A New Insight About Kinship Gardening

some thoughts during a recent visit to a botanical garden

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I wander in and between the vast layouts of plants, pieces of the planetary phylogeny, earth's living tree of diversity, little fragments of order, in a chaotic universe. And I wonder at why as organisms we continue to destroy ecosystems, eliminating habitats, extincting species.

The 12' alluadia standing tall with its madagascarian kin has a celosia-like flattened cristate head. The didiera next to it and in the same family has no leaves. It leafs out and flowers in two months, being leafless most of the intensely hot year. Nearby, a spiral circle of aloes, some dozens of species, have their own rhythm of flowers, flowering spikes and newly emerging agave-like inflorescences.

And I see some new views about kinship gardening.

Years ago, piqued by the linearity of most gardening, I became interested in laying out gardens reflecting the genetic inheritance patterns of each and every kind of plant. Beginning with plants familiar to me, mainly food plants of the temperate zone, I began learning how to take the cladistic diagrams of modern taxonomic science and convert them into bed diagrams useful to home gardeners.

My interest in gardening, though focused during the past few decades on seed growing, began with the joy and liberation of knowing that I could live, off the grid, by growing my own food. This was before GMO's were in our food and after the use of agribusiness toxic chemicals was routine in food production.

Yet each of the food plants I grew was part of a larger unity, it was or was derived from one to several species and these species generally belonged to a genus, very much like our human family names organize individuals into families.

The clustering of genera develops tribes which make up families of which some several hundred encompass the planetary flora of flowering plants.

Some of my favorite plants were in the same genus, or family. Tomatoes, potatoes, eggplants, peppers all belonged to the Solanaceae, the nightshade family. These familiar gardening friends were from 2 different genera, solanum and capsicum. I looked for some way to assess relationships of the different plants that made up my yearly garden. And then I found out that nasturtiums with their spicy buds and leaves are in a family neighboring mustards and other brassicas. And step by step, genus by genus, family by family, garden layouts giving a way at looking at the diversity have emerged.

Walking once again on the paths in the La Buena Fortuna Botanical Garden, some clusters of plants are laid out with an eye towards the kinship

aspect of plants. The aloes are mostly altogether. So are the cycads. Many citrus trees are planted nearby one another along with a curry tree and a few shrubs in the same family, the Rutaceae. I recalled putting plants of close affinity together, like 6 kinds of turnips, 3 kinds of beets, 10 kinds of corn, 3 kinds of carrots, 4 kinds of fava beans, and encouraging them to cross. I figured that adaptation comes from genetic variation. How to support this variation was to encourage crossing, genetic recombination and development of new kinds directly in response to the local conditions. So for several years I have been collecting seeds of these mixed kinds of crosses which I call grexes.

Yet the grexes had all been with food plants, common, familiar food plants, the life support system of temperate zone humanity. And my work in visiting the botanical garden was to promote a kinship botanical garden for humanity in a series of desert ecosystems capable of holding perhaps 30% of the planetary flora. This rather huge task reflects on the urgent need for a home for many tropical, desert species that are disappearing worldwide in the pathways of development, war and pollution.

So rather than gardens emphasizing well known food plants, gardens focusing on species, clustered into genera grouped as families become essential. At least half of the world's plant species are endemic, and rather narrowly localized. They haven't come in contact with close relatives and/or distant relatives for a long time. By putting them together in kinship gardens, one reunites the dispersed and in so doing sets up potential pathways for further successful adaptation.

So I had been wandering down these paths for days, decades and lifetimes. And now science was achieving a unifying view of the biodiversity of plants permitting an accurate and compelling vision of new kinds of gardens for humanity and for the survival and development of new species.

The times they are a changin' as Dylan said so long ago. And as global warming, seasonal intensity and the winds of karma come blowing into our lives, kinship gardens of closely related species become islands of survivorship, adaptation and perseverance.

Sunflowers, marigolds, zinnias, cosmos, chicory, burdock, chamomile, lettuce are all daisies. Sunflowers are outbreeders, crossing readily with their neighbors. Lettuce crosses very rarely. Wild lettuces, of which there are several species, would be good parents for crosses with current salad cultivars. Marigolds whose center of diversity is in the mountains of southern Mexico, are relatives of coriopsis and tickseeds. Chance crosses from unexpected pollinators lead to new adaptivars.

Carrots, parsley, celery, dill, fennel, cilantro are all umbels. Crosses between any of these is unknown but within each kind crosses occur readily.

Mustards, broccoli, cauliflower, cabbage, kale, arugula are all brassicas. These have a multiplicity of breeding patterns. Some like arugula breed true and cross with no other. Oleraceas, i.e. cabbage, broccoli, cauliflower, some kales, all interbreed and outcross. Hence one needs only two plants, one of each kind to generate a F1 population. Saving seeds on this F1 population gives a F2 mix,

unusually with interesting new kinds. Mustards, Chinese cabbage, Bok-Choy, turnips belong to two other brassica species and can and do cross quite readily. Thus roots, leaves, stems and flowering behavior all intermix, waiting for the discerning eye, the aware palette of taste and flavor and the willingness to allow adaptation and selection to proceed.

And from these one can begin exploring the fabric of diversity, saving a few seeds and looking in one's neighborhood for who is related to who is related to who is related to who.

Best of gardening seasons for everyone.