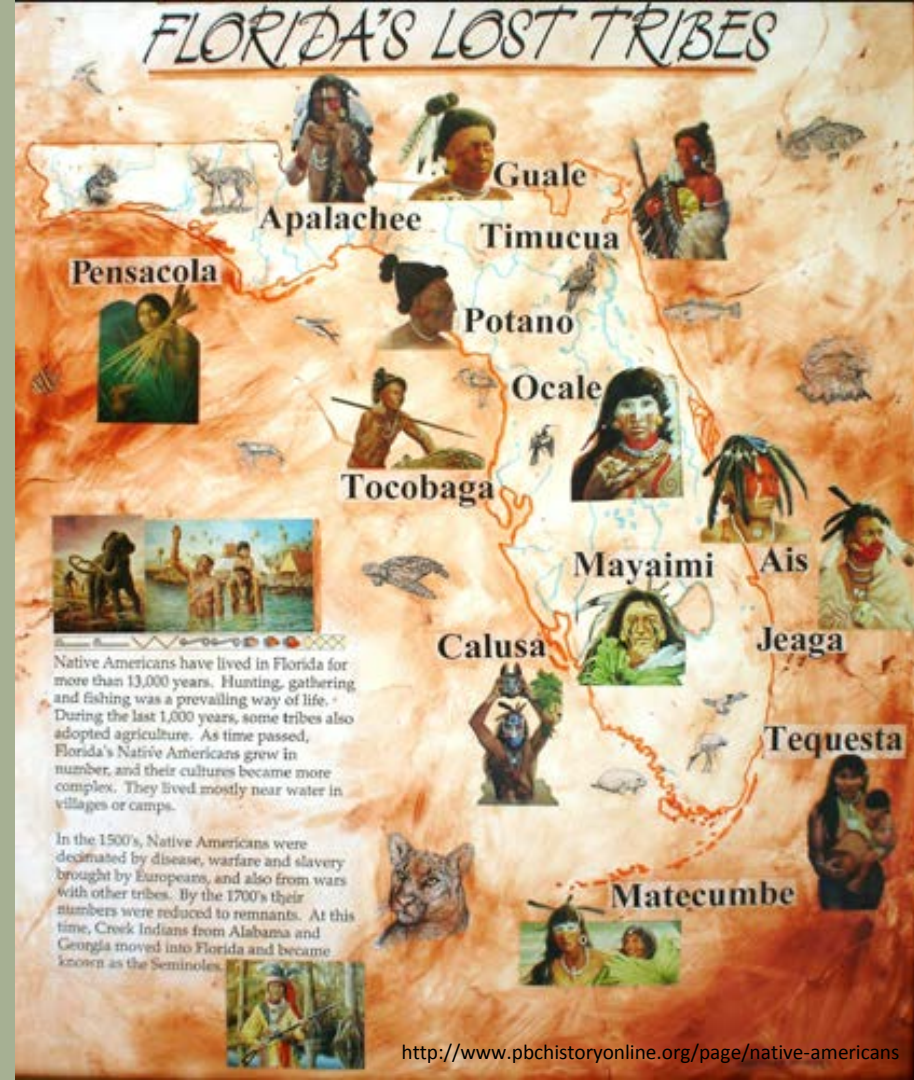


# The Ethnobotany of Early Florida

## Florida's First People and their Plants

Jen Marvin, MLA



# 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

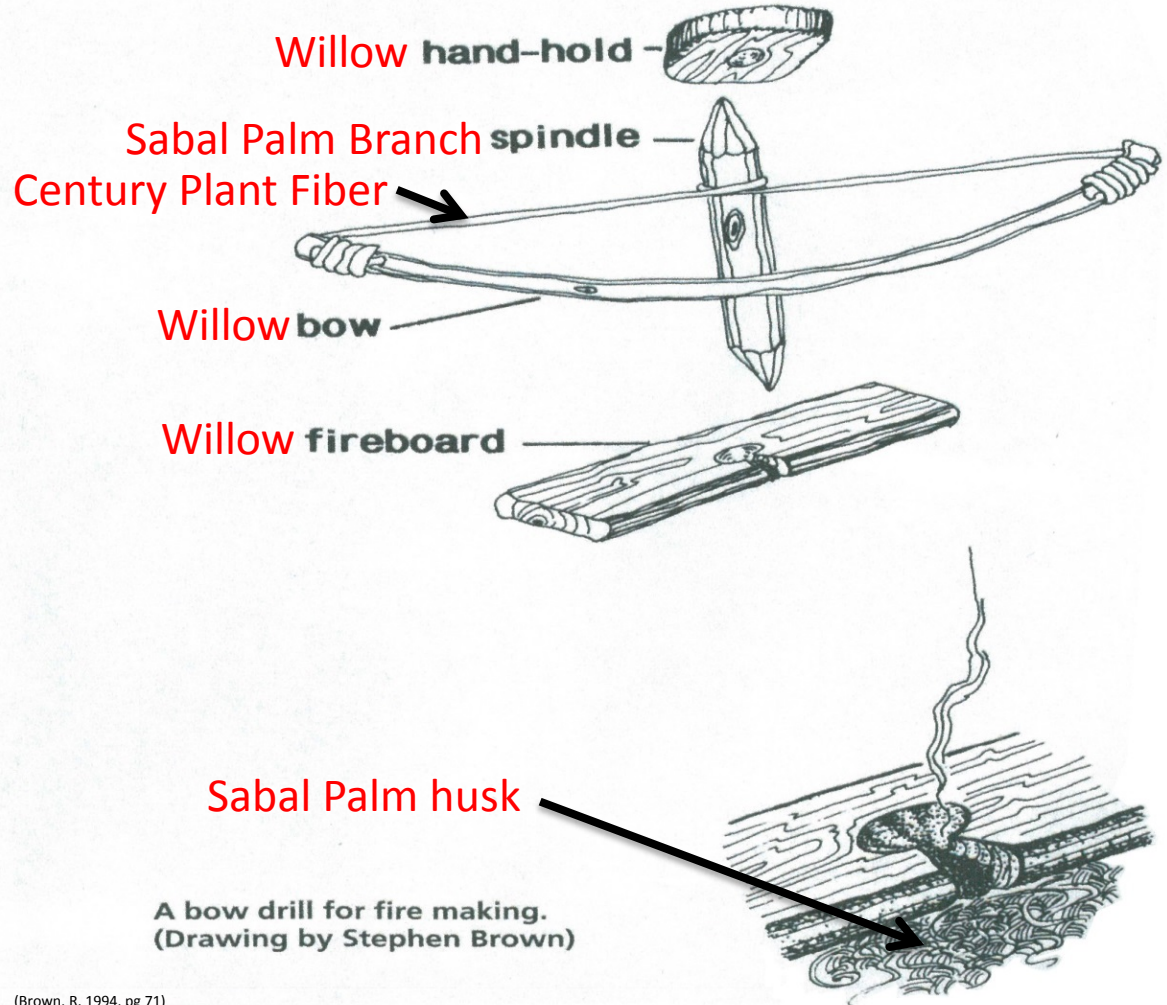
**Medicine:** steroidal medicine used in birth control



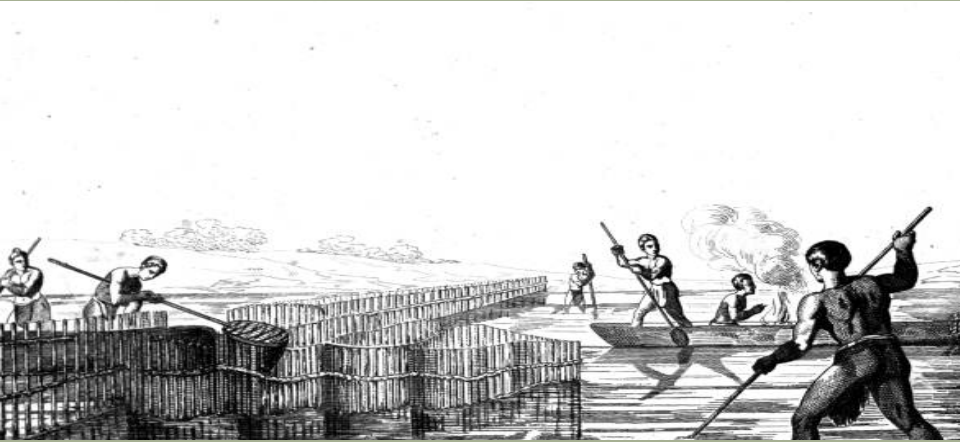


# Tools: Making Fire

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



# Tools: Fishing Nets and Traps



*Timucua Indians trapping fish. 1562.*

(Black & white photoprint. State Archives of Florida, Florida Memory. Accessed 11 Jul. 2017. <https://www.floridamemory.com/items/show/33588>).

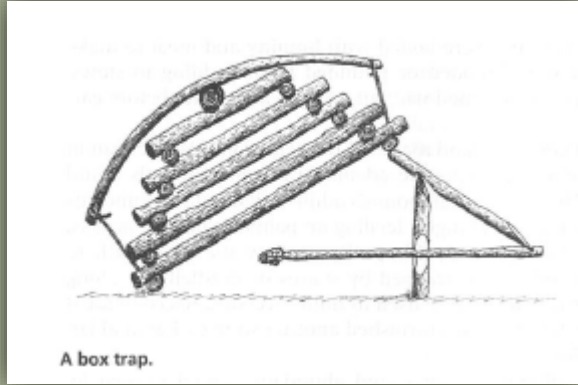


*Making Fishing Net with Authentic Materials*

(Brown, R. 1994, pg 71)

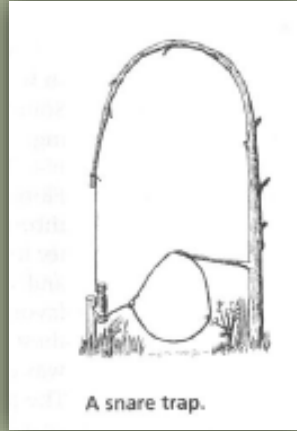
- Fencing: **Wood**
- Wood Lashing: **Plant fiber**
- Net material: **Palm Fiber**
- Net gauge : **Red Mangrove**

# Tools: Traps



*Box Trap*

(Brown, R. 1994, pg 144)



*Snare Trap*

(Brown, R. 1994, pg 144)

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

# Weapons: Points and Atlatles

- 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**



*Indians posed for engraving.* (158-) Theodore de Bry <https://www.floridamemory.com/items/show/4336>

# Construction: Palm Thatch



*Chickee Thatching Detail.*

Photo: [http://www.palmpedia.net/wiki/Sabal\\_yapa](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)



*Cypress Bark Chickee.*

(Brown, R. 1994, Plate 8.18)



*Chickee at Mounts Botanical Garden*  
<http://www.floridagardener.com/misc/ChickeeHut.htm>

Windows and doors - Covered by woven mats of **plants**

# Construction: Wattle and Daub



*Wattle and Daub Construction.*

- **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

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

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

State Archives of Florida, Florida Memory. Accessed 11 Jul. 2017

<<https://www.floridamemory.com/items/show/33599>>.

An early dugout canoe.



A later dugout canoe designed for quiet water.



A dugout canoe designed for rough water.



# Household Items:

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



“Timucua Indians preparing food from Bry's *Americae*,” AMNH

*Digital Special Collections*, accessed July 31, 2017, <http://lbry-web-007.amnh.org/digital/items/show/18585>

# Household Items: Ceramics

- 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)

Breaking Strengths of 2-Ply Ropes

Plant Used	Part of Plant	Diameter of Cord	Breaking Strength
Sabal Palm	Leaf	1/16"	15 pounds
Cypress	Inner Bark (Stem)	1/8"	16 pounds
Cotton, machine-made	Seed Fiber	1/16"	17 pounds
Sabal Palm	Leaf	1/8"	20 pounds
Spanish Moss	Leaf	1/4"	50 pounds
Mulberry	Inner Bark (Stem)	1/8"	73 pounds



Plate 8.13 Replication.  
Cord and rope from native Florida fibers.  
1. Spanish moss, four-ply rope.  
2. Sabal palm trunk fiber, spun yarn.  
3. Sabal palm trunk fiber, two-ply cord.  
4. Willow bark, two-ply cord.

5. Mulberry bark, two-ply rope.  
6. Sabal palm trunk fiber, two-ply rope.  
7. Palmetto trunk fiber, two-ply rope.  
8. Century plant (Agave), two-ply cord and thread.  
9. Sabal palm leaf split fiber, two-ply cords.  
10. Cypress bark, two-ply rope.

*Breaking Strengths (Timucuan  
Technology pg 95)*

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

# Household Items: Rope, Twine, Thread Fiber

## 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.



*Saw Palmetto double-ply rope.*

<http://www.ecoprotectplant.com/en/ropes-plant-fibers.html>

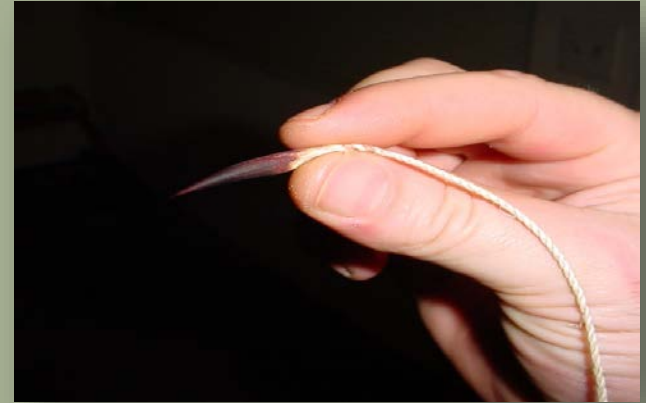
# Household Items: Rope, Twine, Thread Fiber

## Century plant (*Agave spp.*):

- easiest fiber to work with.
- Cut into  $\frac{3}{4}$ " strips, pounded and stripped of flesh
- 1- 5' century plant leaf yields 22" of  $\frac{1}{16}$ " cord that holds 40 lbs.



*Agave Rope.* <http://paleoplanet69529.yuku.com/topic/18235#.WWTVcVGQzmE>



*The tip attached to the central strip makes a needle and thread.*

<http://paleoplanet69529.yuku.com/topic/18235#.WWTVcVGQzmE>

# Household Items: Rope, Twine, Thread Fiber

## 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<sup>th</sup>" can hold 74 lbs.

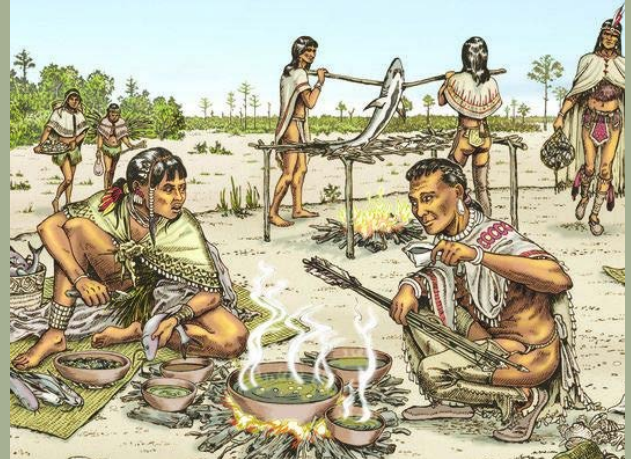


***Yucca Tools and Rope.***

<https://vitalconnection.files.wordpress.com/2012/08/dsc01515.jpg>

# Household Items: clothing

- **Spanish moss** skirts – sometimes woven
- A few accounts of clothing woven from fiber or bark.
- Whole **olive** shells made beads
- Wooden ear ornaments



# Household Items: Weaving

- 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**



Native American Pine Needle Basket



Seminole Weaving





# Natural Fabric Dyes



=



# 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*

*meat.* 1564. Black & white photonegative, 3 x 5 in. State Archives of Florida, Florida Memory. <<https://www.floridamemory.com/items/show/4342>>, accessed 24 July 2017.

# 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



# Medicine



**Timucua Indians treating the sick.** 1562. Black & white photonegative, 3 x 5 in.  
State Archives of Florida, Florida Memory. <<https://www.floridamemory.com/items/show/4335>>, accessed 24 July 2017.

## 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 repellent

## 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



***Timucua horned owl totem pole*** - De Land Region, Florida. 1955.  
Black & white photoprint. State Archives of Florida, Florida Memory. Accessed 11 Jul. 2017.<<https://www.floridamemory.com/items/show/33800>>.



***The Natives of Florida Worship the Column Erected by the Commander on his First Voyage.*** 1591. Bry, Theodor de, 1528-1598. Color digital image, . State Archives of Florida, Florida Memory. <<https://www.floridamemory.com/items/show/254240>>, accessed 11 July 2017.

# 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



<http://www.arrowheadology.com/forums/content/51-black-tea-time-texas-ritual-drinking-vessel.html>

## Drinking

Black drink

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

Wine

- ***Agave spp.***





# Squashes and Gourds (*Cucurbita* spp.)

Acorn	<i>C. pepo</i> var. <i>turbinata</i>	
Cocozzelle	<i>C. pepo</i> var. <i>longa</i>	
Crookneck	<i>C. pepo</i> var. <i>torticolli</i>	
Pumpkin	<i>C. pepo</i> var. <i>pepo</i>	
Scallop	<i>C. pepo</i> var. <i>clypeata</i> ; called <i>C. melopepo</i> by Linnaeus <sup>[5]</sup>	
Straightneck	<i>C. pepo</i> var. <i>recticollis</i>	
Vegetable marrow	<i>C. pepo</i> var. <i>fastigata</i>	
Zucchini	<i>C. pepo</i> var. <i>cylindrica</i>	
Ornamental gourds	<i>C. pepo</i> var. <i>ovifera</i>	

*C. pepo* and Var.

**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



Okeechobee gourd  
(*Cucubita okeechobeensis*)



Seminole Pumpkin  
(*Cucubita moschata*)

# Cabbage Palm (Sabal Palmetto)



Cabbage Palm

**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 Northern tribes like Iroquois, and Winnebago



*Sabal palmetto*



Cabbage Palm Fruit

# Saw Palmetto (*Serenoa repens*)



Saw Palmetto  
(*Serenoa repens*)

**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



Saw Palmetto Berries  
(*Serenoa repens*)

# Oaks

(*Quercus spp.*)



Live oak



Laurel oak

**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



Turkey oak acorn

# Red Mulberry (*Morus rubra*)



Mulberry Tree and Leaves



**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, stems, 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;



Mulberry Fruits

# Beauty Berry (*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 cerifera*)



**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?

