Feature Article

Pawpaws America's Largest Native Fruit

by Sharon Richardson

O YOU REMEMBER GROWING UP singing this old American folk song about pawpaw patches?

Pickin' up pawpaws, puttin' 'em in your pocket... Way down yonder in the pawpaw patch.

I grew up singing about them, but I had no idea what they were until I took an Edible Plants class at Longwood Gardens. It was there that I first learned that *Asimina triloba* trees produce the largest fruit native to North America. Pawpaw trees grow in 26 states, from southern Louisiana to Michigan, from the Atlantic shoreline to Nebraska and Oklahoma. Although pawpaw trees are native, they are rarely in our residential landscapes and were not commonly known in the 20th century. They are just beginning to become popular again.

I was fascinated to learn that Native American tribes planted pawpaw trees along their route from their inland villages to the Atlantic seaboard so that when they returned from their summer fishing expeditions, their route would be demarcated by the trees, and they would be ensured of having delicious fruit all the way home

Plant Description

Asimina triloba is a small understory tree, typically about 25–35' tall. They can grow in many conditions, but are most often found in flood plains, deep fertile river banks, shady rich bottom lands, and woodland understory. They spread by root suckers and are often seen in clumps or patches.

Asimina triloba belongs to a large family of tropical custard apple trees called the Annonaceae family. It is the only member of this family that can survive cold winters. In fact, this plant requires winter temperatures and a period of dormancy. The tree has a tropical appearance with large leaves that are approximately 10-12" long and 4-5" wide. The large leaves are clustered symmetrically at the ends of branches and provide a distinctive imbricated appearance to the tree's foliage.

Pawpaw trees are one of the last East Coast trees to leaf out; their leaf buds stay tightly wrapped until late spring, perhaps to protect the tropical fruit flowers from late winter frosts. Fall foliage is a bright yellow and the color makes it easy for travelers to spot a pawpaw patch from a distance.

The pawpaw trees produce a small maroon flower that hangs upside down and appears in early spring at the same time, or slightly before, new leaves appear. The flowers produce a faint fetid or yeasty smell that attracts wasps, flies, and other insects.

The fruit appears in the fall; it starts out green, but as it ripens it becomes yellow, and then brown to black. The fruit is typically 2-6" long and I-2" wide. It is the size of an avocado and the shape of a kidney. The fruit has a fleshy, custardy texture and contains many lima bean-sized brown seeds. Wild pawpaws tend to vary in weight, but weigh less than cultivated fruit. Pawpaw growers aim to produce fruit that weighs a pound or more.

The fruit starts out being rock hard; as it ripens it gets softer and begins to turn color. When ripe, the skin becomes thin, fragile, and easily bruised. The riper the fruit, the sweeter the taste. Some people prefer to eat pawpaws when they are somewhat firm and have a mild taste, while others wait until the fruit is very soft and sticky with a caramel sweetness. Pawpaw fruit may be used in any recipe that calls for bananas or pumpkin pulp.



Pawpaw fruit found near Media, PA.

So why don't we see these fruit in our grocery stores? They rarely make it to market. Pawpaws have a very short shelf life; they don't travel well because they bruise easily. They are very perishable and have an



Gwynne Ormsby bites into a succulent pawpaw fruit.

active metabolism and high rate of respiration.

Despite their fragility, I have found some articles suggesting that under cultivation, pawpaws may become the next super-fruit. Pawpaws have 20–70 times as much iron, 10 times as much calcium, and 4–20 times as much magnesium as bananas, apples, and oranges. Research from Ohio State has found that pawpaws have antioxidant levels that rival cranberries and cherries. One pawpaw is approximately 80 calories and is a rich source of Vitamin C, magnesium, iron, and manganese. Pawpaws also have a moderate amount of Vitamin A.

So, what does a pawpaw taste like? Many people describe the taste as a cross between a banana and a mango. However, I've learned that the 'wow' factor is in the custardy texture of the fruit. In fact, chilled pawpaw fruit was George Washington's favorite dessert.

Historic References and Uses

Speaking of historical references, the earliest written report about pawpaws was made in 1541 by a member of Hernando de Soto's expedition in southeastern United States. They named the fruit pawpaw because the fruit resembled the fruits of papaya.

Native Americans were not the only people in Colonial America enjoying pawpaw fruit. Thomas Jefferson planted the trees at Monticello. Benjamin Franklin was so enamored with them that he asked for seeds to be sent to him when he was living in France. Members of the Lewis and Clark Expedition wrote about subsisting on pawpaws for several days in September of 1806.

Native American tribes also found other uses for pawpaw trees. The tough fibrous inner bark was used to make cordage and rope, fishing nets, and mats. Pawpaw logs were used to build split rail fences. Inner bark was used for fiber to mend clothes and weave baskets. Crushed seeds were used to treat head lice.

Studies are now being conducted to learn about the medicinal use of pawpaws because they belong to a plant family that produces acetogenins. Annonaceous acetogenins are compounds that some people believe to be strong cancer-fighting tools. Nature's Sunshine[®] has used the plant to create a shampoo to treat headlice, as well as a Para-Cleanse[®] with Pawpaw for intestinal parasites.

Growing Pawpaws

I was so intrigued with this plant that I decided to start growing pawpaw trees at home. I wanted to be ready to feed (yet unborn) grandchildren this delicious, native fruit. Since pawpaw trees do not start bearing fruit until they are seven or eight years old, I needed to get a head start.

Last fall, Pam Baxter wrote two articles about pawpaw trees in her gardening column in the West Chester *Daily Local*. Her first article mentioned her conundrum about where to plant one that had been gifted to her. Her care tag said they prefer shade in their early stages, but they do best in full sun to part shade later. Too much sun and they burn up, too little sun and they can't flower.

I wrote to Pam concurring with her assessment because I had already killed two by planting them in too much sun. I also shared that I had never seen a pawpaw patch. She reported that



Pawpaw flowers

information in her second article and 'Margaret,' one of her readers, invited me to visit her residential pawpaw patch in Chester Springs. Margaret, has a large pawpaw patch that has spread throughout the understory of her wooded front yard over the past 50 years.

When I visited, she had just acquired a newly published book by Andrew Moore entitled *Pawpaw: In Search of America's Fruit.* She was hoping to learn why her pawpaw patch had never produced any fruit. Moore's book is full of fascinating scientific and anecdotal information.

Now that I have read Moore's book, I have a pretty good idea why my new friend's pawpaw patch hasn't fruited. Because of its tendency to sucker, a pawpaw's energy may go into sprouts and runners to form colonies. A pawpaw needs to cross pollinate with a tree that is genetically different. The more a pawpaw suckers, the less likely it is to find a partner.

To complicate things further, pawpaw trees are pollinated by carrion flies and beetles; these insects are less efficient and less reliable pollinators than bees. Furthermore, as understory trees, pawpaw trees receive less light

Common Names for Asimina triloba

| banango | Kentucky banana |
|----------------|-------------------|
| custard apple | Michigan banana |
| custard banana | Missouri banana |
| false banana | Ozark banana |
| fetid bush | pawpaw apple |
| frost banana | poor man's banana |
| Hoosier banana | prairie banana |
| Indiana banana | West Virginia |
| Kansas banana | banana |
| | wild banana |



Pawpaw seeds

so the conditions are not optimal for setting fruit. Eva Monheim of Temple University explained, "Despite their shady habitat, pawpaws can be planted in full sun and moist, well-drained soils where they are more likely to produce fruit each year."

Why Should We Add Pawpaws to our Landscape?

With their unusually large tropical leaves, pawpaws can make an interesting addition to your landscape. They have brilliant yellow-gold fall foliage color, and they produce a delicious fruit that is difficult to purchase. Pawpaw trees are also the only larval host plant for black swallowtail butterflies.

My own trees are doing well. I planted two last year in my small wooded area, where large trees behind them provide shade, while shorter hydrangeas and *Amsonia hubrictii* in front allow them to get sun. They have grown to be about 3¹/2' and appear to be thriving. This summer a friend gave me two potted seedlings; I plan to strategically place the new varieties close to my older ones.

I hope the older two trees will be bearing fruit in time for my brand new grandson's 6th birthday. But in case I can't wait that long, Pawpaw Festivals are springing up in several states. I might just take my toddler grandson Declan with me to taste pawpaw ice cream.

路紧张紧紧接

Sharon Richardson *is a Master Gardener* and a volunteer docent at Longwood Gardens. She serves on the state board of GCFP (Garden Club Federation of PA) and is a member of GWA (The Association for Garden Communicators). Sharon has earned two certificates in Ornamental Horticulture and a certificate in Landscape Design from Longwood Gardens.