



Plants that Weren't Tough Enough

by

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Any researcher working in the Far North is well aware of the beneficial attributes of snow as an insulating blanket for both plants and small animals. We learned in graphic detail just how important snow is in Alaska this past winter. The total accumulation of snow through January 1996 was only 6 inches (15.2 cm). During that time the minimum winter air temperature at the Garden reached -43°F (-42°C) in December and -48°F (-44°C) in January. Thirty-three percent of the experimental plants in the Garden were killed by this low snowfall. Damage could have been caused by extreme desiccation, frost heaving or an inability to tolerate low temperature extremes. Whatever the cause, the plants are dead, and we will have lots of room next season for new experiments. Some of the plants were heartbreaking losses such as the lilies, tulips, columbines and grape hyacinths. Some grape hyacinths finally emerged in mid summer, but it was quite obvious the damage was severe. Other plants such as tansy, we won't miss at all because of its invasive nature. Nearly all of the plants that were growing well prior to last winter will be tested again at a later date. One thing is for certain, all the plants listed below will now come with a warning - needs snow cover to survive! Even more remarkable than this list is the one showing the plants that endured this severe winter. This list will be included in the *Annual and Perennial Landscape Plant Evaluations* to be published in spring.

If it is any consolation, the severe winter also hit Anchorage. The Alaska Botanical Garden located off of Tudor Road reported a 43 percent loss of herbaceous perennials in their Perennial and Demonstration Gardens. A list of affected species will be available in the *1996 Demonstration Report* from Alaska Cooperative Extension which should be available in early 1997.

Table 1. Perennials in the GBG research test plots that had survived at least one winter but were killed during the winter of 1995-96 because of inadequate snow cover.

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| <i>Achillea borealis</i> - Native yarrow | <i>Asplenium scolopendrium</i> - Hart's tongue fern |
| <i>Achillea Ptarmica</i> - Sneezewort | <i>Aster ptarmicoides</i> - White upland aster |
| <i>Achillea taygetea</i> "Debutante" - Yarrow | <i>Berberis koreana</i> x <i>Thunbergii</i> 'Emerald Carousel' |
| <i>Ampelopsis glandulosa</i> var. <i>brevipedunculata</i> - Porcelaine vine | - Hybrid barberry |
| <i>Amsonia Tabernaemontana</i> var. <i>salicifolia</i> | <i>Calamagrostis acutiflora</i> var. <i>stricta</i> - Feather reed grass |
| <i>Anemone Halleri</i> - Haller anemone | <i>Calamagrostis arundinacea</i> 'Karl Foerster' |
| <i>Aquilegia</i> 'Mckana Giant Hybrids' - Columbine | <i>Campanula alliariifolia</i> |
| <i>Aquilegia</i> 'Nora Barlow' - Columbine | <i>Campanula glomerata</i> 'Superba' |
| <i>Aquilegia atrata</i> - Columbine | <i>Carex Grayi</i> - Gray's sedge |
| <i>Aquilegia Buergerana</i> - Columbine | <i>Chelone Lyonii</i> |
| <i>Aquilegia canadensis</i> - Wild Columbine | <i>Chrysanthemum coccineum</i> - 'Robinson's Dark Crimson' |
| <i>Aquilegia formosa</i> - Sitka columbine | <i>Chrysanthemum leucanthemum</i> - Ox-eye daisy |
| <i>Aquilegia glandulosa</i> | <i>Cimicifuga racemosa</i> - Black cohosh |
| <i>Aquilegia pyrenaica</i> - Pyrenees columbine | <i>Crocus chrysanthus</i> 'Princess Beatrix' |
| <i>Aquilegia</i> sp. - Berdsk columbine | <i>Crocus chrysanthus</i> 'Snow Bunting' |
| <i>Aquilegia</i> 'Dynasty' - Columbine | <i>Crocus Tomasinianus</i> 'Ruby Giant' |
| <i>Aquilegia vulgaris</i> - Garden columbine | <i>Crocus versicolor</i> 'Picturatus' |
| <i>Aquilegia vulgaris</i> 'Michael Stromminger' - Columbine | <i>Delphinium</i> x <i>Belladonna</i> 'Improved' |
| <i>Arabis caucasica</i> - Wall rock cress | <i>Deschampsia caespitosa</i> 'Goldgehaenge' - Tufted hairgrass |
| <i>Arnica alpina</i> - Alpine arnica | <i>Dianthus</i> 'Ipswich Pinks Mix' |
| | <i>Dianthus carthusianorum</i> - Carthusian Pink |

Dianthus deltoides - Maiden pink
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Digitalis x sibirica - Siberian foxglove
Dryopteris arguta
Dryopteris dilatata 'Jimmy Dyce'
Dryopteris dilatata 'Lepidota cristata'
Dryopteris filix-mas 'Undulata Robusta'
Elaeagnus angustifolia 'King's Red' - Russian olive
Erigeron 'Pink Jewel'
Festuca caesiaca 'Glauca' - Swiss fescue
Galium odoratum - Sweet woodruff
Gentiana Freyniana
Gypsophila paniculata 'Snow White' - Baby's breath
Helinium autumnale 'Red and Gold Hybrids'
 - Autumn sunspray
Heuchera 'Purple Palace' - Coral bells
Heuchera x brizoides 'Firefly' - Coral bells
Iris missouriensis - Western blue flag
Iris Pseudacorus
Iris sibirica - Siberian iris
Leontopodium alpinum - Edelweiss
Liatris aspera
Liatris borealis
Liatris punctata
Liatris pycnostachya
Lilium 'America'
 Asiatic Hybrid lily
Lilium 'Corsica' - Asiatic hybrid lily
Lilium 'Crete' - Asiatic Hybrid Lily
Lilium 'Crimson Beauty' - Asiatic Hybrid Lily
Lilium 'Pink Perfection' - Asiatic Hybrid Lily
Lilium canadense - Canada lily
Lilium Henryi
Lilium Martagon 'Mix' - Martagon lily
Lilium regale
Lilium speciosum 'Rubrum' - Showy Japanese Lily
Lilium superbum - Turk's cap lily
Linaria alpina
Lonicera hybrida 'Honey Rose' - Honeysuckle
Lychnis chalconica - Maltese cross
Lychnis Flos-cuculi - Cuckoo flower
Lychnis Flos-jovi - Flower-of-Jove
Lychnis viscaria

Macleaya microcarpa - Plume poppy
Mahonia repens - Dwarf mahonia
Malva churinskaya
Mentha suaveolens - Applemint
Monarda didyma - Bee balm
Muscari 'Early Giant' - Grape hyacinth
Muscari armeniacum - Grape hyacinth
Muscari botryoides 'Album' - Grape hyacinth
Muscari Tubergenianum
Myrrhis odorata - Sweet cicely
Papaver alboroseum - Portage poppy
Parthenocissus inserta
Penstemon Digitalis
Phacelia sericea (native wildflower) - Chinese lantern plant
Physalis Alkekengi (Franchetii) - Chinese lantern plant
Physostegia virginiana - Obedience
Poa alpina "Gruening" - Alpine bluegrass
Polemonium caeruleum 'Cashmerianum'
Polemonium caeruleum var. *lactaeum* - White polemonium
Polemonium reptans - Creeping polemonium
Polemonium reptans 'Blue Pearl'
Polemonium reptans var. *villosum*
Polystichum acrostichoides - Christmas Fern
Potentilla megalantha
Potentilla recta
Potentilla x 'Melton Fire'
Prunus sp. - Manchurian apricot
Prunus tenella - Dwarf Russian almond
Salix alba 'Argentea' - White willow
Salix purpurea 'Leicestershire Dicks' - Purple osier
Securinega suffruticosa
Sedum acre - Golden Carpet
Silene Schafta
Silphium perfoliatum - Cup plant
Spiraea 'Fair Queen'
Stachys grandiflora
Stachys officinalis - Betony
Tanacetum vulgare - Common tansy
Thalictrum dioicum - Early meadow rue
Tiarella cordifolia - Foamflower
Tulipa Batalinii
Tulipa Batalinii 'Bright Gem'
Tulipa Clusiana
Veronica alpina

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