 | 10 | 0.7 | 4 (12) | 14 |
| <i>Dianthus arenarius</i> | Sand pink | T&M | June 90 | 2 | 2.0 | 12 | 15 |
| <i>Dianthus arenarius</i> (pink) | Sand pink | ARGS | June 90 | 10 | 0.5 | 5 (8) | 14 |

* Winter Injury Rating : 0 = no visible injury, 1 = slight winter injury, 2 = moderate winter injury, recovery likely, 3 = severe setback from winter injury, recovery questionable, 4 = winterkilled

Table 2. (continued)

| SCIENTIFIC NAME | COMMON NAME | SOURCE | DATE PLANTED | NUMBER OF PLANTS | WINTER INJURY* | HEIGHT (in) | SPREAD (in) |
|--|--------------------|--------|--------------|------------------|----------------|-------------|-------------|
| <i>Dianthus arenarius</i> subsp. <i>borussicus</i> | Sand pink | ARGS | June 90 | 10 | 0.2 | 5 (12) | 14 |
| <i>Dianthus armeria</i> | Deptford pink | NCRPIS | June 90 | 10 | 2.9 | 20 | 20 |
| <i>Dianthus callizonus</i> | Zoned pink | ARGS | June 90 | 6 | 2.5 | 3 (7) | 8 |
| <i>Dianthus carthusianorum</i> | Carthusian pink | T&M | June 90 | 10 | 0.0 | 15 | 10 |
| <i>Dianthus chinensis</i> | Chinese pink | NCRPIS | June 90 | 10 | 0.7 | 17 | 20 |
| <i>Dianthus Freynii</i> | | ARGS | June 90 | 6 | 0.7 | 18 | 20 |
| <i>Dianthus gratianopolitanus</i> 'T&M Hybrid Mix' | Cheddar pink | T&M | June 90 | 9 | 2.0 | 13 | 20 |
| <i>Dianthus gratianopolitanus</i> 'Elfin's Hat' | Cheddar pink | T&M | June 90 | 9 | 1.8 | 18 | 19 |
| <i>Dianthus pavonius</i> | | ARGS | June 90 | 10 | 0.4 | 3 (6) | 12 |
| <i>Dianthus plumarius</i> 'Smokey' | Cottage pink | NCRPIS | June 90 | 7 | 0.3 | 17 | 16 |
| <i>Dianthus</i> 'Orchid Lace' | Cottage pink | T&M | June 90 | 10 | 0.1 | 20 | 20 |
| <i>Dianthus repens</i> | Bering pink | ARGS | June 90 | 4 | 1.2 | 15 | 24 |
| <i>Dianthus superbus</i> 'Fantasy Mix' | Lilac pink | T&M | June 90 | 10 | 0.0 | 31 | 30 |
| <i>Erigeron compositus</i> | Fernleaf fleabane | ANPS | June 90 | 10 | 1.5 | 4 (9) | 8 |
| <i>Erigeron glabellus</i> | Smooth fleabane | ANPS | June 90 | 10 | 0.8 | 10 (22) | 13 |
| <i>Fillipendula vulgaris</i> | Dropwort | Park | Aug 89 | 7 | | 15 (32) | 22 |
| <i>Geranium Endressii</i> 'Wargrave' | Endres cranesbill | VB&S | June 90 | 10 | 2.7 | 14 (18) | 28 |
| <i>Geranium Regellii</i> | | VB&S | June 90 | 10 | 0.0 | 24 | 34 |
| <i>Geranium sanguineum</i> | Blood-red geranium | VB&S | June 90 | 6 | 2.8 | 9 | 12 |

* Winter Injury Rating : 0 = no visible injury, 1 = slight winter injury, 2 = moderate winter injury, recovery likely, 3 = severe setback from winter injury, recovery questionable, 4 = winterkilled

| MAY | WEEKLY BLOOM PERIOD | | | | | BLOOM COLOR | FROST TOLERANT | | COMMENTS | PLOT LOCATION | SCIENTIFIC NAME |
|-----|---------------------|------------|------------|------------|------------|----------------------|-------------------|---|---|------------------|---|
| | JUN | JUL | AUG | SEP | flowers | | foliage | | | | |
| | | ☼☼☼☼☼☼☼☼☼☼ | ☼☼☼☼☼☼☼☼☼☼ | | | white | + | + | | 7 | <i>D. arenarius</i> subsp. <i>borussicus</i> |
| | | | ☼☼☼☼☼☼☼☼☼☼ | ☼☼☼☼☼☼☼☼☼☼ | | magenta | + | + | | 11 | <i>Dianthus armeria</i> |
| | ☼☼☼☼☼☼☼☼☼☼ | ☼☼☼☼☼☼☼☼☼☼ | ☼☼☼☼☼☼☼☼☼☼ | ☼☼☼☼☼☼☼☼☼☼ | | pink | + | + | | 7 | <i>D. callizonus</i> |
| | | ☼☼☼☼☼☼☼☼☼☼ | ☼☼☼☼☼☼☼☼☼☼ | ☼☼☼☼☼☼☼☼☼☼ | | magenta | + | + | | 7 | <i>D. carthusianorum</i> |
| | ☼☼☼☼☼☼☼☼☼☼ | ☼☼☼☼☼☼☼☼☼☼ | ☼☼☼☼☼☼☼☼☼☼ | ☼☼☼☼☼☼☼☼☼☼ | ☼☼☼☼☼☼☼☼☼☼ | pink | + | + | | 11 | <i>D. chinensis</i> |
| | ☼☼☼☼☼☼☼☼☼☼ | ☼☼☼☼☼☼☼☼☼☼ | ☼☼☼☼☼☼☼☼☼☼ | ☼☼☼☼☼☼☼☼☼☼ | | pink, white | + | + | variable plant form and bloom color | 7 | <i>D. Freynii</i> |
| | | ☼☼☼☼☼☼☼☼☼☼ | ☼☼☼☼☼☼☼☼☼☼ | ☼☼☼☼☼☼☼☼☼☼ | ☼☼☼☼☼☼☼☼☼☼ | red, rose mix | + | + | plants variable, foliage color varies | 7 | <i>D. gratianopolitanus</i> 'T&M Hybrid Mix' |
| | | ☼☼☼☼☼☼☼☼☼☼ | ☼☼☼☼☼☼☼☼☼☼ | ☼☼☼☼☼☼☼☼☼☼ | ☼☼☼☼☼☼☼☼☼☼ | rose | + | + | | 7 | <i>Dianthus</i> 'Elfin's Hat' |
| | | ☼☼☼☼☼☼☼☼☼☼ | ☼☼☼☼☼☼☼☼☼☼ | ☼☼☼☼☼☼☼☼☼☼ | | pink | + | + | | 7 | <i>D. pavonius</i> |
| | ☼☼☼☼☼☼☼☼☼☼ | ☼☼☼☼☼☼☼☼☼☼ | ☼☼☼☼☼☼☼☼☼☼ | ☼☼☼☼☼☼☼☼☼☼ | | pink | + | + | blooms fade to white | 11 | <i>Dianthus</i> 'Smokey' |
| | ☼☼☼☼☼☼☼☼☼☼ | ☼☼☼☼☼☼☼☼☼☼ | ☼☼☼☼☼☼☼☼☼☼ | ☼☼☼☼☼☼☼☼☼☼ | | orchid | + | + | very attractive in bloom | 7 | <i>Dianthus</i> 'Orchid Lace' |
| | | ☼☼☼☼☼☼☼☼☼☼ | ☼☼☼☼☼☼☼☼☼☼ | ☼☼☼☼☼☼☼☼☼☼ | | pink | + | + | | 7 | <i>D. repens</i> |
| | | | ☼☼☼☼☼☼☼☼☼☼ | ☼☼☼☼☼☼☼☼☼☼ | | white to lavender | + | + | | 7 | <i>Dianthus</i> 'Fantasy Mix' |
| | | ☼☼☼☼☼☼ | | | | pale lavender | | + | | 11 | <i>Erigeron compositus</i> |
| | ☼☼☼☼☼☼☼☼☼☼ | ☼☼☼☼☼☼☼☼☼☼ | ☼☼☼☼☼☼☼☼☼☼ | | | lavender | + | + | blooms fade to white | 11 | <i>E. glabellus</i> |
| | | ☼☼☼☼☼☼☼☼☼☼ | ☼☼☼☼☼☼☼☼☼☼ | ☼☼☼☼☼☼☼☼☼☼ | ☼☼☼☼☼☼☼☼☼☼ | white | + | + | plants flowered at different times | 4 | <i>Fillipendula</i> |
| | | ☼☼☼☼☼☼☼☼☼☼ | ☼☼☼☼☼☼☼☼☼☼ | ☼☼☼☼☼☼☼☼☼☼ | | pink | + | + | | 11 | <i>Geranium Endressii</i> |
| | ☼☼☼☼☼☼☼☼☼☼ | ☼☼☼☼☼☼☼☼☼☼ | ☼☼☼☼☼☼☼☼☼☼ | ☼☼☼☼☼☼☼☼☼☼ | | blue violet | + | + | foliage on 4 plants became discolored and plants died back in August | 11 | <i>G. Regellii</i> |
| | | ☼☼☼☼☼☼ | | ☼☼ | | magenta | + | + | | 11 | <i>G. sanguineum</i> |

Table 2. (continued)

| SCIENTIFIC NAME | COMMON NAME | SOURCE | DATE PLANTED | NUMBER OF PLANTS | WINTER INJURY* | HEIGHT (in) | SPREAD (in) |
|---|---------------------|------------|--------------|------------------|----------------|-------------|-------------|
| <i>Geranium sanguineum</i> | Blood-red geranium | ARGS | June 90 | 10 | 3.0 | 8 | 11 |
| <i>Hemerocallis minor</i> | Grass-leaf daylily | NCRPIS | Aug 90 | 9 | 1.6 | 18 | 6 |
| <i>Heracleum Sphondylium</i> subsp. <i>montanum</i> | | NEWFS | Oct 90 | 5 | 0.0 | 21 | 40 |
| <i>Hieracium umbellatum</i> | Yellow hawkweed | ANPS | Aug 89 | 10 | 0.4 | 28 | 20 |
| <i>Iris scariosa</i> | | J.Grant | Sept 89 | 7 | 1.4 | 14 | 7 |
| <i>Lilium</i> 'Corina' | Asiatic hybrid lily | VB&S | Aug 90 | 10 | 0.5 | 34 | 11 |
| <i>Lilium</i> 'Fireball' | Asiatic hybrid lily | VB&S | Aug 90 | 10 | 0.7 | 26 | 10 |
| <i>Lilium</i> 'Freckles' | Asiatic hybrid lily | VB&S | Aug 90 | 10 | 0.7 | 28 | 10 |
| <i>Lilium</i> 'French Vanilla' | Asiatic hybrid lily | VB&S | Aug 90 | 10 | 0.9 | 20 | 11 |
| <i>Lilium</i> 'Juliana' | Asiatic hybrid lily | VB&S | Aug 90 | 10 | 0.1 | 22 | 10 |
| <i>Lilium</i> 'Pink Chiffon' | Asiatic hybrid lily | VB&S | Aug 90 | 10 | 1.3 | 16 | 10 |
| <i>Lilium</i> 'Poet's Dream' | Asiatic hybrid lily | VB&S | Aug 90 | 10 | 0.3 | 26 | 9 |
| <i>Lilium</i> 'Prince Carnival' | Asiatic hybrid lily | VB&S | Aug 90 | 10 | 0.9 | 24 | 8 |
| <i>Lilium</i> 'Rainbow' | Asiatic hybrid lily | VB&S | Aug 90 | 10 | 0.6 | 34 | 9 |
| <i>Lilium</i> 'Rose Fire' | Asiatic hybrid lily | VB&S | Aug 90 | 10 | 0.2 | 26 | 10 |
| <i>Lilium</i> 'Tribute' | Asiatic hybrid lily | VB&S | Aug 90 | 10 | 0.3 | 24 | 9 |
| <i>Lilium</i> 'Vanessa' | Asiatic hybrid lily | VB&S | Aug 90 | 10 | 0.0 | 38 | 11 |
| <i>Lupinus polyphyllus</i> | Washington lupine | P.Holloway | Aug 89 | 7 | 0.8 | 22 | 28 |
| <i>Lysimachia punctata</i> | Garden loosestrife | T&M | Aug 90 | 10 | 3.3 | 16 | 14 |

* Winter Injury Rating : 0 = no visible injury, 1 = slight winter injury, 2 = moderate winter injury, recovery likely, 3 = severe setback from winter injury, recovery questionable, 4 = winterkilled

| WEEKLY BLOOM PERIOD | | | | | BLOOM COLOR | FROST TOLERANT | | COMMENTS | PLOT LOCATION | SCIENTIFIC NAME |
|---------------------|------|----------|----------|----------|----------------|-------------------|---------|-----------------|------------------|------------------------------------|
| MAY | JUN | JUL | AUG | SEP | | flowers | foliage | | | |
| | | ☼☼☼☼☼☼☼☼ | ☼☼☼☼☼☼☼☼ | | magenta | + | + | | 11 | <i>G. sanguineum</i> |
| | | | | | | | + | | 12 | <i>Hemerocallis</i> |
| | | | | | | | + | | 15 | <i>Heracleum</i> |
| | | ☼☼☼☼☼☼☼☼ | ☼☼☼☼☼☼☼☼ | ☼☼☼☼☼☼☼☼ | yellow | + | + | reseeds readily | 4 | <i>Hieracium</i> |
| | | | | | | | + | | 7 | <i>Iris</i> |
| | | ☼☼☼☼☼☼☼☼ | ☼☼☼☼☼☼☼☼ | ☼☼☼☼☼☼☼☼ | deep orange | + | + | | 12 | <i>Lilium</i> 'Corinda' |
| | | ☼☼☼☼☼☼☼☼ | ☼☼☼☼☼☼☼☼ | ☼☼☼☼☼☼☼☼ | burgundy | + | + | | 12 | <i>Lilium</i> 'Fireball' |
| | | ☼☼☼☼☼☼☼☼ | ☼☼☼☼☼☼☼☼ | ☼☼☼☼☼☼☼☼ | red | + | + | | 12 | <i>Lilium</i> 'Freckles' |
| | | ☼☼☼☼☼☼☼☼ | ☼☼☼☼☼☼☼☼ | ☼☼☼☼☼☼☼☼ | light yellow | + | + | | 12 | <i>Lilium</i> 'French Vanilla' |
| | | ☼☼☼☼☼☼☼☼ | ☼☼☼☼☼☼☼☼ | | light yellow | | + | | 12 | <i>Lilium</i> 'Julliana' |
| | | | ☼☼☼☼☼ | | pink | | + | | 12 | <i>Lilium</i> 'Pink Chiffon' |
| | | ☼☼☼☼☼☼☼☼ | ☼☼☼☼☼☼☼☼ | ☼☼☼☼☼☼☼☼ | white/rose | + | + | | 12 | <i>Lilium</i> 'Poet's Dream' |
| | | | ☼☼☼☼☼☼☼☼ | ☼☼☼☼☼☼☼☼ | pink | + | + | | 12 | <i>Lilium</i> 'Prince Carnival' |
| | | ☼☼☼☼☼☼☼☼ | ☼☼☼☼☼☼☼☼ | ☼☼☼☼☼☼☼☼ | red | + | + | | 12 | <i>Lilium</i> 'Rainbow' |
| | | ☼☼☼☼☼☼☼ | | | orange/gold | | + | | 12 | <i>Lilium</i> 'Rose Fire' |
| | | | ☼☼☼☼☼ | | coral | | + | | 12 | <i>Lilium</i> 'Tribute' |
| | | | ☼☼☼☼☼☼☼☼ | | bright yellow | + | + | | 12 | <i>Lilium</i> 'Vanessa' |
| | ☼☼☼☼ | | | | blue | | + | | 4 | <i>Lupinus</i> |
| | | ☼☼☼☼☼☼☼☼ | ☼☼☼☼☼☼☼☼ | ☼☼☼☼☼☼☼☼ | yellow | + | + | | 12 | <i>Lysimachia</i> |

Table 2. (continued)

| SCIENTIFIC NAME | COMMON NAME | SOURCE | DATE PLANTED | NUMBER OF PLANTS | WINTER INJURY* | HEIGHT (in) | SPREAD (in) |
|---|----------------------|----------|--------------|------------------|----------------|-------------|-------------|
| <i>Malva moschata</i> | Musk mallow | T&M | June 90 | 9 | 3.3 | 22 | 12 |
| <i>Myosotis alpestris</i> | Alpine forget-me-not | ANPS | June 90 | 10 | 2.3 | 6 | 7 |
| <i>Papaver alaskanum</i> | | ANPS | June 90 | 10 | 1.9 | 8 (15) | 12 |
| <i>Polemonium caeruleum</i> subsp. <i>villosum</i> | Jacob's-ladder | C.Parker | Aug 89 | 4 | 1.0 | | |
| <i>Primula incana</i> | | J.Grant | Aug 89 | 10 | 1.3 | 3 (10) | 4 |
| <i>Rubus parvifolius</i> | Japanese raspberry | NCRPIS | Sept 89 | 5 | 1.8 | 24 | 48+ |
| <i>Solidago decumbens</i> | Decumbent goldenrod | ANPS | Aug 89 | 10 | 1.6 | 21 | 20 |
| <i>Stellaria monantha</i> | | D.Dinkel | Aug 89 | 10 | 1.6 | 6 | 32 |
| <i>Tripleurospermum phaeocephalum</i> | | ANPS | June 90 | 10 | 3.7 | 7 (13) | 16 |
| ORNAMENTAL GRASSES | | | | | | | |
| <i>Andropogon Gerardii</i> 'Pawnee' | Big bluestem | Bluebird | Aug 90 | 3 | 2.7 | 34 | 12 |
| <i>Arrhenatherum elatius</i> 'Variegatum' | Tall oat grass | Bluebird | Aug 90 | 2 | 2.0 | 15 (24) | 12 |
| <i>Calamagrostis acutiflora</i> var. <i>stricta</i> | Feather reed grass | Bluebird | Aug 90 | 1 | 0.0 | 34 (69) | 24 |
| <i>Calamagrostis arundinacea</i> 'Karl Foerster' | | Bluebird | Aug 90 | 2 | 0.0 | 30 (68) | 14 |
| <i>Carex muskingumensis</i> | Palm sedge | NEWFS | July 90 | 8 | 2.6 | 22 | 14 |
| <i>Carex nigra</i> | Black sedge | Bluebird | July 90 | 9 | 3.1 | 8 | 10 |
| <i>Deschampsia caespitosa</i> 'Bronzeschleier' | Tufted hair grass | Bluebird | Aug 90 | 2 | 0.0 | 24 (46) | 24 |
| <i>Deschampsia caespitosa</i> 'Goldgehaenge' | Tufted hair grass | Bluebird | Aug 90 | 4 | 0.0 | 18 (38) | 22 |

* Winter Injury Rating : 0 = no visible injury, 1 = slight winter injury, 2 = moderate winter injury, recovery likely, 3 = severe setback from winter injury, recovery questionable, 4 = winterkilled

Table 2. (continued)

| SCIENTIFIC NAME | COMMON NAME | SOURCE | DATE PLANTED | NUMBER OF PLANTS | WINTER INJURY* | HEIGHT (in) | SPREAD (in) |
|---|---------------------|----------|--------------|------------------|----------------|-------------|-------------|
| <i>Deschampsia caespitosa</i> 'Goldschleier' | Tufted hair grass | Bluebird | Aug 90 | 1 | 0.0 | 20 (36) | 22 |
| <i>Deschampsia flexuosa</i> | Crinkled hair grass | Bluebird | Aug 89 | 12 | 2.6 | 9 (32) | 10 |
| <i>Festuca amethystina</i> | Large blue fescue | Bluebird | Aug 89 | 10 | 1.6 | 12 (24) | 12 |
| <i>Festuca scoparia</i> | Bearskin grass | Bluebird | Aug 90 | 1 | 2.0 | 3 | 4 |
| <i>Festuca valesiaca</i> 'Glauca' | Swiss fescue | Bluebird | Aug 90 | 3 | 0.3 | 12 (18) | 13 |
| <i>Helictotrichon sempervirens</i> | Blue oat grass | Bluebird | Aug 90 | 1 | 1.0 | 15 | 7 |
| <i>Hystrix patula</i> | Bottle brush grass | Bluebird | Aug 89 | 12 | 3.0 | 31 | 12 |
| <i>Koeleria glauca</i> | Blue hair grass | Bluebird | Aug 89 | 10 | 1.2 | 11 (23) | 13 |
| <i>Koeleria glauca</i> | Blue hair grass | T&M | July 90 | 10 | 2.5 | 9 (21) | 12 |
| <i>Melica ciliata</i> | Silky-spike melic | Bluebird | Aug 89 | 10 | 2.2 | 20 (35) | 15 |
| <i>Phalaris arundinacea</i> var. <i>picta</i> | Ribbon grass | Bluebird | Aug 89 | 11 | 0.6 | 40 (56) | 42 |
| <i>Sesleria autumnalis</i> | Autumn moor grass | Bluebird | Aug 90 | 2 | 0.5 | 14 (24) | 10 |
| WOODY PERENNIALS | | | | | | | |
| <i>Actinidia kolomikta</i> | Kolomikta kiwi | BCN | Sept 89 | 5 | 2.0 | 24 | 48 |
| <i>Betula occidentalis</i> | Water birch | NCRPIS | June 90 | 3 | 2.0 | 37 | 49 |
| <i>Betula michauxii</i> | | ARGS | Sept 90 | 5 | 1.0 | 9 | 26 |
| <i>Betula</i> sp. | | NCRPIS | June 90 | 3 | 1.3 | 60 | 72 |
| <i>Caragana manshurica</i> | | NCRPIS | Sept 90 | 5 | 3.6 | 24 | 6 |

* Winter Injury Rating : 0 = no visible injury, 1 = slight winter injury, 2 = moderate winter injury, recovery likely, 3 = severe setback from winter injury, recovery questionable, 4 = winterkilled

| WEEKLY BLOOM PERIOD | | | | | BLOOM COLOR | FROST TOLERANT | | COMMENTS | PLOT LOCATION | SCIENTIFIC NAME |
|---------------------|-----|-----|-----|-----|----------------|-------------------|---------|-----------------------------|------------------|--------------------------------------|
| MAY | JUN | JUL | AUG | SEP | | flowers | foliage | | | |
| | ☼ | | | | | | + | | 8 | <i>Deschampsia</i> 'Goldschleier' |
| | ☼ | | | | | | + | | 8 | <i>D. flexuosa</i> |
| | ☼ | | | | | | + | | 8 | <i>Festuca amethystina</i> |
| | | | | | | | + | | 8 | <i>F. scoparia</i> |
| | ☼ | | | | | | + | | 8 | <i>F. valeslaca</i> |
| | | | | | | | + | | 8 | <i>Helictotrichon</i> |
| | | ☼ | | | | | + | reddish fall color | 8 | <i>Hystrix</i> |
| | ☼ | | | | | | + | blue-green color | 8 | <i>Koeleria glauca</i> |
| | ☼ | | | | | | + | | 8 | <i>K. glauca</i> |
| | ☼ | | | | | | + | | 8 | <i>Melica</i> |
| | ☼ | | | | | | + | striking variegated foliage | 8 | <i>Phalaris</i> |
| | | | | | | | + | | 8 | <i>Sesleria</i> |
| | | | | | | | | | | |
| | | | | | | | - | | 3 | <i>Actinidia</i> |
| | | | | | | | + | | 3 | <i>Betula occidentalis</i> |
| | | | | | | | + | | 14 | <i>B. michauxii</i> |
| | | | | | | | + | | 3 | <i>Betula sp.</i> |
| | | | | | | | + | | 14 | <i>Caragana</i> |

Table 2. (continued)

| SCIENTIFIC NAME | COMMON NAME | SOURCE | DATE PLANTED | NUMBER OF PLANTS | WINTER INJURY* | HEIGHT (in) | SPREAD (in) |
|--|----------------------|-------------|--------------|------------------|----------------|-------------|-------------|
| <i>Crataegus monogyna</i> | Single-seed hawthorn | NCRPIS | June 90 | 3 | 1.3 | 37 | 34 |
| <i>Forsythia ovata</i> | Early forsythia | NCRPIS | Sept 90 | 5 | 2.2 | 15 | 23 |
| <i>Forsythia ovata</i> 'Nakai' | Early forsythia | NCRPIS | Sept 90 | 5 | 1.6 | 29 | 24 |
| <i>Larix decidua</i> | European larch | PMC | Sept 90 | 5 | 3.6 | 10 | 8 |
| <i>Larix Gmelinii</i> var. <i>Gmelinii</i> | Dahurian larch | PMC | Sept 90 | 4 | 3.0 | 15 | 7 |
| <i>Larix Gmelinii</i> var. <i>olgensis</i> | Dahurian larch | PMC | Sept 90 | 5 | 3.6 | 12 | 8 |
| <i>Larix Gmelinii</i> var. <i>principis</i> | Dahurian larch | PMC | Sept 90 | 5 | 3.6 | 14 | 8 |
| <i>Lonicera Maackii</i> | Amur honeysuckle | NCRPIS | June 90 | 5 | 3.2 | 29 | 52 |
| <i>Lonicera tatarica</i> 'Beavermor' | Tatarian honeysuckle | Beaverlodge | Sept 89 | 5 | 1.0 | 47 | 60 |
| <i>Lonicera tatarica</i> 'Siberica' | Tatarian honeysuckle | NCRPIS | June 90 | 3 | 0.3 | 45 | 58 |
| <i>Physocarpus opulifolius</i> 'Nugget' | Ninebark | NCRPIS | Sept 89 | 5 | 2.0 | 37 | 59 |
| <i>Physocarpus</i> sp. | Ninebark | NCRPIS? | Sept 89 | 5 | 1.2 | 42 | 51 |
| <i>Picea Engelmannii</i> | Engelmann spruce | Schumacher | Sept 89 | 5 | 0.2 | 11 | 9 |
| <i>Picea glauca</i> var. <i>albertiana</i> | Alberta spruce | GBG | Sept 89 | 5 | 0.0 | 14 | 8 |
| <i>Pinus cembra</i> | Swiss stone pine | Schumacher | Sept 89 | 5 | 0.6 | 4 | 3 |
| <i>Pinus pumila</i> | Dwarf stone pine | Schumacher | Sept 89 | 5 | 2.0 | 3 | 2 |
| <i>Populus deltoides</i> X <i>Petrowskiana</i> 'Brooks #6' | | NCRPIS | June 90 | 2 | 1.4 | 71 | 76 |
| <i>Populus</i> 'Tower' | | PMC | June 90 | 5 | 2.0 | 79 | 56 |
| <i>Populus tremula</i> 'Erecta' | Upright European ash | KHN | June 90 | 5 | 1.8 | 52 | 22 |

* Winter Injury Rating : 0 = no visible injury, 1 = slight winter injury, 2 = moderate winter injury, recovery likely, 3 = severe setback from winter injury, recovery questionable, 4 = winterkilled

| WEEKLY BLOOM PERIOD | | | | | BLOOM COLOR | FROST TOLERANT | | COMMENTS | PLOT LOCATION | SCIENTIFIC NAME |
|---------------------|----------|----------|----------|-----|---------------------|-------------------|---------|----------|------------------|---|
| MAY | JUN | JUL | AUG | SEP | | flowers | foliage | | | |
| | | | | | | | + | | 3 | <i>Crataegus</i> |
| | | | | | | | + | | 14 | <i>Forsythia ovata</i> |
| | | | | | | | + | | 14 | <i>Forsythia 'Nakai'</i> |
| | | | | | | | + | | 9 | <i>Larix decidua</i> |
| | | | | | | | + | | 9 | <i>L. Gmelinii</i> var. <i>Gmelinii</i> |
| | | | | | | | + | | 9 | <i>L. Gmelinii</i> var. <i>olgensis</i> |
| | | | | | | | + | | 9 | <i>L. Gmelinii</i> var. <i>principis</i> |
| | | | | | | | + | | 3 | <i>Lonicera Maackii</i> |
| | | ●●●●●●●● | ●●●●●●●● | | white red fruits | | + | | 2 | <i>Lonicera 'Beavermor'</i> |
| | | | | | | | + | | 3 | <i>Lonicera 'Siberica'</i> |
| | ●●●●●●●● | ●●●●●●●● | ●●●●●●●● | | white | | + | | 2 | <i>Physocarpus 'Nugget'</i> |
| | ●●●●●●●● | ●●●●●●●● | ●●●●●●●● | | white | | + | | 2 | <i>Physocarpus. sp.</i> |
| | | | | | | | + | | 9 | <i>Picea Engelmanni</i> |
| | | | | | | | + | | 9 | <i>P. glauca</i> var. <i>albertiana</i> |
| | | | | | | | + | | 9 | <i>Pinus cembra</i> |
| | | | | | | | + | | 9 | <i>P. pumila</i> |
| | | | | | | | + | | 3 | <i>Populus 'Brooks #6'</i> |
| | | | | | | | + | | 3 | <i>Populus 'Tower'</i> |
| | | | | | | | + | | 3 | <i>Populus 'Erecta'</i> |

| WEEKLY BLOOM PERIOD | | | | | BLOOM COLOR | FROST TOLERANT | | COMMENTS | PLOT LOCATION | SCIENTIFIC NAME |
|---------------------|-----|-----|-------------------|-----|----------------|-------------------|---------|--|------------------|--|
| MAY | JUN | JUL | AUG | SEP | | flowers | foliage | | | |
| | | | | | | | + | | 2 | <i>Prunus fruticosa</i> |
| | | | | | | | + | surviving plants grew back from roots | 2 | <i>Prunus</i> 'Scarlet' |
| | | | | | | | + | winter killed to ground, plants grew back from roots | 2 | <i>P. salicina</i> <i>mandshurica</i> |
| | | | | | | | + | winter killed to ground, plants grew back from roots | 3 | <i>P. sargentii</i> |
| | | | | | | | + | | 3 | <i>Ribes</i> |
| | | | | | | | + | winter killed to ground, plants grew back from roots | 2 | <i>Salix</i> |
| | | | ⊗ ⊗ ⊗ ⊗ ⊗ ⊗ ⊗ ⊗ ⊗ | | white | + | + | | 2 | <i>Sorbaria</i> |
| | | | | | | | + | | 3 | <i>Viburnum</i> |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |

Table 3. All plants that have been evaluated but did not survive the minimum number of test years.*

| SCIENTIFIC NAME | COMMON NAME | SOURCE | YEAR PLANTED | NUMBER OF PLANTS | NUMBER OF YEARS SURVIVED | COMMENTS |
|--|---------------------------|-------------|--------------|------------------|--------------------------|----------|
| HERBACEOUS PERENNIALS | | | | | | |
| <i>Dianthus capitatus</i> | | NCRPIS | 1990 | 10 | 0 | A |
| <i>Dianthus glacialis</i> | Ice pink | T&M | 1990 | 1 | 0 | A |
| <i>Dianthus superbus</i> | Lilac pink | NCRPIS | 1990 | 10 | 0 | A |
| <i>Dryas Drummondii</i> | Drummond dryad | ANPS | Aug 89 | 10 | 1 | C |
| <i>Erigeron erlocephalus</i> | Fleabane | ANPS | June 90 | 10 | 0 | A |
| <i>Erigeron purpuratus</i> | Fleabane | ANPS | Aug 89 | 10 | 1 | B,C |
| <i>Gypsophila cerastiodes</i> | Mous ear gypsophila | ARGS | June 90 | 8 | 0 | A |
| <i>Gypsophila globulosa</i> | | NCRPIS | June 90 | 10 | 0 | A |
| <i>Hedysarum Mackenzii</i> | Wild sweet pea | ANPS | Aug 89 | 3 | 1 | B |
| <i>Kitabeta vitifolia</i> | | NCRPIS | June 90 | 10 | 0 | A |
| <i>Malva sylvestris</i> | High mallow | T&M | June 90 | 10 | 0 | A |
| <i>Papaver kernerii</i> | Poppy | ARGS | June 90 | 7 | 0 | A,D |
| <i>Potentilla pensylvanica</i> | Pennsylvania cinquefoil | J.Grant | Sept 89 | 3 | 0 | A |
| <i>Potentilla</i> sp. | | ANPS | Aug 89 | 10 | 1 | |
| <i>Primula vulgaris</i> 'Dania Mix' | English primrose | Daehnfelddt | Sept 89 | 10 | 0 | A |
| <i>Prunella vulgaris</i> | Common selfheal | ANPS | Aug 89 | 10 | 0 | A |
| <i>Smelowskia pyriformis</i> | | C.Parker | Aug 89 | 3 | 0 | A,D |
| <i>Taraxacum carneocoloratum</i> | | C.Parker | Aug 89 | 9 | 1 | |
| <i>Tellima grandiflora</i> | Alaska fringe cup | NEWFS | Sept 89 | 10 | 0 | A |
| <i>Xerophyllum tenax</i> | Bear grass | Lawyer | Aug 90 | 10 | 1 | E |
| ORNAMENTAL GRASSES | | | | | | |
| <i>Bouteloua curtipendula</i> 'Trailway' | Sideoats grama | Bluebird | Aug 90 | 4 | 0 | A |
| <i>Bouteloua gracilis</i> | Blue grama | Bluebird | Aug 89 | 7 | 1 | |
| <i>Carex Morrowii</i> var. <i>aureo-variegata</i> 'Old Gold' | Variegated Japanese sedge | Bluebird | Aug 89 | 11 | 0 | A |
| <i>Carex ornithopoda</i> 'Variegata' | | Bluebird | Aug 89 | 10 | 1 | |
| <i>Carex pendula</i> | Sedge grass | Bluebird | Aug 89 | 11 | 0 | A |
| <i>Chasmanthium latifolium</i> | Sea oats | Bluebird | Aug 90 | 1 | 0 | A |
| <i>Eragrostis trichodes</i> | Sand love grass | Bluebird | Aug 89 | 10 | 0 | A |
| <i>Imperata cylindrica</i> var. <i>rubra</i> 'Red Baron' | Japnaese blood grass | Bluebird | Aug 90 | 4 | 0 | A |
| <i>Panicum virgatum</i> 'Pathfinder' | Switch-grass | Bluebird | Aug 89 | 12 | 0 | A |
| <i>Pennisetum alopecuroides</i> | Chinese pennisetum | Bluebird | Aug 89 | 11 | 0 | A |
| <i>Pennisetum flaccidum</i> | | Bluebird | Aug 89 | 10 | 0 | A |
| <i>Schizachyrium scoparium</i> 'Blaze' | Little bluestem | Bluebird | Aug 89 | 11 | 1 | |
| <i>Sorghastrum avenaceum</i> | Indian grass | Bluebird | Aug 89 | 11 | 0 | A |
| <i>Sporobolus airoides</i> | Greater dropseed | Bluebird | Aug 90 | 2 | 0 | A |

Key to Comments : A = did not survive first winter, B = mechanical injury caused loss, C = spring drought may have caused mortality, D = weak going into fall, E = very weak after winter.

* Minimum number of test years = 5 years for herbaceous perennials, = 10 years for woody landscape plants.

Table 4. Plantings from 1991 that have not yet been evaluated for winter survival.

| SCIENTIFIC NAME | COMMON NAME | SOURCE | DATE PLANTED | NUMBER OF PLANTS |
|--|-------------------------|--------------|--------------|------------------|
| HERBACEOUS PERENNIALS | | | | |
| <i>Achillea borealis</i> | Yarrow | P. Wagner | Oct 91 | 3 |
| <i>Aconitum volubile</i> | Monkshood | T&M | Sept 91 | 2 |
| <i>Alchemilla alpinamollis</i> | Mountain ladysmantle | Park | Sept 91 | 10 |
| <i>Allium cernuum</i> | Nodding onion | NEWFS | Aug 91 | 10 |
| <i>Allium</i> sp. | | VASKHNIL | Aug 91 | 10 |
| <i>Androsace septentrionalis</i> | Pygmy flower | WNS | June 91 | 10 |
| <i>Anemone alpina</i> subsp. <i>sulfurea</i> | Sulfur alpine anemone | ANPS | June 91 | 3 |
| <i>Anemone Halleri</i> | Haller anemone | ANPS | June 91 | 7 |
| <i>Anemone virginiana</i> | Thimbleweed | NEWFS | June 91 | 10 |
| <i>Aquilegia atrata</i> | | ARGS | Aug 91 | 7 |
| <i>Aquilegia brevistyla</i> | Yukon columbine | ANPS | June 91 | 10 |
| <i>Aquilegia Buegerana</i> | | ARGS | Aug 91 | 10 |
| <i>Aquilegia formosa</i> | Sitka columbine | ANPS | Aug 91 | 10 |
| <i>Aquilegia pyrenaica</i> | Pyrenees columbine | ARGS | Aug 91 | 7 |
| <i>Aquilegia sibirica</i> | Siberian columbine | ARGS | Aug 91 | 10 |
| <i>Aquilegia vulgaris</i> | Garden columbine | T&M | Aug 91 | 2 |
| <i>Aquilegia</i> sp. 'Dynasty' | | J. Bittner | June 91 | 10 |
| <i>Aquilegia</i> sp. 'McKana Giant Hybrids' | | T&M | Aug 91 | 10 |
| <i>Aquilegia</i> sp. 'Nora Barlow' | | Park | Aug 91 | 10 |
| <i>Aquilegia</i> sp. 'Star McKana Mix' | | Park | Aug 91 | 6 |
| <i>Arnica</i> sp. | | WNS | Sept 91 | 10 |
| <i>Armeria</i> sp. | | J. Bittner | June 91 | 3 |
| <i>Artemisia Absinthium</i> | Common wormwood | Johnny's | June 91 | 10 |
| <i>Artemisia frigida</i> | Fringed sagebrush | P. Holloway | June 91 | 10 |
| <i>Artemisia Schmidtiana</i> 'Silver Mound' | | P. Holloway | June 91 | 10 |
| <i>Aster alpinus</i> var. <i>vierhapperi</i> | | NEWFS | Sept 91 | 4 |
| <i>Chrysanthemum Leucanthemum</i> | Oxeye daisy | WNS | June 91 | 10 |
| <i>Cimicifuga racemosa</i> | Black snakeroot | T&M | Sept 91 | 4 |
| <i>Clematis columbiana</i> | Columbian rock clematis | ANPS | Oct 91 | 1 |
| <i>Clematis integrifolia</i> | Solitary clematis | J. Holm | Oct 91 | 1 |
| <i>Cornus X unalaschkensis</i> | | ARGS | Oct 91 | 2 |
| <i>Decodon verticillatus</i> | Swamp loosestrife | NEWFS | Sept 91 | 5 |
| <i>Delphinium glaucum</i> | Sierra larkspur | C. Parker | Oct 91 | 2 |
| <i>Delphinium grandiflorum</i> | Siberian larkspur | NCRPIS | July 91 | 10 |
| <i>Delphinium grandiflorum</i> 'Blue Elf' | | Harris Moran | July 91 | 10 |
| <i>Delphinium laxiflorum</i> | | NCRPIS | July 91 | 10 |
| <i>Delphinium</i> sp. 'Stand Up' | | Park | July 91 | 10 |
| <i>Dianthus deltoides</i> | Maiden pink | J. Bittner | June 91 | 10 |

Table 4. (continued)

| SCIENTIFIC NAME | COMMON NAME | SOURCE | DATE PLANTED | NUMBER OF PLANTS |
|---|------------------------|---------------|--------------|------------------|
| <i>Dianthus plumarius</i> | Cottage pink | VASKHNIL | Aug 91 | 19 |
| <i>Dianthus plumarius</i> | Cottage pink | VASKHNIL | Aug 91 | 19 |
| <i>Dianthus plumarius</i> | Cottage pink | VASKHNIL | Aug 91 | 31 |
| <i>Dianthus plumarius</i> 'Ballad Blend' | Cottage pink | Stokes | July 91 | 10 |
| <i>Dianthus plumarius</i> 'Sonata Double Mix' | Cottage pink | Park | July 91 | 10 |
| <i>Draba densifolia</i> | | ARGS | Aug 91 | 3 |
| <i>Draba kamtschatica</i> | | ANPS | July 91 | 10 |
| <i>Erigeron humilis</i> | Fleabane | ANPS | Aug 91 | 5 |
| <i>Erigeron</i> sp. 'Pink Jewel' (?) | | J. Bittner | June 91 | 10 |
| <i>Eupatorium rugosum</i> | White snakeroot | NEWFS | Sept 91 | 2 |
| <i>Gentiana Freyniana</i> | | ARGS | Aug 91 | 10 |
| <i>Gentiana septemfida</i> | | ARGS | Aug 91 | 10 |
| <i>Geranium maculatum</i> | Wild geranium | NEWFS | Aug 91 | 10 |
| <i>Geranium Renardii</i> | | ARGS | Sept 91 | 4 |
| <i>Geranium sanguineum</i> 'Album' | | ARGS | Sept 91 | 2 |
| <i>Geranium</i> sp. | | VASKHNIL | Sept 91 | 10 |
| <i>Heuchera americana</i> 'Palace Purple' | Rock geranium | T&M | June 91 | 10 |
| <i>Heuchera glabra</i> | Alumroot | ANPS | June 91 | 10 |
| <i>Heuchera sanguinea</i> 'Bressingham Hybrids' | Coral bells | T&M | June 91 | 10 |
| <i>Hypericum perforatum</i> | Common St. Johnswort | SBG | Sept 91 | 1 |
| <i>Iris Bulleyana</i> | Hollowstem Iris | ARGS | Sept 91 | 1 |
| <i>Iris Kaempfer</i> (?) | Japanese Iris | ANPS | June 91 | 10 |
| <i>Iris sibirica</i> | Siberian Iris | AHS | Aug 91 | 10 |
| <i>Iris sibirica</i> 'Snow Queen' | Siberian Iris | ARGS | Aug 91 | 8 |
| <i>Iris</i> (?) sp. | | Novosibirsk | Aug 91 | 10 |
| <i>Levisticum officinale</i> | Lovage | Vermont Bean | June 91 | 10 |
| <i>Liatris borealis</i> | | NEWFS | June 91 | 10 |
| <i>Liatris punctata</i> | Dotted gayfeather | NEWFS | June 91 | 10 |
| <i>Lilium</i> 'Corsica' | Asiatic hybrid lily | J. Bittner | June 91 | 10 |
| <i>Lilium</i> 'Dreamland' | Asiatic hybrid lily | J. Bittner | June 91 | 10 |
| <i>Lilium</i> 'Sterling Star' | Asiatic hybrid lily | J. Bittner | June 91 | 10 |
| <i>Lilium</i> 'Yolanda' | Asiatic hybrid lily | J. Bittner | June 91 | 10 |
| <i>Mentha</i> sp. | Mint | J. Bittner | June 91 | 1 |
| <i>Patrinia scabiosifolia</i> 'Nagoya' | Dahurian patrinia | Park | July 91 | 10 |
| <i>Penstemon procerus</i> | Littleflower penstemon | ANPS | Aug 91 | 2 |
| <i>Physostegia virginiana</i> | Obedience | NEWFS | Sept 91 | 6 |
| <i>Polemonium reptans</i> | Creeping polemonium | NEWFS | Oct 91 | 4 |
| <i>Potentilla mandshurica</i> | | VASKHNIL - DG | Sept 91 | 10 |

Table 4. (continued)

| SCIENTIFIC NAME | COMMON NAME | SOURCE | DATE PLANTED | NUMBER OF PLANTS |
|---|--------------------------|---------------|--------------|------------------|
| <i>Potentilla tridentata</i> | Three-toothed cinquefoil | P. Holloway | June 91 | 10 |
| <i>Potentilla villosa</i> | Hairy cinquefoil | NEWFS | June 91 | 10 |
| <i>Primula scotia</i> | Scotch primrose | ANPS | June 91 | 10 |
| <i>Salvia officinalis</i> | Common salvia | Gorno-Altalsk | June 91 | 10 |
| <i>Silene caroliniana</i> | Wild pink | NEWFS | June 91 | 6 |
| <i>Silene</i> sp. | | VASKHNIL | Sept 91 | 10 |
| <i>Silene(?)</i> sp. | | ANPS | Sept 91 | 6 |
| <i>Silphium terebinthinaceum</i> | Prairie dock | NEWFS | July 91 | 10 |
| <i>Sisyrinchium littorale</i> | Blue-eyed grass | ANPS | June 91 | 4 |
| <i>Solidago puberula</i> | Downy goldenrod | NEWFS | Sept 91 | 10 |
| <i>Tanacetum vulgare</i> | Common tansy | J. Bittner | June 91 | 10 |
| <i>Telekia speciosa</i> | | T&M | June 91 | 10 |
| <i>Thalictrum sparsiflorum</i> | | ANPS | Sept 91 | 4 |
| <i>Thymus X citriodorus</i> 'Lemon' | Lemon thyme | DBG | June 91 | 2 |
| <i>Thymus X citriodorus</i> | Silver thyme | DBG | June 91 | 3 |
| <i>Thymus X citriodorus</i> | White thyme | DBG | June 91 | 4 |
| <i>Thymus Serphyllum</i> | Lemon variegated thyme | DBG | June 91 | 4 |
| <i>Thymus Serphyllum</i> 'Pink Chintz' | | DBG | June 91 | 4 |
| <i>Thymus</i> sp. | Lemon thyme | DBG | June 91 | 8 |
| <i>Valeriana sitchensis</i> | Sitka valerian | ANPS | June 91 | 2 |
| <i>Veronica incana</i> | Wooly speedwell | T&M | June 91 | 10 |
| <i>Viola pedata</i> | Bird-foot viola | NEWFS | Sept 91 | 10 |
| WOODY PERENNIALS | | | | |
| <i>Betula popullifolia</i> | Gray birch | Barnaul | Aug 91 | 10 |
| <i>Caragana arborescens</i> | Siberian pea | Chamal | Sept 91 | 5 |
| <i>Caragana</i> sp. | | PMC | Sept 91 | 1 |
| <i>Caragana</i> sp. o.p. | | PMC | Sept 91 | 2 |
| <i>Cotoneaster horizontalis</i> | Rock cotoneaster | Schumacher | Sept 91 | 5 |
| <i>Cotoneaster nitens</i> | Pinkblush cotoneaster | NCRPIS | Sept 91 | 5 |
| <i>Larix sibirica</i> | Siberian larch | Novosibirsk | Aug 91 | 5 |
| <i>Malus baccata</i> var. <i>mandsurica</i> | Siberian crab | PMC | Sept 91 | 5 |
| <i>Picea pungens X glauca</i> | Spartan spruce | BTI | Aug 91 | 5 |
| <i>Prunus fenella</i> | Dwarf Russian almond | Lawyer | Sept 91 | 1 |
| <i>Rhododendron canadense</i> | Rhodora | NEWFS | Aug 91 | 5 |
| <i>Rosa Eglanteria</i> | Eglantine rose | NCRPIS | Aug 91 | 5 |

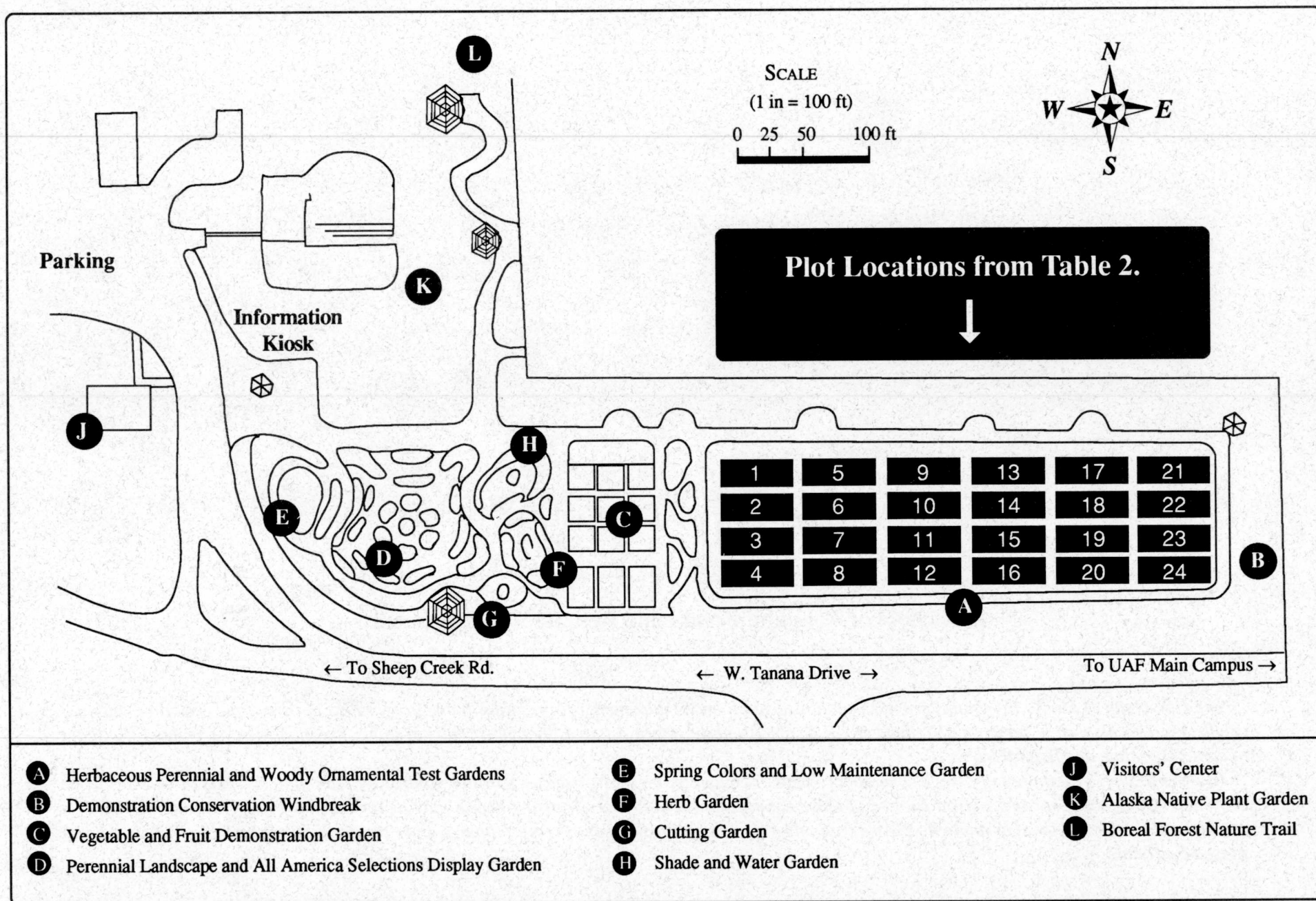
Table 4. (continued)

| SCIENTIFIC NAME | COMMON NAME | SOURCE | DATE PLANTED | NUMBER OF PLANTS |
|--------------------------------------|-------------|-------------|--------------|------------------|
| <i>Rosa multiflora</i> | Baby rose | Seiberling | Aug 91 | 5 |
| <i>Rosa multiflora</i> | Baby rose | P. Holloway | Aug 91 | 5 |
| <i>Rosa rugosa</i> Pl 277 432 | | PMC | Aug 91 | 5 |
| <i>Rosa Woodsii</i> | Wood's rose | NCRPIS | Aug 91 | 5 |
| <i>Rosa</i> sp. 'Lac Majean' | | PMC | Aug 91 | 5 |
| <i>Rosa</i> sp. 'à Parfum de l' Hay' | | PMC | Aug 91 | 4 |
| <i>Rosa</i> sp. 'Prairie Wren' | | PMC | Aug 91 | 2 |
| <i>Rosa</i> sp. 12B | | PMC | Aug 91 | 1 |
| <i>Salix</i> sp. | | AFES | Aug 91 | 5 |
| <i>Syringa pekinensis</i> | Pekin lilac | NCRPIS | Sept 91 | 3 |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |

Appendix 1. Commercial sources and organizations

| | | | |
|--------------------|---|--------------------|--|
| AAS | All-America Selections | Lawyer | Lawyer Nursery Inc., 950 Highway 200 West, Plains, MT 59859 |
| AHS | The American Horticultural Society, P.O. Box 6118, 7931 E. Boulevard Dr., Alexandria, VA 22308 | NCRPIS | North Central Regional Plant Introduction Station, Ames, IA |
| ANPS* | Alaska Native Plant Society, P.O. Box 141613, Anchorage, AK 99514 | NEWFS* | New England Wild Flower Society, Garden in the Woods, Hemenway Rd., Framingham, MA 01701 |
| ARGS* | American Rock Garden Society, P.O. Box 67, Millwood, NY 10546 | Novosibirsk | Central Siberian Botanical Garden, Novosibirsk, Russia |
| Barnaul | The Lisavenko Research Institute of Horticulture, Barnaul, Altai Region, Russia | Park | Park Seed Co., Cokesbury Rd., Greenwood, SC 29647-0001 |
| BCN | Bear Creek Nursery, P.O. Box 411, Northport, WA 99157 | PMC | Plant Materials Center, HC02 Box 7440, Palmer AK 99645 |
| Beaverlodge | Beaverlodge Nursery, Ltd., Box 127, Beaverlodge, Alberta T0H 0C0, Canada | SBG | Siberian Botanical Garden, Novosibirsk, Russia |
| Bluebird | Bluebird Nursery, Inc., P.O. Box 460, Clarkson, NE 68629 | Schumacher | F.W. Schumacher Co., Inc., 36 Spring Hill Rd., Sandwich MA 02563-1023 |
| BTI | Better Trees, Inc., 7894 W. Maple Rapids Rd., St. Johns, MI 48879 | Seiberling | Seiberling Naturealm, Akron, Ohio |
| Chamal | Mountain Experiment Station, Gorno-altaisk Region, Russia | T&M | Thompson & Morgan Inc., P.O. Box 1308, Jackson, NJ 08527 |
| Daehnfeldt | Daehnfeldt, Box 947, Albany, OR 97321 | VASKHNIL-DG | Dendrological Garden - Siberian Academy of Agricultural Sciences, Novosibirsk Region, Russia |
| DBG | Denver Botanic Gardens | VASKHNIL | Siberian Academy of Agricultural Sciences, Novosibirsk Region, Russia |
| GBG | Georgeson Botanical Garden, 309 O'Neill Building, University of Alaska Fairbanks, Fairbanks, AK 99775 | VB&S | K. Van Bourgondien & Sons, Inc., 245 Farmingdale Rd., Babylon NY 11702 |
| Harris Moran | Harris Moran Seed Company, 1155 Harkins Rd. Salinas, CA 93901 | Vermont Bean | Vermont Bean Seed Co., Garden Lane, Fair Haven, VT 05743 |
| KHN | Knight Hollow Nursery, Inc., 236 E. Sunset Ct., Madison, WI 53705 | WNS | Wildwood Northern Seeds, Whitehorse, Yukon, Canada |
| Johnny's | Johnny's Selected Seeds, Foss Hill Rd., Albion, ME 04910 | | *seeds available to members |

Map of the Georgeson Botanical Garden.



University of Alaska Fairbanks
Agricultural and Forestry Experiment Station
School of Agriculture and Land Resources Management

The University of Alaska Fairbanks provides equal education and employment opportunities for all, regardless of race, color, religion, national origin, sex, age, disability, status as a Vietnam era or disabled veteran, marital status, changes in marital status, pregnancy, or parenthood pursuant to applicable state and federal laws.

In order to simplify terminology, trade names of products or equipment may have been used in this publication. No endorsement of products or firms mentioned is intended, nor is criticism implied of those not mentioned. Material appearing herein may be reprinted provided no endorsement of a commercial product is stated or implied. Please credit the researchers involved and the Agricultural and Forestry Experiment Station, University of Alaska Fairbanks.



Printed on recycled paper with soy ink

