

Wild Wednesday 20 January 2021. Walnuts. By Walt Anderson

So what's in a name? Humans have named and classified things since the dawn of language. It just wasn't enough to point at something and grunt. It's how we communicate. Often a name had some descriptive qualities, though similarities that had nothing to do with relatedness often confused us. Thus we called New World vultures "buzzards," even though in the Old World, that name was used for Buteo hawks, like our Redtail. The name "gopher" in the West is a rodent, while in the Southeast, it's a tortoise. Some critters went by a variety of names depending on the location.

To try to be a little more organized about naming, Linnaeus started a classification system that gave each distinct type of organism a Latin binomial: a genus (capitalized) followed by a species epithet. This would allow some standardization compared to highly variable and often weird common names. However, humans being flawed (or didn't you know?) didn't always provide a "scientific name" that was truly logical or applicable, and thousands of botanists have made their academic careers by changing the names, usually right after we learned them. Taxonomy without representation!

Today's featured organism is the Arizona Walnut, *Juglans major*. The genus *Juglans* is believed to be derived from a contraction of a word meaning "nut of Jupiter," but botanically, it's not even a nut. Perhaps its namer was. "Arizona" as a descriptor is certainly misleading, as most of its range is in Mexico. "Walnut" is a corruption of an Old English phrase for "foreign nut," as it was introduced in what we call merry old England. But here in Arizona, it's neither foreign nor a nut.

The Spanish called it "nogal," and the two cities of Nogales on the Arizona-Sonora border are named for this tree. Throughout the state you can find place names for this plant: Walnut Creek, Walnut Grove, Walnut Canyon, Walmart (contraction for Walnut Market).

OK, let's take a closer look at this minimally Arizona non-nut, shall we?



The Arizona Walnut ranges throughout the state at elevations from about 3500-7000 feet, usually near water, though it is facultatively riparian, not obligate (unlike water-lovers like willows, cottonwoods, alders, and ash). It is common in mountain canyons with or without perennial water. This fine, rounded specimen is along the Peavine Trail in Granite Dells. It is the viewshed we are trying to protect from development. In fact, if we succeed and keep them from being bulldozed down for house pads, we will have some fine walnut trees for people and wildlife to enjoy.



Not a nut! This fruit is technically a drupe, where a somewhat fleshy exterior wrapping surrounds a hard shell inside in which the seed resides, protected until mature and the outer parts are removed. Other drupes include such familiar fruits as peaches, apricots, almonds, plums, cherries, almonds, and even coconuts (another poorly named plant)! Some botanists complicate the picture by calling them pseudodrupes, but that could be fake news. So what are nuts? I'll skip definitions that refer to psychotics or pieces of metal related to screws and bolts. A nut is a dry, one-seeded fruit with a hard shell that develops within a cup of bracts at its base. This means that acorns, hickory nuts, and hazelnuts (filberts) are nuts, unlike all those crazy drupes above plus pistachios, cashews, and pecans. A peanut is a legume! Legal proceedings to resolve incorrect fruit nomenclature are known as nut cases.



Walnut interiors are, of course, edible, and Native Americans also used the exteriors to color cloth (if you handle the husk, your fingers will turn brown; they are to dye for). Squirrels and other rodents love them. A typical walnut (the edible part) is 4% water, 14% carbohydrates, 15% protein, and 65% fat—not a favorable ratio for a human body, but a good component of a healthy Mediterranean diet.



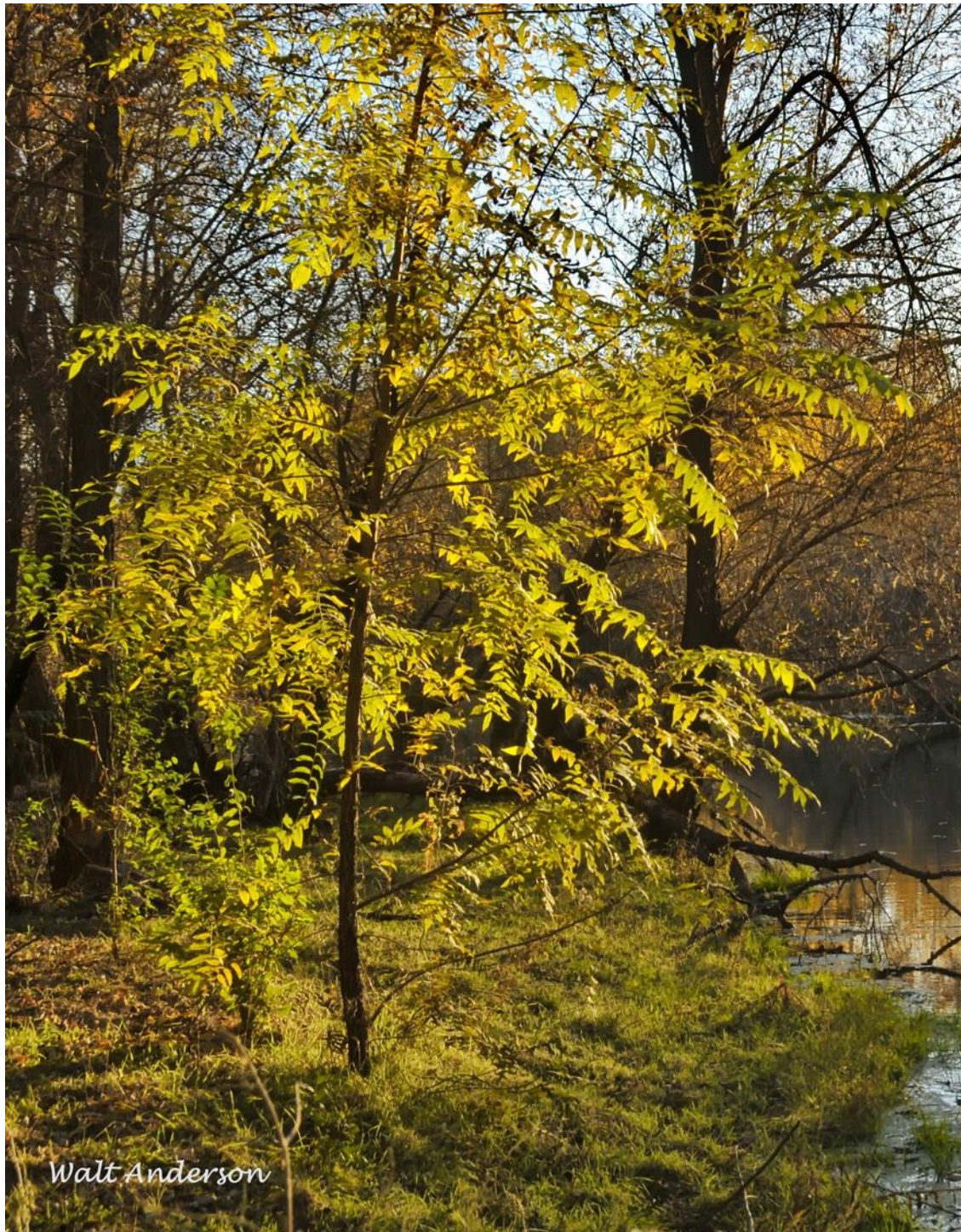
A walnut tree has both male and female flowers on the same individual—nothing sexist about them. Female flowers are in upright clusters that are mainly wind-pollinated (hence a common allergen for people), though bees do transfer some pollen (there is a tiny honeybee in this photo).



Male flowers tend to droop (not to be confused with drupe). Of course, they are the guilty party in pollen production. Wind is not as reliable for efficient direct dispersal, so pollen is produced in prodigious quantities. Much is wasted (including the particles that get stuck in your nose), but it's a numbers game. Walnuts, like oaks, tend to have mast years—good ones occasionally that produce the biggest crops of fruits.



Walnuts, like oaks, are homes to a tremendous variety of life, from microbes invisible to the naked eye (I never wear clothes on my orbits!) all the way to larger birds and mammals that dwell in and feed upon them. Here amidst the male flowers is a little cicada. I guess that, to a human, this is a bit like having ants in your pants.



Walnuts do well along streams like Granite and No-name Creek. They provide a pleasant show of yellow in the autumn. The leaves disintegrate quickly once they fall, and the ground around the trees is often kept free of most other plants because of the chemical compounds in the decomposed material.



Sometimes we can't see the trees for the forest, so I encourage us to differentiate the different kinds, each with many stories to tell. Giving a plant or an animal a name is a way of honoring its uniqueness, though a name is just the first step in getting to know a complex, living, and often mysterious being. Each deserves our attention. Together, all the living things in a landscape constitute a dynamic ecosystem worthy of our admiration and also protection.