



## Alaska Native Wildflowers for Meadow Garden

by Ouina Rutledge

Since 1992, I have been observing native and non-native wildflower meadow mixes established in the agricultural fields just south of the botanical garden. The two native mixes included the Alaska Native Wildflower Mix (Nauriaq Gardens, Fairbanks) which contained 19 native species as well as three non-native wildflowers that provided first season color as the native wildflowers became established. The Experimental Wildflower Mix contained 15 Alaska wildflowers harvested from wild stands. These mixes were sown on June 12 and Sept. 25, 1992. Half the plots were irrigated until seedling establishment.

During the first season some native flowers bloomed, but the effect was not as spectacular as the vibrant, multi-colored displays of non-native wildflower mixes. The Experimental mix was dominated by the red of strawberry spinach and white/yellow of wild chamomile (Table 1). The non-native annuals in the Alaska Native Wildflower Mix, particularly the California poppy, lived up to their purpose and provided plenty of color the first season, almost to the exclusion of other flowers.

The 1994 season marked the third year for the spring-sown wildflower mixes and the second for fall-sown plots. In the spring-sown plots, 16 native wildflowers from the two Alaska wildflower mixes became established and bloomed by the third growing season, while 15 native wildflowers bloomed on the fall-sown plots. Although both sowing dates showed a similar number of species established, the density of each species was greater in fall-sown plots. For instance, wild sweet pea averaged four plants in fall-sown plots, while only one plant occurred in each spring-sown plot. Jacob's ladder averaged eight plants in fall-sown plots in contrast to one plant per spring-sown plot.

Both wildflower mixes began flowering May 20, but the greatest color occurred at the end of May. The earliest plants to flower were arctic lupine, wild sweetpea, Jacob's ladder and arnica. Late summer flower color was provided by yarrow, siberian aster, burnet and yellow hawkweed.

The non-native annual wildflower, California poppy, grew exceptionally well in the fall-sown plots. In 1994, California poppy self-seeded and flowered spectacularly from mid summer until the first hard freeze.

The Alaska wild iris appeared only in the spring-sown plots. Although seedlings were present, it still had not flowered by the third growing season. Six wildflower species did not appear any time during the study: thoroughwax, river beauty, wild larkspur, melandrium, oxytrope and grass of parnassus. These species may have complex seed dormancy mechanisms that prevent germination for several years. Environmental conditions also may not have been suitable for seedlings establishment.

Plots of the Alaska Native Wildflower Mix showed a predominance of two wildflowers: fireweed and butter and eggs. Both species prefer disturbed sites with few competitors for establishment. The butter and eggs was so invasive that it filled more than half the plot space in some areas. This species has since been removed from the commercial mix because of this invasive growth habit.

From this study we learned that fall sowing hastens the establishment of Alaska native wildflowers. Spring-sown plots need irrigation for at least six weeks to become fully established. Also, intensive weeding is necessary during the first two growing seasons in order to remove unwanted plants.

Meadows composed of Alaska wildflowers take a few years to establish, but the color variety and seasonal display get better every year. Wildflowers that grow well in established meadows include arctic lupine, wild sweetpea, yellow hawkweed, Jacob's ladder, Siberian aster, arnica and goldenrod. However, don't limit your choices to these wildflowers. Read about Alaska native species (see reading list below) and select ones that appeal to you. Make sure the species you select will grow in the conditions found in your area and the microenvironment of your meadow. Not only will you have a natural meadow, but over time you will be helping conserve our Alaska native wildflowers for future generations to enjoy!

<i>Flowering dates of Alaska native wildflowers during the first year of establishment and in 1994.</i>		
Wildflower	Earliest Flowering Date	
	First Season	1994
Arnica ( <i>Arnica Alpina</i> )		May 24
Siberian aster ( <i>Aster sibiricus</i> )		June 8
Thoroughwax ( <i>Bupleurium triradiatum</i> )		
Strawberry spinach ( <i>Chenopodium, capitatum</i> )	July 23	June 2
Rock harlequin ( <i>Corydalis sempervirens</i> )		June 21
Fireweed ( <i>Epilobium angustifolium</i> )	June 24	June 21
River beauty ( <i>Epilobium latifolium</i> )		
Fleabane ( <i>Erigeron glabellus</i> )		June 21
Wild larkspur ( <i>Delphinium glaucum</i> )		
Northern Bedstraw ( <i>Galium boreale</i> )		June 21
Wild sweetpea ( <i>Hedysarum Mackenzii</i> )	July 23	May 20
Yellow Hawkweed ( <i>Hieracium scabriusculum</i> )	July 9	June 21
Wild iris ( <i>Iris setosa</i> )		
Butter and eggs ( <i>Linaria vulgaris</i> )	July 23	June 21
Blue flax ( <i>Linum perenne</i> )		June 21
Arctic Lupine ( <i>Lupinus arcticus</i> )	July 30	May 20
Melandrium ( <i>Melandrium affine</i> )		
Northern yellow oxytrope ( <i>Oxytropis campestris</i> )		
Grass of parnassus ( <i>Parnassia palustris</i> )		
Jacob's ladder ( <i>Polemonium acutiflorum</i> )	July 2	May 24
Burnet ( <i>Sanguisorba officinalis</i> )		June 21
Goldenrod ( <i>Solidago multiradiata</i> )		July 12
Wild chamomile ( <i>Tripleurospermum inodorum</i> )	June 18	July 12

### Further Readings on Wildflowers

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