

Jewels of the Plains: Selection and Propagation of Native Perennials

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INTRODUCTION

Paulino's is a retail nursery and produces over 1300 types of perennials grown from seed, cuttings, and bareroot divisions.

The growing area for perennials covers 5 acres where over 300,000 1-gal-size and 500,000 4-inch-size perennials are grown. Soft cuttings are rooted under shade in humidity tents using one layer of 4-mil clear poly and another layer of 50% shade cloth.

Display gardens at the nursery help maximize sales and serve as trial grounds for new varieties. Paulino Gardens builds feature gardens and educational displays for organizations such as the American Rock Garden Society.

USE OF NATIVE PLANTS IN THE DENVER AREA

The Denver Botanic Gardens Plains Garden inspires many gardeners in the use of native plains plants. The Denver Zoo utilizes native plants (*Sorghastrum nutans*, *Chrysothamnus nauseosus*, *Schizachyrium scoparium* (syn. *Andropogon scoparius*), *Yucca glauca*, etc.) in displays near the native animals.

WILD PLANT SELECTIONS

Most of my plant selections are made in Colorado, Wyoming, Montana, and South Dakota. *Iris missouriensis* is a favorite wildflower that when grown from seed is typically pale blue. I'm working on selections of pure white and deep purples. Propagation of the selections must be by division. Hopefully, we will soon be able to propagate them by tissue culture. The best selections have come from Wyoming.

In western and central Colorado, I find a lot of drought-tolerant plants such as *Echinocereus reichenbachii* (syn. *E. caespitosus*) (a crested form) which is multiplied by grafting pieces of the crest onto *Opuntia phaeacantha* yearlings that are still in a cylindrical, juvenile form.

I am particularly interested in larger flowered forms of *Zinnia grandiflora*. This is one of the few perennials that blooms all summer. Seed will usually germinate after a cold stratification of 2 weeks at 38 to 45F.

Claude Barr (1983), a famous Great Plains plantsman who wrote *Jewels of the Plains*, was passionate about roses such as a lovely, near-red form of *Rosa arkansana* selected near Sheridan, Wyoming. The plant is growing in loose shale and is nearly 200 ft across. It is propagated by root or stolon-root cuttings at any time of year. Hardwood cuttings are relatively successful.

Other native plants such as *Dodecatheon pulchellum* are selected for white and crimson color forms that are best propagated by division. *Lewisia rediviva* has been selected for white flowers and is a choice plant among rock gardeners. It is generally grown from seed because it is too slow by division (cold stratify for 6 weeks). *Lilium philadelphicum* var. *andinum* is a favorite in the Black Hills of

South Dakota where I am hopeful to find a true red or other variant. This lily can be propagated from bulbils or bulb scales. On the high prairie of Wyoming I find deeply colored forms of *Oxytropis lambertii*, a beautiful, silver-leafed pea. I stratify the seeds for 6 to 12 weeks at 38 to 45F.

Penstemon species are often considered among the choicest perennials on the Great Plains. Breeding and selection are performed at the North Platte Experiment Station in Nebraska.

On Mount Evans in Colorado, we find both deep purple and white forms of *Penstemon whippleanus*, with no color variation in between. Fresh seed sown in August or September germinate readily.

Penstemon grandiflorus is one of my personal favorites. It is a very showy, large-flowered species. Mary Ann Heacock of Denver selected these many color forms from her early crosses with other species. Six weeks of cold stratification is beneficial.

Undoubtedly, one of the showiest penstemons is from Wyoming. *Penstemon glaber* is generally royal blue and occasionally a natural hybrid is found such as the one I call 'Purple Banner'. *Penstemon glaber* may be useful in *Penstemon* breeding because of its longevity. Many penstemons are short-lived.

CONCLUSION

I'm just beginning my work on native perennial plant selections and I'm looking forward to many years of further exploration. I suspect that Colorado's water availability may decrease in the next few years with the influx of people into the state and I want to be prepared with a whole palette of colorful native plants to offer water-restricted gardeners.

LITERATURE CITED

Barr, Claude A. 1983. *Jewels of the Plains*. 1st ed. University of Minnesota Press, Minneapolis, MN.