The Ethnobotany of Early Florida

Florida’s First People and their Plants

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http://www.pbchistoryonline.org/page/native-americans
What is Ethnobotany?

The story of the interaction between plants and people in a certain region at some point in history.

PLANT USES:
- Tools
- Weapons
- Construction
- Transportation
- Household items
- Food
- Medicine
- Rituals
- Art
Century Plant
(*Agave spp.*)

**Tools:** cord and ropes for ship building; awls

**Weapons:** string for bows; traps

**Construction:** natural fencing

**Household Goods:** Provides fiber, baskets, cords, breech cloth worn by men and shawl worn by women; roasted for paper

**Food:** stalk nectar alternative sweetener; flowers, stalks, and leaves are edible; distilled blue agave nectar makes tequila

**Medicine:** steroidal medicine used in birth control
Tools: Making Fire

- **Sabal Palm**
  - spindle
  - kindling
- **Willow**
  - fire board
  - hand hold
  - bow
- **Century Plant Fiber**
  - twine

[Image of a bow drill for fire making with labels for Sabal Palm Branch, Century Plant Fiber, Willow, and Sabal Palm husk.]

(Brown, R. 1994, pg 71)
**Tools:** Fishing Nets and Traps

- Fencing: **Wood**
- Wood Lashing: **Plant fiber**

- Net material: **Palm Fiber**
- Net gauge: **Red Mangrove**

*Timucua Indians trapping fish. 1562.*

*Making Fishing Net with Authentic Materials*
(Brown, R. 1994, pg 71)
Tools: Traps

- Box trap – straight branches possibly **elm**
- Snare trap – young **sapling; palm** twine
- Birdlime – sticky substance to snare birds made from **Gumbo Limbo tree**

*Box Trap* (Brown, R. 1994, pg 144)

*Snare Trap* (Brown, R. 1994, pg 144)
Weapons: Points and Atlatls

- Chert was heated for 5 hours sometimes using a slash pine fire before being shaped into projectile points. Red mangrove was also used for projectile points.

- Points were attached to shaft of bamboo using pine resin and leather to make a spear, dart, or arrow.

- Atlatls - made of oak, red mangrove, and buttonwood - to propel darts further and harder than by hand.
Weapons: Bows and Arrows

Bows - oak, hickory, mulberry, dogwood, red maple, and birch – "bows so tall and heavy that the Spanish couldn’t draw them fully".

Arrows – cane, sapling, straight new shoots from trees such as *dogwood*.
Construction: Palm Thatch

Chickee Thatching Detail.
Photo: http://www.palmpedia.net/wiki/Sabal_yapa

Seminole Indian Thatching A Chickee.
photograph by Willard Culver which was uploaded on October 2nd, 2011 to pixels.com
**Construction:** Palm Thatch and Cypress Bark

- **Structure** – *Cypress* saplings, pine
- **Roof** – thatch or bark
  - Saw Palmetto
  - Cabbage Palm
  - Florida Thatch Palm
  - Royal Palm
  - Coconut Palm
  - Cypress or poplar bark (Apalachee)

Windows and doors - Covered by woven mats of plants

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*Chickee at Mounts Botanical Garden*

http://www.floridagardener.com/misc/ChickeeHut.htm

*Cypress Bark Chickee.*

(Brown, R. 1994, Plate 8.18)
Construction: Wattle and Daub

- Spanish moss for daub and for lashing house framework
- Grapevine or sapling for the wattle
- Sandcord grass (Spartina bakerii) and other grasses sometimes used for roofing
Transportation: Canoes

- Almost always longleaf or slash pine.
- Resin burns readily to hollow out the canoe.

**Timucua men carving a boat from a tree.** 1562. Black & white photoprint.

**Types of Dugout Canoes.** (Brown, R. 1994, pg 113)
Household Items:

- Ceramics
- Utensils
- Rope, Twine, Thread
- Clothing
- Mats
- Baskets
- Dyes

Earliest ceramics from 4,000 years ago found along the St. Johns river.
• Earliest clay pots were tempered with vegetable fiber, shredded palm fibers, or Spanish moss
• Not the best way to temper and left the vessel shaky
• The paddles used to shape ceramics were wrapped with plant fiber fabric or cord so the clay wouldn’t stick and patterns would be left – improving it’s heat tolerance. Corn cobs were also used for patterning.
Household Items: Utensils

*Cypress Bowl.* (Brown, R. 1994, Plate 4.1)

*Basswood Spoon.* (Brown, R. 1994, Plate 8.16)
Household Items: Rope, Twine, Thread Fiber

- Fishing net
- Weaving
- Lashing
- Clothing
- Cording for ships

(Brown, R. 1994, Plate 8.15)
Household Items: Rope, Twine, Thread Fiber

- Sabal Palm (2, 3, 6, 9)
- Saw Palmetto (7)
- Century Plants (8)
- Yucca
- Mulberry (5)
- Spanish Moss (1)
- Cypress Bark (10)
- Basswood
- Hickory
- Willow (4)

Types of Plant-based Rope, Twine, and Thread (Brown, R. 1994, Plate 8.13)

<table>
<thead>
<tr>
<th>Plant Used</th>
<th>Part of Plant</th>
<th>Diameter of Cord</th>
<th>Breaking Strength</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sabal Palm</td>
<td>Leaf</td>
<td>1/16&quot;</td>
<td>15 pounds</td>
</tr>
<tr>
<td>Cypress</td>
<td>Inner Bark (Stem)</td>
<td>1/8&quot;</td>
<td>10 pounds</td>
</tr>
<tr>
<td>Cotton, machine-made</td>
<td>Seed Fiber</td>
<td>1/16&quot;</td>
<td>17 pounds</td>
</tr>
<tr>
<td>Sabal Palm</td>
<td>Leaf</td>
<td>1/8&quot;</td>
<td>20 pounds</td>
</tr>
<tr>
<td>Spanish Moss</td>
<td>Leaf</td>
<td>1/4&quot;</td>
<td>50 pounds</td>
</tr>
<tr>
<td>Mulberry</td>
<td>Inner Bark (Stem)</td>
<td>1/8&quot;</td>
<td>73 pounds</td>
</tr>
</tbody>
</table>

Breaking Strengths (Timucuan Technology pg 95)
Sabal Palm (Sabal Palmetto) and Saw Palmetto (Serenoa repens):

- Red fibers from the trunks of sabal palms and saw palmettos (about 4”-5”) long spun on a spindle into ropes and cord. ¼” 2 ply rope held 20 lbs.
- Fiber near the sabal palm heart is spun like cotton to make a fine thread.
- Leaves of saw palmetto, sabal palm are split into fine strips and twisted into rope and cord and the long strands of fiber in between sabal palm leaf blades made into twine.

Household Items: Rope, Twine, Thread Fiber

Saw Palmetto double-ply rope.  
Century plant (Agave spp.):
• easiest fiber to work with.
• Cut into ¾” strips, pounded and stripped of flesh
• 1- 5’ century plant leaf yields 22” of 1/16” cord that holds 40 lbs.
Yucca (Yucca filimentosa)

- 3’ leaves yields long strong fibers.
- Leaves split can be plied into cord without further processing.
- Cord made pliable by soaking
- Strongest native cord – 2-ply cord 1/8" can hold 74 lbs.

Household Items: Rope, Twine, Thread Fiber

Yucca Tools and Rope.  
https://vitalconnection.files.wordpress.com/2012/08/dsc01515.jpg
• **Spanish moss** skirts – sometimes woven
• A few accounts of clothing woven from fiber or bark.
• Whole **olive** shells made beads
• Wooden ear ornaments
Weaving - Archeological evidence shows skilled weavers over 7000 years ago.

Baskets – essential to cooking, gathering, harvesting, and sifting
  - Saw palmetto leaves and stems, sabal palm leaves and roots, peeled grapevine, Virginia creeper, blackberry, young willow branches, longleaf pine, grasses, yucca

Mats – walls, roofs of houses, flooring and bedding, wrapping the dead
  - Cattail, sabal palm, palmetto, yucca

Household Items: Weaving
Household Items:
Mordants and Dyes

Navajo natural dyes

Homesteading.about.com

https://www.flickr.com/photos/exfordy/3393097775/
Natural Fabric Dyes

Plum

Beet

Strawberry

Ginger

Onion

Coffee beans

Spinach

Lavender

Acorn
Food: Pre-Agricultural Foraging

Nut Starches

• Mockernut hickory
• Acorn from white oak group, swamp chestnut oak, overcup oak; cannot eat red oak group without further processing
• Chinquapins, beachnuts, bass nuts
• Nut Starches were essential before corn

Timucua Indians gathering food and smoking

**Food: Pre-Agricultural Foraging**

**Root starches:** Some required additional preparation
- Smilax rhizomes
- Coontie
- Arrowhead
- Cattail roots
- Waterlily
- Spatterdock
- Wild morning glory
- Groundnut
- Nut sedge

**Seeds:** Most prehistoric seeds were small
- Amaranth family
- Goosefoot family
- Cane
- Cockspur grass
- Sea oats

**Fruits and berries:** Often dried
- Wild grapes
- Wild plums
- Hog plums
- Persimmons – shaped into a cake
- Blueberries
- Huckleberries
- Blackberries
- Red mulberries
- Elderberries
- Sabal palm fruits and hearts
- Saw Palmetto “berries”
Food: Cultivation

- Agriculture started around 900 AD, but some grew small gardens before.
- Cultivation allowed for less foraging – especially corn.
- Populations grew and people began to concentrate in cities or larger villages.

Cultivated Crops

- **Maize** – since 800 AD
- **Squashes** – summer and winter
- **Beans** - several varieties
- **Persimmon and Plums** - left growing
- **Sunflowers** – for seeds to eat and oil
- **Tobacco** - ritual
- **Bottle gourds** - vessels
Beauty Berry (Callicarpa americana):
- Sweat baths against edema and malaria
- Clean the kidneys and bladder “urine retention sickness” (Seminoles)
- Roots have anti-viral activity against polio and measles
- Remedy for skin cancer
- Mosquito repellant

American Holly (Ilex opaca)
- Boiled bark rubbed on itchy skin (Koasati)
- Same to wash sore eyes (Choctaw)
- Chewed berries for upset stomach (Cherokee)
- Treat malaria, fever, and rheumatism (Mississippi African Americans)
Ritual


Ritual

Smoking

- **Nicotinia rustica**
  - 3 to 4 times stronger than tobacco today may be first cultivated crop.
  - Made cigarettes with corn husk wrappers
  - Leaves chewed and eaten, licked, drunk and powdered.
  - Burned as incense
  - Used for poultice
- Smoked alone or combined with **Nicotinia**
  - Inner bark of dogwood, Sweet gum, and southern arrow wood
  - Leaves of sumac and sweet grass
  - Roots of willow
  - Silk of corn

Native Americans Smoking
https://fineartamerica.com/featured/native-american-smoking-1591-granger.html
Ritual

Masks
Paint for rituals
- Strangler fig for latex
- Mulberries for dye
- Gumbo Limbo for mask

Drinking
Black drink
- *Ilex vomitoria*
  - roasted and boiled for tea.
  - Taken during ritual
  - Only elites and guests; no women

Wine
- *Agave spp.*
**Tools:** pottery scrapers

**Household goods:** carrying and storing liquids; bowls, spoons, dippers, scoops

**Food:** boiled, baked, soups, dried for flour for bread. Shoots eaten as greens, blossoms stuffed.

**Ritual:** ceremonial rattles, masks

**Medicine:** seeds treat intestinal worms; be ward off liver flukes; treatment for enlarged prostate

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**Squashes and Gourds (Cucurbita spp.)**

- **Acorn:** C. pepo var. turbinata
- **Cocozelle:** C. pepo var. longa
- **Crookneck:** C. pepo var. luteocinerea
- **Pumpkin:** C. pepo var. pepo
- **Scallop:** C. pepo var. cyathophora; called C. melo pepo by Linnaeus
- **Straightneck:** C. pepo var. rectocinerea
- **Vegetable marrow:** C. pepo var. fastigata
- **Zucchini:** C. pepo var. cylindrica
- **Ornamental gourds:** C. pepo var. ovifera

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**Squashes and Gourds (Cucurbita spp.)**

- **Okeechobee gourd:** Cucubita okeechobeensis
- **Seminole Pumpkin:** Cucubita moschata

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*C. pepo* and Var.
Cabbage Palm (Sabal Palmetto)

**Tools:** Fish drags, cord to hang meat to dry; food paddles from trunks; ball game sticks

**Weapons:** arrows

**Construction:** Thatch for roofs; house poles

**Household Goods:** Provides fiber, baskets, cords, breech cloth worn by men and shawl worn by women

**Food:** Fruits eaten fresh or dried for winter use; Seminoles make drink called palmetto gruel, made into bread, syrup, raw; ash used for salt

**Medicine:** Diuretic, sedative, anti-inflammatory, colds, coughs, diarrhea, prostate problems, migraine

**Ritual:** Hunting dance staffs

**Barter:** traded with Norther tribes like Iroquois, and Winnebago
**Construction:** Thatch for roofs

**Household Goods:** Provides fiber, oil, wax, and leaves for baskets

**Food:** Fruits eaten fresh or dried for winter use; Seminoles make drink called palmetto gruel

**Medicine:** Diuretic, sedative, anti-inflammatory, colds, coughs, diarrhea, prostate problems, migraine
Oaks
(Quercus spp.)

**Construction:** Ship building, furniture, construction. Most sought after building material for ships

**Household Goods:** Bark for dyes and paints, ink

**Food:** Food for all indigenous people; oil for cooking and flavoring foods

**Ritual:** Leaves repel witches (Gaelic); symbolize strength – brave wore crowns of oak leaves (Roman)

**Medicine:** Tannins may be antiviral, antiseptic, and antitumor; also may be carcinogenic
Red Mulberry  
*(Morus rubra)*

**Weapons:** Wood for bows (Seminoles)

**Construction:** tubs, casks, furniture, boats, fence posts (Americans)

**Household Goods:** Inner bark used to make fiber and white cloth (Natchez); leaves, steams, fruits used as dyes (Timucua)

**Food:** dried for “raisins”, smashed for dried fruit cakes (Muskogee); mixed with sugar and cornmeal for dumplings (Cherokee)

**Ritual:** Paint for masks when mixed with latex from strangler fig

**Medicine:** Urinary problems, expel worms, stop dysentery, laxative, emetic, cure ringworm; Potential for treating diabetes and hyperlipidemia;
Beauty Berry
\(\text{Callicarpa americana}\)

**Construction:** stems used in house rafter construction

**Food:** fish poison; for wildlife

**Household Goods:** leaves used to scrub dishes; stems burned for fuel

**Medicine:** sweat baths against edema and malaria, clean the kidneys and bladder “urine retention sickness”; Roots have anti-viral activity against polio and measles; Remedy for skin cancer;
Wax Myrtle
(Myrica cerfera)

Food: flavor food and improve foaming of beer

Household Goods: Oil used to scent soap; berries boiled for long lasting, clean burning candle oil

Medicine: 
- dysentery
- analgesic
- diuretic
- emetic
- febrifuge
- headaches
- stomach problems
- external inflammation

Ritual: Make tobacco last longer
Thank You! Questions?