

TOOTHACHE TREE AND HERCULES' CLUB IN LOUISIANA

by

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Two distinct woody plants have the overlapping common names of TOOTHACHE TREE and HERCULES' CLUB. Both plants, *Aralia spinosa* and *Zanthoxylum clava-herculis*, are widespread throughout the Southeastern United States and have a history of use by both the early settlers and by the various tribes of Indians. This may account for the overlapping of their various names. *Aralia spinosa* has been called Devil's Walking Stick, Hercules' Club, Prickly Ash, Prickly Elder, Angelica-tree, Spikenard Tree, Toothache Tree, Shotbush, Pigeon Tree, Pick-tree, Thorny Ash, and Mississippi Hoe Handle. *Zanthoxylum clava-herculis* is known as Toothache Tree, Hercules' Club, Southern Prickly Ash, Sea Ash, Pepperwood, Prickly Orange, Sting Tongue, Tear Blanket, Pillenterry, Prickly Yellow Wood, and Wait-a-bit. Both shrubs (or small trees) have prickly stems and compound leaves. The leaves of *Aralia spinosa* are two or three times pinnately compound and have thorns on the petioles and the leaves of *Zanthoxylum clava-herculis* are only once odd pinnately-compound. The leaves of *Zanthoxylum* are about 10 inches long with about 9-13 leaflets, but those of *Aralia* can be up to three feet long and about as wide. Thorns are scattered along the twigs and main trunk of *Zanthoxylum*. These thorns are on the ends of corky protuberances (bumps) on larger stems. The thorns on *Aralia* are concentrated near the leaf scars and terminal bud scars but are scattered all over the younger stems.

Aralia spinosa is a spiny, few-branched shrub or small tree. *Aralia* is the Latinization of the old French-Canadian name, *Aralie*; *spinosa* refers to the spines on the stem. It is in the same family as Ginseng (*Panax*, *Araliaceae*) and in the same genus as American sarsaparilla or spikenard and five other species in North America. It ranges from Oklahoma and East Texas to New York. It tends to grow un-branched until cold weather kills the terminal bud and then two or a few lateral buds grow in a bean-pole fashion. Its large compound leaves form an umbrella-shape at the tip of the poles. Its large sprays of white flowers make it an attractive plant to cultivate. It is especially impressive behind a fence or in the edges of wooded areas. The wood is weak, soft, and light and has been used for button boxes, photograph frames, pen racks, stools and arms of rocking chairs. Stems about two inches in diameter can be peeled in spring and make excellent tomato stakes or walking sticks. The large clusters of purple berries are relished by a number of birds and deer browse the foliage. Indians used a decoction of the bark and root to purify the blood and to treat fever. They used the boiled mashed root as a poultice to bring boils to a head. Negroes used the fresh root to treat snakebite, and applied a dried powder of the root to the site of the bite. The water that fresh roots were stored in has been used to treat irritated eyes. The bark has been considered a stimulant and also a means of breaking fever by increased perspiration. Many other uses were made of spikenard (*Aralia racemosa*), a closely related herbaceous species of the Appalachians. *A. spinosa* is suspected of poisoning livestock in Maryland. This shrub can be propagated by seeds or root cuttings. The fruit should be harvested and the pulp removed from the seeds. An embryo dormancy is present and is satisfied by 3 months of cold stratification. Seeds sown without cold treatment germinated 1% and those treated germinated 55%. Root cuttings are much easier but the juice from the bark of roots sometimes causes sores on those handling it. The preparation of clear-cut woods for pine planting causes many broken roots and thus many small readily available plants of this

shrub. The tendency of this plant to form thickets can be counteracted by keeping the area around it mown. Godfrey described this plant by saying: " The characteristic prickly, cane-like stems marked by ring-scars and crowned by an umbrella-like canopy of large 2-3-pinnately compound leaves makes this plant easily identifiable. Its features make it a very interesting subject for horticultural use although its habit of spreading afar by underground runners is perhaps a disadvantage. The national champion devil's-walkingstick is 1'11" circum., 51' in height, 16' spread in San Felasco Hammock State Park, Florida."

Zanthoxylum clava-herculis is a shrub to small tree. The flowers are yellow-green and produced April to May in terminal panicles. *Zanthoxylum* comes from the Greek for yellow (*xanthos*) and wood (*xylon*) referring to the yellow wood of some species. *Zanthoxylum* is in the citrus family (*Rutaceae*) and is a large genus with 2 species in Louisiana and 18 in North America including Hawaii. Because of the similarity of chemical content throughout the genus, these plants have been used throughout the world in medicine and folklore. It is most widely known in Louisiana by the name of Toothache Tree referring to its use by both Indians and settlers. It ranges from southern Virginia, Kentucky, West Virginia to Florida and west to Louisiana, Texas, Arkansas, and Oklahoma. In Louisiana it is common in fencerows from Alexandria south and is common on chenieres along the Gulf. It is also common along the Red River and is scattered throughout northern Louisiana. It seems to prefer basic soil in uplands and is common in the clay upland soils near Copenhagen. Indians used this plant for an amazing range of ailments. A decoction of the bark was used for gonorrhoea; the wood for toothache, and a decoction of boiled roots to increase perspiration. Both Indians and early settlers mixed the inner bark with bear grease and applied it as a poultice to treat ulcers. Ripe berries were thrown in hot water to make a spray used in the mouth and blown on the chest and throat for chest ailments. The bark was also used for inflammations of the throat. The inner bark, boiled in water, produced a lotion used to treat various itches. The berries have been considered tonic, stimulant, anti-rheumatic, and effective in relieving gas, colic, and muscle spasms. A solvent extract from the bark is an effective synergist with pyrethrum. Modern herbalists specify the bark and berries of *Zanthoxylum* as a treatment for rheumatism and as a stimulant for blood circulation. Researchers have not been able to validate their claims. Berberine is found in the bark and it is a broad-spectrum bactericide. Other species are used throughout their range as chewing sticks for cleaning teeth, killing decay bacteria, etc. The fruits have been described as single-seeded capsules or as follicles with one or two seed. The plant has dormant seed that must be stratified for four months and probably should also be scarified. They can be propagated by the occasional suckers but probably should be propagated by root cuttings. The national champion is 7'6" in circumference at 2', 38' in height, and 59' in spread at Little Rock, Arkansas.

Another species, *Zanthoxylum americanum*, has been found in Louisiana only in several populations at Copenhagen in Caldwell Parish. It ranges from Quebec to Minnesota and south to Louisiana and the peninsula of Florida. It is a small shrub forming clones by subterranean runners. Prickles occur in pairs at the nodes on the stems (scattered on *Z. clava-herculis*). There are few if any on the petioles. Flowers are solitary or in axillary panicles rather than terminal. This species has the same numbing effect when one chews the bark. It was used throughout the northern part of United States where it is usually referred to as prickly ash. It is heavily browsed by deer at Copenhagen. Because of its spreading by underground roots to form thickets, it can be easily propagated by root cuttings. Plantings of both species should be supplemented with lime.

Regardless to what common names we use for *Aralia spinosa* and *Zanthoxylum clava-herculis*, few woody plants have had such a varied and widespread use in our folklore.