

July Miscellany

There is a new gardening word we are encountering more often - biochar. Biochar is a term that is emerging in gardening and environmental publications with increasing frequency. You may have already seen the product itself offered in large bags at area gardening centers.

The story of biochar goes back a long way. According to an article by Jeff Cox in Organic Magazine the story dates back to 450AD in the Amazon Basin. In that part of the world slash and burn agriculture was not the norm, slash and char was. They roasted the green plants that had been slashed by layering them in smothered fires. Lower temperatures and lower oxygen levels resulted in the production of charcoal instead of ash. We probably will never know whether this was a result of planning or whether it was an accidental process.

The charcoal was buried in their agricultural fields and in the twentieth century fields of this buried charcoal were discovered. By the 1990s scientists had decided these large black expanses, called terra preta, were not a product of natural biological activity but were manmade.

This fascinating "soil" was six feet deep in places and had become home to not only worms and microbes and such but more importantly, it held on to carbon atoms that would otherwise have escaped into the atmosphere. Scientists hope that the current production of charcoal will hold promise as a carbon sink, keeping CO₂ out of the air. Biochar also acts as a complete fertilizer promoting growth. In one instance crops grew 45% greater biomass on terra preta soil than on poor soil with chemical fertilizers added.

Like most things that sound too good to be true, this good thing could become a disaster if we decide to chop up the rainforest to make a profitable commercial product, but a real boon if it can be made from the tons of organic waste that chokes our landfills.

small is beautiful...and productive

Small farmers, the Mayan peasants in the state of Chiapas, Mexico are said to be unproductive because they produce only two tons of corn per acre. However (and this 'however' you will love) the actual food output is 20 tons per acre, because those small farmers know their land and know how to use every inch of it.

Hard to believe, but even the economists at the World Bank now acknowledge "redistribution of land to small farmers would lead to greater overall productivity." According to author Bill McKibbin, economists are realizing that small farms in Africa, Asia, and Latin America are more productive than large ones, a surprise considering the best land is used for export crops and these farmers must feed themselves from marginal land. Equally surprising is the report of the latest census from the U.S. Department of Agriculture that finds smaller farms produce more food per acre, whether measured in calories, tons, or dollars.

A conundrum

One attribute gardeners truly need is flexibility. It is not a given as most of us want our hard-earned 'facts' to stay put. We have adjusted to our beloved asters becoming Eurybia (white wood aster) and Symphyotrichum (blue aster) even if we have no clue how those formidable terms should be pronounced. Decades ago I was taught that syllables should remain unstressed if the words were constructed from Greek or Latin roots, but then not all of what I learned in school is still true, i.e. high school physics and fourth grade geography.

Now we learn the fall-blooming mistflower that looks like a grown up blue flowered ageratium and flings seeds everywhere is no longer properly Eupatorium coelestinum but Conoclinium coelestinum and you have my permission to call it anything you like. Happily I found these works in the Niche Gardens catalog, one that puts the pronunciations after the words. They have space for these niceties because they have very few pictures, trusting the reader to concoct an image from their words. They say: *conoclinium coelestinum* = koh-no-KLY-nee-um ko-les-TIE-num.

To add to our comfortable confusion the uncommon climbing aster is properly Ampelaster = AMP-el-AS-ter. The Niche catalog is a keeper.