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The Glades Indians And the Plants they Used



Ethnobotany of an Extinct Culture

by Daniel F. Austin

Dozens of papers have been published about the now extinct people found living in South Florida at the time of European discovery in 1513. Most studies have concentrated on pottery, bone and shell artifacts, animals used, and culture. In contrast, this article summarizes the plants

THE PEOPLE

All data suggest that these Native Americans were linguistically and culturally related. As a group, they were dubbed the "Glades Indians" by anthropologists even though they had no permanent villages within the Everglades. The Glades Indians preceded the more famous Seminoles in South Florida, living between Lake Okeechobee and Key West from about 2000 years ago until the 1760s, when they disappeared as a culture. Seminoles, by contrast, did not settle in the area until the middle 1700s, although they were familiar with the landscape and made slave-capturing raids south into the region well before that time.

Based on historical and archaeological data, anthropologists recognize five village complexes or tribes of Glades Indians.

Calusa. This culture may have taken their name from their second historical leader, Calos. These were a coastal people of Southwestern Florida between Charlotte Harbor and Cape Sable who relied heavily on the ocean for food. The most powerful group in historic times, the Calusa extracted tribute from the Atlantic coastal villages. Most of the gold and silver lost by Spanish shipwrecks on the Florida East Coast made its way to the Calusa. Their dominance caused people to incorrectly refer to all pre-Seminole Indians in South Florida as the "Calusa."

Tequesta. Ponce de Leon recorded their name phonetically as "Chequescha" in 1513. The leader of this group in the 1530s was a "near relative" of Calos. These people lived from the Palm Beach-Broward County border to Key West. Although they took much of their food from the ocean, they also relied more heavily on plants than the other groups. Coontie (*Zamia floridana*) was especially important to them.

Mayamis. The group living around Lake Okeechobee took their name from the lake. *Mayamis* has the same meaning as the Mikasukkee-derived word *Okeechobee* (big water). There was no linguistic or cultural relationship with the Miamis of Ohio. Lake Okeechobee provided most of the Mayamis' food.

Jaega or Job. There is no known meaning of these names. Fontaneda gave us both; Jonathan Dickinson left more details on the second village. These people lived in what are today Palm Beach and Martin Counties,

especially the Jupiter Inlet region. The Jaega seem to have been linked closely with the Mayamis. The Jaega were certainly allied with the Ais to their north since the Ais leader was father-in-law to the Jaega leader in historic times. The Jaega also shared several cultural traits with the Calusa.

Ais. This name is of uncertain origin, although reports from the 1760s said with confidence that it was from Muskogee "issi" or "aisa" meaning deer. Bernard Romans, the surveyor, said that "Aisahatchee" was "deer-river" in Ais. We now call the "Aisa-hatchee" the Indian River. Ais lived from St. Lucie County north to the Cape Canaveral region. The Ais were more like the people to their north, the Timucua, whose history was better recorded by Europeans.

These five groups spoke two basic languages; the Calusa, Tequesta and Mayamis spoke one and the Ais and Jaega another. Direct translations exist for only about ten of their words. In spite of this paucity, Swanton thought they were of Muskogean language stock like the Creeks and Seminoles. The entire recorded Glades Indian vocabulary is as follows:

calobe: deep spring

calos: a fierce people

caogacola: a crafty people, skillful with the bow

cucbiaga: a martyred place; for many years the Keys were called The Martyrs "Los Martyres" were originally located on Big Pine Key

guarangube: "Pueblo de Llanto" or village of crying, now Matacumbe Key

mayamis: big water

o: town beloved

se-le-tega: run to the lookout, see if there are people coming

tejibue: look-out

zertepe or certepe: chief or cacique

Five other words from their languages have no translations. These are *tequesta* (a village in modern Miami, probably on Miami Beach), *guacata* (a people also known as the Ais or St. Lucies), *Senquene* (father of Calos), *surruque* (a village at Cape Canaveral), and *tampa* or *tanpa* (said to be Charlotte Harbor). Another word, *soco* (grape), is said to be in their languages; it has the same meaning in Muskogean and Cherokee.

Populations of Glades Indians are estimated at being between 4,000 and 10,000 individuals. To obtain enough food to survive, they lived in small, widely dispersed

villages. Their cultures combined aspects of people who came from the Mound Builder complex of the Southeastern United States and those in the Caribbean. Some even identify Mexican elements in their lives and artifacts. They left ceremonial and village mounds like those used by the Mound Builders around Lake Okeechobee and scattered down both coasts. In the manner of their neighbors to the south ' they built platform-type dugout canoes like those used in Central America and the West Indies. Other people in the United States built pointed-end-type canoes. Whatever their origin, the Glades Indians left middens, canals, and mounds behind after living here about 2,000 years. Bernard Romans reported that the last of them were taken to Cuba in 1763, where they lived for a while in a suburb of Havana. Others think that the "Spanish Indians," who lived with the Seminoles in the 1800s, were remnants of the Glades Indian culture.

Historical and archaeological records exist to document fewer than 50 plant species used by the Glades people. That number is about 3% of the native flora, markedly lower than other Native Americans used. Several studies in North America indicate that about 18% of the local flora was used by pre-European cultures. South Florida's poor recorded usage is doubtless an artifact of lost data. Diseases, slaving, and wars quickly decimated the Glades Indians after Europeans arrived, and there were no Jesuit priests recording native plant usage in Florida as there were in Mexico.

Houses. No contemporary descriptions exist for the Calusa and Tequesta dwellings. There is a poor description from Jonathan Dickinson for the Jaega and Ais. We do know that marsh grasses (probably *Spartina* species), and palm fronds (*Sabal*, *Serenoa*, *Thrinax*, and *Coccolobrinax* species) were used for thatch. Trees such as the gumbo limbo (*Bursera simaruba*), slash pine (*Pinus elliottii*), cypress (*Taxodium distichum*), and others were used for logs, posts and pilings.

The literature of the period mentions two types of houses: those of the leaders and simpler houses of the other people. Possibly these houses were of the hut and chickee types used later by Seminoles and European-Americans. The type now called *chickee* (a Muskogean word) is still used in wet sites in Central and South America.

Perhaps the Seminoles learned this style from the Glades Indians.

Domestic Utensils. Plants were used to make cups, trays, coffins, bowls, mortars, pestles, ladles, canoes, adze handles, fibers, clothes, and other items. Species used include pine, cypress, and mangrove (presumably *Rhizophora mangle*). Several other artifacts are probably of the more tropical species of the region, like gumbo limbo. Gourds (*Cucurbita pepo* and *Lageneria siceraria*) were used for floats on nets recovered from the Marco Island site that was abandoned and burned before 1500. These gourds may have been cultivated, although reports of maize (*Zea mays*) cultivation in South Florida are based on misinterpretations.

Transport. Canoes were made of logs. Although no full-size examples are known, miniatures were recovered on Marco Island in the 1890s. Larger versions of these canoes were used "legally" from 1699 when Spain reopened trade between Florida and Cuba (it had been closed officially since the 1570s). Contemporary historical records describe Glades Indians traveling between Key West and Havana (about 90 miles) in these dugout canoes in 24 hours. In Havana, individuals traded furs, live birds in cages made of willow (*Salix caroliniana*), and unrecorded fish and plant species. Good singers like mockingbirds and cardinals brought the equivalent of \$5.00 apiece when sold to the cigar factories.

Clothes. The Tequesta women wore shawls made of woven palm leaves. These women's "skirts" were simple, being little more than fibers suspended from a belt; a little like the stereotype Hawaiian "grass skirt." John K. Small and others interpreted Fontaneda's description of the source of these fibers ("unas yerbas que nacen cle unos arboles" - "some herbs that grow on trees") as being Spanish moss (*Tillandsia usneoides*). Indian women were supposed to have clothed themselves with this air plant, and Jacques LeMoynes's 1550s drawings of the Timucua farther north seemed to support the idea. However, other words in the original Spanish ("a manera de estopa o lana y no es blanca sino pardo" - "resembling tow or wool, but brown instead of white") and other data show that the fibers were from Spanish dagger (*Yucca aloifolia*), an abundant coastal plant in South Florida. Men wore a "loincloth" of woven palm leaves. At least

when they were at war, they had "tails" of the yucca fibers attached at the back.

Food Plants. We have direct and indirect records of 17 species being used as food, but surely there were more. Some of those used were fruits of prickly pear (*Opuntia* spp.), gopher apple (*Licania micbauxii*), coco plum (*Chrysobalanus icaco*), saw palmetto (*Serenoa repens*), and sea grape (*Coccoloba uvifera*). Jonathan Dickinson and other survivors of the 1690s shipwreck off the mouth of the Loxahatchee River at first declined saw palmetto berries. He wrote that "They taste like rancid cheese soaked in tobacco juice." Later they were so hungry that they grew to favor them on their long walk to St. Augustine.

Starch was obtained from the roots of both *Smilax* spp. and *Zamia floridana*. We do not know what the Glades Indians called these, but the Seminoles call them "coontie chatte" (red flour root for *Smilax*), and "coontie hateka" (white flour root for *Zamia*). Extraction from *Smilax* was comparatively easy; *Zamia* was more difficult and poisons always remained behind in trace amounts. People in the world who still eat cycad starch have higher esophageal cancer rates than those who do not.

Fishing and Hunting. We have no documentation of the Glades Indians using plant chemicals to catch fish, but there are several in the region they could not have missed.

Notable among those containing poisons that block oxygen-uptake on fish gills are "fish poison" (*Piscidia piscipula*), now often called Jamaica dogwood. This species and another legume, coin-vine (*Dalbergia ecastopyllum*), have rotenone-like compounds that make them effective piscicides (fish killers).

Palms (*Sabal palmetto*, *Serenoa repens*, *Thrinax* spp., *Coccolobrinax argentata*) were sources of fibers for nets and cords. Of these, *Thrinax* was preferred as it still is in remote and poor areas in Central America. Palm fiber ropes are especially good for ocean fishing and hunting because they do not get wet and sink. That feature made ropes attached to harpoons effective for killing seals (now extinct), manatees, turtles, and other marine animals. When these animals sounded, the buoyant fiber lines served as floats to bring them back to the surface.

Palm fibers were also used to make fishing nets. Fragments of these nets were preserved in the Marco Island site. Although they were hundreds of years old, there were still parts of the nets that showed the weave and the knots used to tie them. Additionally, there were wooden and gourd floats attached.

Popular accounts portray the Glades Indians using bows and arrows. Possibly by historic times they did. Fontaneda refers to *flecberos* (archers), although he never uses the word for bow (*arco*). Jaega later were illustrated using bows when meeting Jonathan Dickinson in the 1690s. However, the Calusas of southwestern Florida were not using bows before the 1500s. At that time, they were using spear-throwers, often called *atlatls*, to launch their weapons. One *atlatl* recovered from Marco Island had a rabbit carved on the end that held the spear in place with its tail.

Small birds were captured by the ancient method of using bird-lime. This technique consists of putting a sticky material on a favored perch. The Glades Indians used the glue-like sap of gumbo limbo boiled with water to make the bird-lime. When this material was spread on a branch, any bird landing on the site became stuck. The hunters removed the birds carefully and placed them in cages. Some were eaten; others were sold or bartered.

Medicinal and Religious Plants. If we judge Florida inhabitants by people in nearby regions, we know that many plants were used in these contexts. A few are recorded. *Cassine* is the best known medicinal and religious plant from this time and region. Either these people used the same word for the plants as the Muskogee farther north, or they used it as a Spanish loan-word with Jonathan Dickinson and his party. The name *cassine* is derived from Muskogee *asi* that becomes *aseen* in the objective form. The Seminole leader who came to be called Osceola was really called not by a personal name, but by a title: *Asi-Yahola*, the black drink singer. Ultimately *aseen* became *cassina* in Spanish and *cassine* in English. We know the plant scientifically as *Ilex vomitoria* and the source of the "black drink" of the Timucua and Muskogean-speaking Creeks. From Lake Okeechobee south, *Ilex cassine* was used in the beverage because the other species is absent. Europeans, who did not believe in bathing, considered the Native

Americans barbarians for drinking the "black drink" and vomiting in their religious festivals. We do not know what the well-bathed Indians thought of the aromatic Europeans.

Gumbo limbo as a common name for *Bursera simaruba* first appeared in the middle 1800s. Fontaneda called it "el palo para muchas cosas" (the tree of many uses). The sap was used in medicines, to ward off evil spirits, to safe-guard canoes from wood-boring shipworms (*Teredo*, Teredinidae: Mollusca), as glue, and in many other ways.

Alakenge is a name used in early literature for *Physalis* spp. in Florida. Doubtless the Glades Indians used the plants medicinally as do many people, although the common name is Arabic. The roots are a drastic laxative and were used to purge demons, bad blood, and other evils from the body.

Pigments were taken from a number of places. Artifacts from Marco Island, buried under anaerobic seawater for 400-500 years, still contained visible pigments of black, white, blue, red-brown, pink, red and gray. Black came from charcoal and, according to some, oxidized rubber from strangler fig sap (*Ficus* spp.). Reds and pinks came from the cochineal insects (*Dactylopius coccus*) that live on cacti (*Opuntia* spp.).

Probably the most famous plant fragment taken from the Marco Island site by Frank Hamilton Cushing was the feline figure or panther. This six inch tall carved cat was considered by Gilliland as a "god-animal representation." No one seems to have identified the wood of this carving, but its

intricate detail clearly indicates a sophisticated and skilled people with a complex worldview. This, with other wooden carvings, and the quantity of plant uses by these Glades Indians also indicates a people who had a full understanding of the resources around them.

ABOUT THE AUTHOR: Dan Austin is a founding member of the FNPS who has contributed to The Palmetto regularly since its beginning. This paper is based on the talk "Environmental effects of the Glades Indians on southern Florida," first given at the March 1980 joint meeting of the Association of Southeastern Biologists and the Ecological Society of America, Tampa, Florida. Subsequently, Austin has given an annual "Glades Indians" lecture in the education program at the Loxahatchee National Wildlife Refuge.

Additional Reading

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