

Native Cultivars: How Wild Plants are Selected for Garden Use

Some people avoid buying the native plant cultivars sold at the Santa Barbara Botanic Garden plant sales, being vaguely suspicious that they are not really native plants at all but some man-made concoction of who knows what. Many people are confused about what cultivars are and how they relate to wild-occurring native plants. The explanation provides insight into the worlds of both horticulture and botany.

A cultivar (or cultivated variety) is a plant that exhibits special features that sets it apart from the typical form. Once identified by a horticulturalist, it is given a cultivar name and introduced into the nursery trade. Cultivar names are added to the botanical name and set off by 'cv.' or single quotes - e.g. *Ceanothus* 'Wheeler Canyon'. To maintain their desirable features, cultivars are propagated by cuttings or division, so that each individual is a clone – or genetic duplicate – of the mother plant. For gardeners, the advantage of growing cultivars is that they have known and consistent qualities and were selected for their horticultural merit.

Native plant cultivars originate from several sources: selected forms of wild plants, naturally occurring hybrids, chance garden hybrids, and man-made hybrids

Selected Forms

The great majority of California native plant cultivars come from plants found in the wild. Horticulturalists are forever searching natural habitats for unusual or superior forms of plants to cultivate for our gardens. For example, horticulturalists seek out plants with unusual flower colors, plants that have larger or more abundant flowers, plants that are compact or low growing, or plants with unusual leaf colors or shapes. In a natural population, a species can exhibit a remarkable range of physical characteristics. This is especially true of widely distributed species that occur in varying habitats. Even though the individual plant selected may be unusual in some way that is attractive to us, it is botanically indistinguishable from the typical form of the species.

Natural Hybrids

Natural hybrids within a genus can occur where the distributions of two or more species overlap. In certain cases, a 'hybrid swarm' of intermediate plants will develop at such points of contact. Species in some genera - such as sages, manzanitas, and *Ceanothus* - commonly produce hybrids. Horticulturists take advantage of the beauty and vigor of natural hybrids and have selected a number of such plants for cultivar designation. A popular example is *Arctostaphylos* 'Emerald Carpet,' a natural hybrid between *A. uva-ursi* and *A. nummularia* originally collected on the Mendocino coast at Havens Neck.

Garden Hybrids

Another major source of native cultivars is chance hybrids that occur in botanic gardens, nurseries, or private gardens where several related species of a genus are planted together. Plants whose distributions do not overlap in the wild may hybridize freely in gardens, producing unique plants. Not surprisingly, the parentage of these cultivars is frequently confused or unknown. For example,



Arctostaphylos 'White Lanterns' was a seedling discovered in the Santa Barbara Botanic Garden. Its presumed parents are *A. edmundsii* and *A. hookeri*, which were both growing in the same bed.

Plant Breeding

Plant breeders attempt to combine the desirable traits of two or more species into one exemplary hybrid plant. This is accomplished by cross-pollinating the two parents by hand, growing and observing the traits of the first-generation (F1) plants, then selecting individuals that exhibit the desired traits. For example, attempts to produce a low-growing fremontia with large flowers suitable for small gardens was accomplished by crossing the large-flowered, but tall *Fremontodendron* 'California Glory' with the small-flowered but prostrate *F. decumbens*. Both the cultivars *Fremontodendron* 'Ken Taylor' and *F.* 'Dara's Gold' (the latter bred by our own Dara Emery, and named after his death) are cultivars resulting from such breeding efforts.

The Santa Barbara Botanic Garden was fortunate to have the renowned plant breeder, Dara Emery, on staff for many years. His work with coral bells, iris and lupine, among others, resulted in such notable Garden introductions as *Iris* 'Canyon Snow' and *Heuchera* 'Canyon Delight'. In all, the Botanic Garden has introduced 39 cultivars to the nursery trade and continues to search for and evaluate superior forms of native plants for the landscape.