

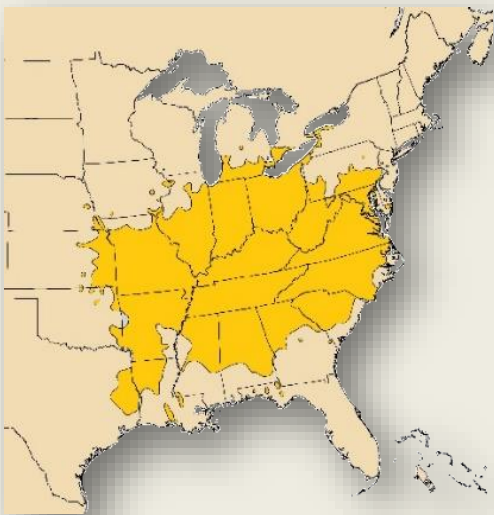
North American Pawpaw

Asimina triloba

The fruit that sustained Lewis and Clarke, and a favourite of US presidents Thomas Jefferson and George Washington



Fruit of North American Pawpaw, *Asimina triloba*. Photo: Scott Bauer, USDA, Public domain, via Wikimedia Commons



Distribution of *Asimina triloba* in North America, map modified from: E L Little Jr, U.S. Dept of Agriculture, Forest Service, & others, Public domain, via Wikimedia Commons

interest in wild foraging, growing trees with edible fruit, recovering forgotten native species and through the popularity of world-wide *eat local* movements.

This ancient fruit from North America is very different from the Pawpaw that shares the same name and that we know from the tropics. The fruit of North American Pawpaws was of great importance to the indigenous people of North America, for food and fibre. It was much prized by the early European settlers and once common fare in North America, but more recently, largely overlooked and bypassed for more conventional fruits. Particularly during the Covid-19 pandemic, there has been a resurgence of interest in Pawpaw, with increased



Fruit of *Asimina triloba*, North American Pawpaw. Manuel.conde, public domain, via Wikimedia Commons.



North American Pawpaw, *Asimina triloba*. Photo by Famartin, CC BY-SA 4.0 <<https://creativecommons.org/licenses/by-sa/4.0/>>, via Wikimedia Commons

is the only genus in this family that grows in temperate regions; all other genera come from the tropics and subtropics, including many exotic tropical fruits, such as custard apple, cherimoya, soursop and ylang-ylang.

Fossils of *Asimina* date from the Eocene (about 56 to 34 mya) but the first fossils that resemble *A. triloba* were recorded from the Miocene, about 23 to 5.3 million years ago, in Colorado. The range expanded during climate-warming periods that allowed tropical species, including pawpaws, to expand northwards, possibly dispersed by megafauna including mammoths, mastodons, sloths, sabre-toothed cats and giant beavers. After the extinction of the megafauna, and following the last Ice Age, it is probable that humans played a major role in pawpaw dispersal, and in the process improved fruit quality by selecting plants with enhanced characteristics. The earliest written record comes from a 1541 report written by a Portuguese officer, a member of Hernando de Soto's expedition, that documents Native Americans cultivating and eating pawpaws in the Mississippi Valley.

Members of de Soto's expedition called the fruit *pawpaw*, because of the perceived similarity to the *pawpaw* of the tropics, *Carica papaya*.

Lewis and Clark, the famous American explorers, led an expedition that took three years from 1804 – 1806, crossing 13,000 km of the American north-west, from St Louis in Missouri to the Pacific Ocean and back. On their return, they ran short of provisions but survived on

pawpaws for the final days to reach their destination. Their journal entry, dated 18th September, 1806, relates: *Our party entirely out of provisions. Subsisting on poppaws we divide the buiskit* (biscuit) *which amounts to nearly one buisket per man,*



this in addition to the poppaws is to last down to the Settlement's which is 150 miles the party appear perfectly contented and tell us that they can live very well on pappaws (Sic).

European settlers made good use of Pawpaws, often surviving on Pawpaw fruits when crops failed. Presidents George Washington and Thomas Jefferson both planted Pawpaws on their properties in Virginia, and the fruit was enjoyed by Mark Twain and Daniel Boone. The fruit itself is highly nutritious, not only does it contain high levels of vitamin C, magnesium, iron, copper and manganese, but also all the essential amino acids.



North American Pawpaws, *Asimina triloba*, have flower parts arranged in multiples of 3, and are now classified as *Early Angiosperms*. Each flower has 6 petals. Photo by Cbarlow, CC BY-SA 4.0 <https://creativecommons.org/licenses/by-sa/4.0>, via Wikimedia Commons

Botanists from the pre-molecular era will recall being taught that *dicots* have flower parts in multiples of four or five, and *monocots* have flower parts in multiples of three. But based on modern techniques, *Early Angiosperms* are now recognised as having flower parts whorled or in *multiples of three* despite being dicots (see image to left). Remarkably, the flowers of North American Pawpaws have **three** sepals and **six** petals and are thus classified as *Early Angiosperms*! So the Pawpaw is indeed an ancient plant, far more closely related to *Magnolia* and *Liriodendron* (Tulip Tree) than to modern day, tropical Pawpaws that share the same name.

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