

Hercules Club (tree) – Reprinted from Friends of Hagerman NWR Weekly Blog January 26, 2017 (by Sharon and David Parrish)

Hercules Club

Zanthoxylum clava-herculis L.

Other Names: Pepperbark, Toothache Tree, Tickle-tongue, Prickly Ash

Family: Rutaceae (Rue or Citrus Family)

Synonym: *Zanthoxylum macrophyllum*

USDA Symbol: ZACL

Larval host for the Giant Swallowtail Butterfly

Imagine, if you will, Hercules, the mythological son of Zeus with the strength of a lion searching through Texas to find a tree for his legendary club. Surely, he would be drawn to the *Zanthoxylum clava-herculis* or Hercules Club with its distinctive knobby warts along the trunk. Today he could find two small specimens in the Butterfly Garden at Hagerman National Wildlife Refuge. In addition, Dr. Wayne Meyer reports that several examples can easily be seen along Meadow Pond Trail.



Medicine: Also known as the toothache tree or tickle-tongue, the Native Americans and the early European settlers were known to chew the leaves and the bark to soothe a throbbing tooth. The major

active compound is chelerythrine. This benzophenanthridine alkaloid exhibits anti-bacterial activity against the common, infectious microbe, *Staphylococcus aureus* (i.e., the staph infection). This highlights the importance of protecting our planet's extensive botanical treasures, which harbor cures to countless human ailments. "As of 2003, at least 25 percent of modern medicines were derived from plants, yet only a tiny fraction of the estimated more than 50,000 medicinal plants used around the globe have been studied in the lab."

Identification: *Z. clava-herculis* is a small, round-headed tree with smooth gray bark covered by triangular-shaped knobby prickles on the bark; thorns emerge from these triangular bumps when the plant is young, then as the plant ages and the "triangles" get larger, the thorns disappear. Leaves are alternate, once pinnately compound 5 to 8 inches long with 7 to 17 leaflets. Each leaflet is 1 to 3 inches long, ovate or lanceolate, toothed, with several sharp prickles along the rachis. The flowers are pale green on loose wide-branched terminal clusters, 4 to 5 inches long. *Z. clava-herculis* blooms in the early spring.



Fruit and Avian Dispersal: The fruit ripens in the early summer, producing a loose cluster of dark brown one seeded capsules. Once the valves open, the small seeds are exposed. Seeds are quickly eaten by seed-loving (granivorous) birds. The fruit passes through the birds and is dispersed below the birds' favorite resting places, along fence rows and the edge of the woods.



Butterfly Host: *Z. clava-herculis* serves as a host plant to a number of insect species including the Giant Swallowtail Butterfly (*Palio cresphontes*). Their “ugly” caterpillars which resemble bird droppings morph into a large, attractive butterflies.



Related Plant Species: There are four species from the genus *Zanthoxylum* found in Texas. *Z. clava-herculis* overlaps in range with *Z. hirsutum*, which is also referred to as toothache tree. *Z. hirsutum* has five smaller leaflets and is common in West Texas.

Z. clava-herculis is related to the Chinese-pepper tree, *Z. simulans*, from eastern China. The fruit of this tree, the Sichuan pepper, produces the signature mouth-numbing flavor that is indispensable in the regional cuisine of Sichuan, China.

Same Name, Different Family: *Aralia spinoza* or devil's walking stick is sometimes called Hercules club. It is a spiny shrub in east Texas with large twice compound leaves. *A.spinoza* is in a different family and does not resemble *Z. clava-herculis*.

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