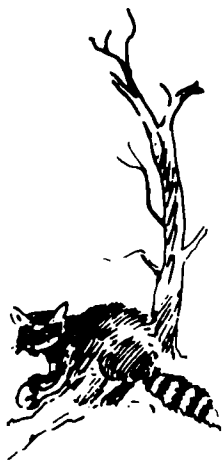
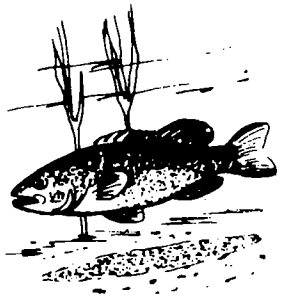
4-H 247



The Florida 4-H Forest Ecology Project

Unit #2

A.S. Jensen



Florida Cooperative Extension Service
Institute of Food and Agricultural Sciences
University of Florida, Gainesville
John T. Woeste, Dean for Extension

THE FLORIDA 4-H
FOREST ECOLOGY PROJECT
MEMBER'S MANUAL
UNIT #2

C O M M O N F L O R I D A P L A N T S

A.S. Jensen
Former Assistant Extension Forester
Cooperative Extension Service
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Introduction

Welcome to the study of Florida plant life. We hope you enjoyed the beginning 4-H Forest Ecology Project and that is the reason you are looking at Unit #2, Common Florida Plants.

Remember in any 4-H project that what you learn is really up to you. As some of you have taken Botany in school, you know that botany is the study of plant life. Plant life includes: trees, shrubs, vines, flowers, grasses, and a host of lesser plants.

This unit deals mainly with common trees, shrubs, vines, flowers, and grasses passed every day along the road. The main objectives of the unit include:

1. Helping you recognize common Florida plants;

2. Training you for the 4-H Forest Ecology Event; and

3. Supplementing school botany and helping you become more interested in the Plant Kingdom.

What to Do - Step by Step

1. Read over the Table of Contents and skim through this manual.

2. Bring at least one specimen of a tree, a shrub, a vine, a flower, and a grass to a meeting. Tell what they are (if you know). If not, have the other 4-H members and leaders help identify them.

3. If you are not interested enough to do No. 2 above, forget this project and do something else.

4. There is no easy magic formula for learning common plants of Florida. Books and instructions are simply aids to learning. Go on field trips. (Did you read Item 4 in Unit #1?)

5. Make a collection of at least 10 common native trees (leaves, flowers, etc.).

6. Give a short talk or demonstration of My Favorite Native Tree.

7. Answer the questions at the end of this unit.

8. Move on to Unit #3, Florida Animal Life.

Basic Definitions

Algae - A group of plants including pond scums, seaweeds, etc.

Bacteria - Microscopic (usually) one-celled plants

Botany - The study of plant life

Fungi - Primitive plants, including mildews, molds, rusts, smuts

Grass - Group of plants having jointed stems and sheathed leaves

Lesser plants - simpler plants than trees, shrubs, and vines

Lichen - Combination of an algae and fungus

Plant Succession

Moss - A group of lesser plants with tufted stems

Shrub - A woody plant that remains low and has several stems

Tree - A woody plant growing tall, usually with a single stem

Vine - Plants with long climbing stems

Plant Succession - Orderly progressive changes in a plant community

A Hardwood tree - has broad leaves, usually sheds in winter (oaks, maples, hickory, etc.)

A Softwood or conifer - has needle-like leaves, usually evergreen (pines, cedars, etc.)

Facts about Florida Plants

Trees:

1. Florida has about 314 native trees. Remember that a native tree is one originally found growing here.

2. Florida has several hundred exotic trees, especially in South Florida. An exotic tree is a tree originally from another country.

3. Of the 314 species of native trees, about 50 have commercial value -- they are harvested and used for over 5,000 wood products.

4. Remember these forest types and common trees found growing on them:

   a. Scruboak ridge - scrub oaks
   b. Sandpine scrub - sand pine
   c. Pine flatwoods - longleaf and slash pine
   d. Hardwood hammock - oak, hickory, maple (North Florida)
      royal palm, gumbo, limbo liveoak (South Florida)
   e. Cypress swamp - bald cypress, blackgum
   f. Mangrove forests - mangrove

Later on we will study these in greater detail.

The trees selected for study in this book are common ones found in much of Florida. They are also ones used in the State 4-H Forest Ecology Event.

Plants: Florida has several thousand native plants besides trees. The plants discussed in this book are common ones found in many areas of Florida. They are also the ones used in the State 4-H Forest Ecology Contest.

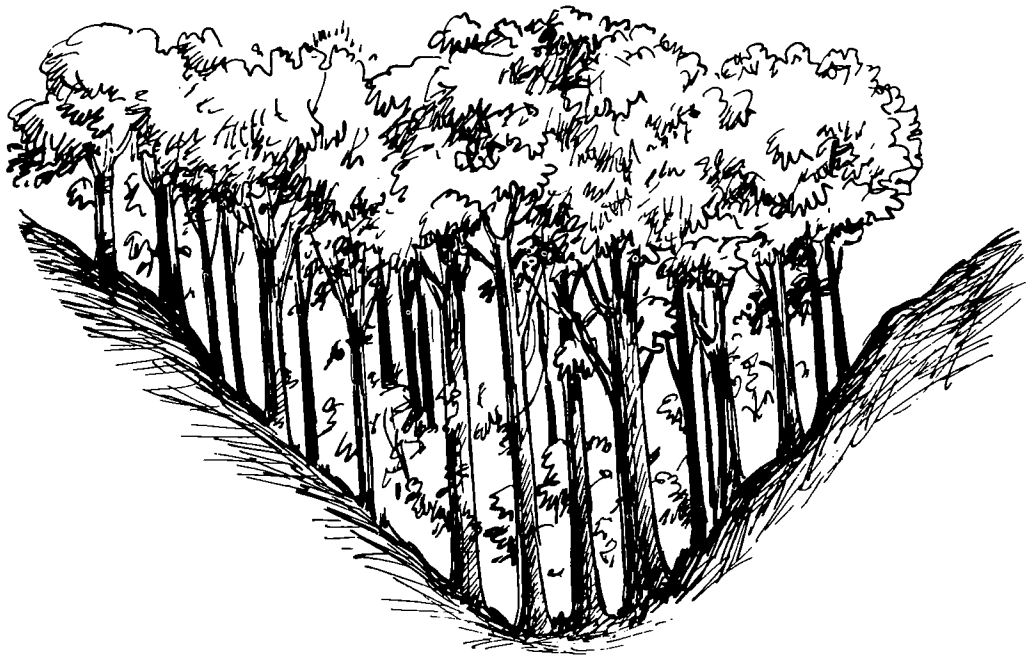
How to Collect Plant Specimens

1. The best way to learn Florida native plants is to make your own collection.

2. Remember to collect several leaves as well as flowers, fruit, and seeds if possible.

3. Press the leaves between sheets of newspaper for one or two weeks.

4. Mount specimens on heavy paper and keep in a loose-leaf notebook.



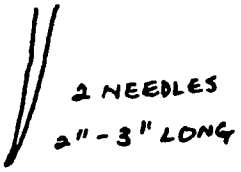
A HARDWOOD FOREST COMMUNITY

Descriptions of the Trees to Learn for the 4-H Forest Ecology Contest

Southern Red Cedar:

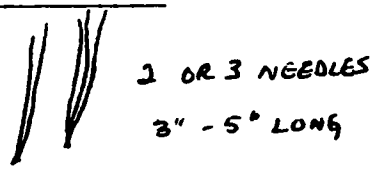
(Juniperus silicicola) Common in most of Florida north of Sarasota County. Aromatic foliage. Small blue fruits. Found in limestone soils in hammocks and coastal islands and marshes. Used for wind breaks, Christmas trees. Valuable wildlife food.

Sandpine:



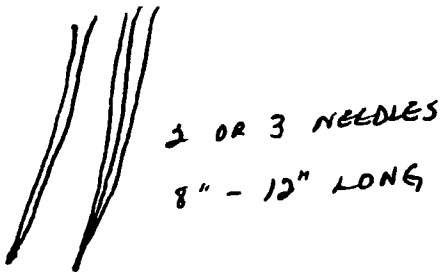
(Pinus clausa) Coastal dunes and sandpine scrub of interior Florida. Needles in 2's, 3" long. Cones persistant.

Shortleaf Pine:



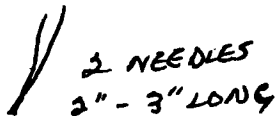
(P. echinata) Red clay hills of west Florida. Needles in 2's. Very small cones, red rectangular bark. Not found in Peninsular Florida.

Slash Pine:



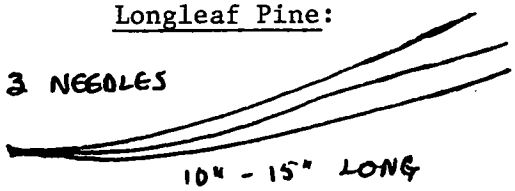
(P. elliottii) As far south as Highlands County. South Florida Slash in South Florida. Long needles in 2's and 3's. Ovoid cones. Slim seedlings. Thick stemmed seedlings. The "plantation pine" used extensively in reforestation habitat: Flatwoods, cypress ponds, often mixed with longleaf and loblolly pine.

Spruce Pine:



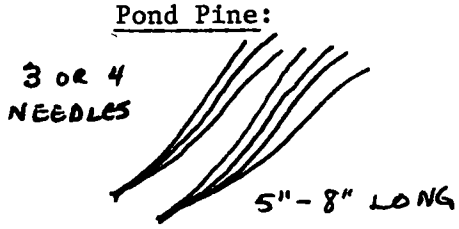
(P. glabra) Moist hammocks mixed with hardwoods. Alachua County west. Smooth bark, slender needles in 2's. Small, non-prickly cones.

Longleaf Pine:



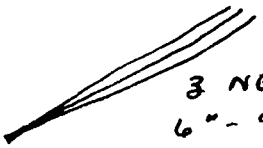
(P. palustris) Lake Okechobee north and west. Long needles in 3's. Big cones. Silvery white new shoots, short stemmed seedlings. Flatwoods and scruboak ridges. (Longleaf pine-turkey oak type.)

Pond Pine:



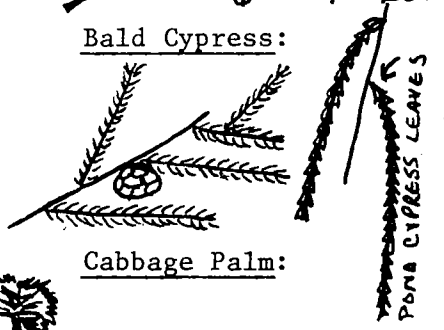
(P. serotina) Low flatwoods Osceola County northward. Unstalked cones - globular needles sprout from trunk. Needles in 3's or 4's, 6-11" long. A sure sign of poorly drained land.

Loblolly Pine:



(P. taeda) Orange County northward -- usually on old fields. Persistant unstalked cones. Long needles in 3's. Not in wet flatwoods or on deep sands. All pine seed are valuable wildlife food.

Bald Cypress:



(Taxodium distichum) Statewide in ponds, swamps, along streams. Fernlike deciduous foliage. Knees around base of trunk. Pond Cypress is found in flatwoods ponds, minute scaly foliage. Valuable wildlife food (seeds).

Cabbage Palm:

(Sabal palmetto) Moist hammocks Alachua County south. In coastal hammocks statewide. STATE TREE. Seeds valuable wildlife food.

Coast Pignut Hickory:

(Carya glabra) Hammocks Manatee County north. Smooth bark, 5-7 leaflets, small pear-shaped nuts. The common Florida hickory. Valuable wildlife food, scrub hickory (Carya Floridana) - similar, smaller - found on sand pine scrub.

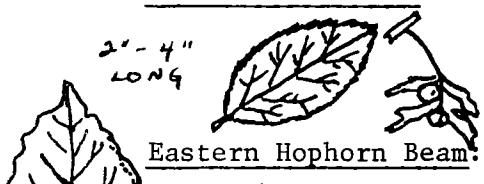
Waxmyrtle:

(Myrica cerifera) Every Florida County. Common shrub or small tree. Aromatic evergreen leaves. Wax covered pale berries. Found on many soil types.

Coastal Plain Willow:

(Salix caroliniana) Along streams and lakes of every county. Leaves silvery beneath, brown twigs turning gray.

American Hornbeam:

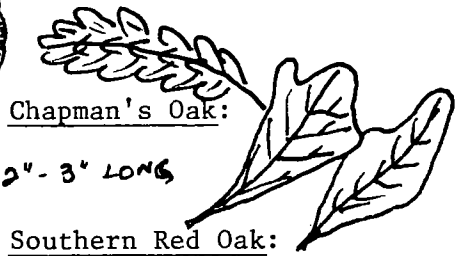


(Carpinus caroliniana) Seminole County north. Smooth blue-gray bark, leaf-like bract fruit. Found in hammocks - moist woods.

Eastern Hophorn Beam:

(Ostrya virginiana) Dry woods, Marion County north. Shaggy gray bark, hop-like fruits.

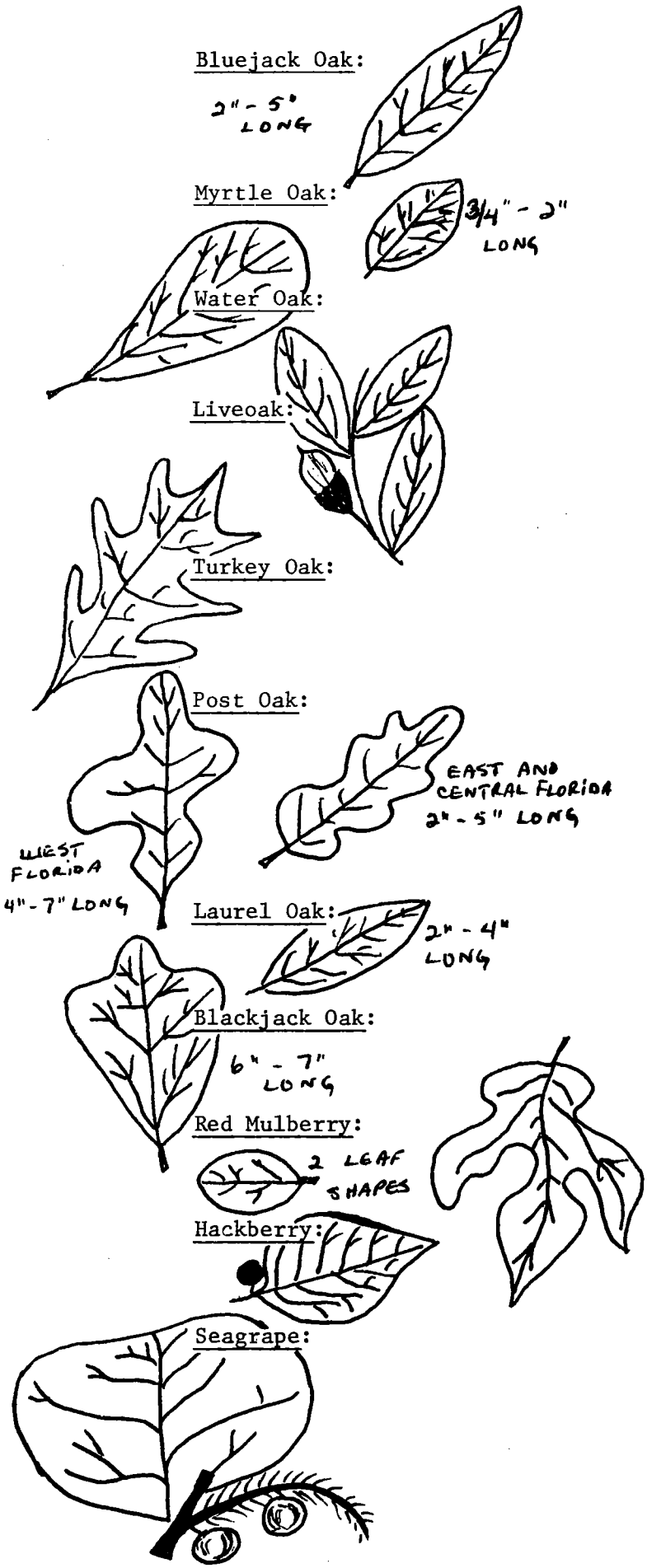
Chapman's Oak:



(Quercus Chapmanii) Scrub soils everglades north, indistinct 3-lobed leaves. Yellowish beneath. Valuable deer browse.

Southern Red Oak:

(Q. falcata) Dry open woods, Marion County north. Leaves with 3-5 lobes yellow to rusty beneath. All oak acorns are used by countless kinds of wildlife.



(Q. incana) Dry sands (not scrub) Lee County north. Grey-green pale simple leaves. Very shallow acorn cups.

(Q. myrtifolia) Sand pine scrubs Dade County north. Rounded evergreen leaves. Typical oak of scrub.

(Q. nigra) Hammocks, Orange County north. Common street tree. Wedge shaped leaves. Short round acorns.

(Q. virginiana) Every Florida County. Hammocks, lake margins. Broad spreading crown. Dark green boat-like leaves. Sand liveoak (Q. geminata). Found on deep sands.

(Q. laevis) Scrub oak ridge. Dry pinelands. Collier County north. Deep-cut leaves with sickle-shaped lobes. Persistant after death.

(Q. stellata) Dry hills west Florida. Sand post lake (Q. S. Margaretta) is an east and central Florida variety. Found on scrub oak ridges. Broad leaves with squarish middle lobes (Q. stellata) 3-5 shallow lobes in variety Q. S. Margaretta of east Florida.

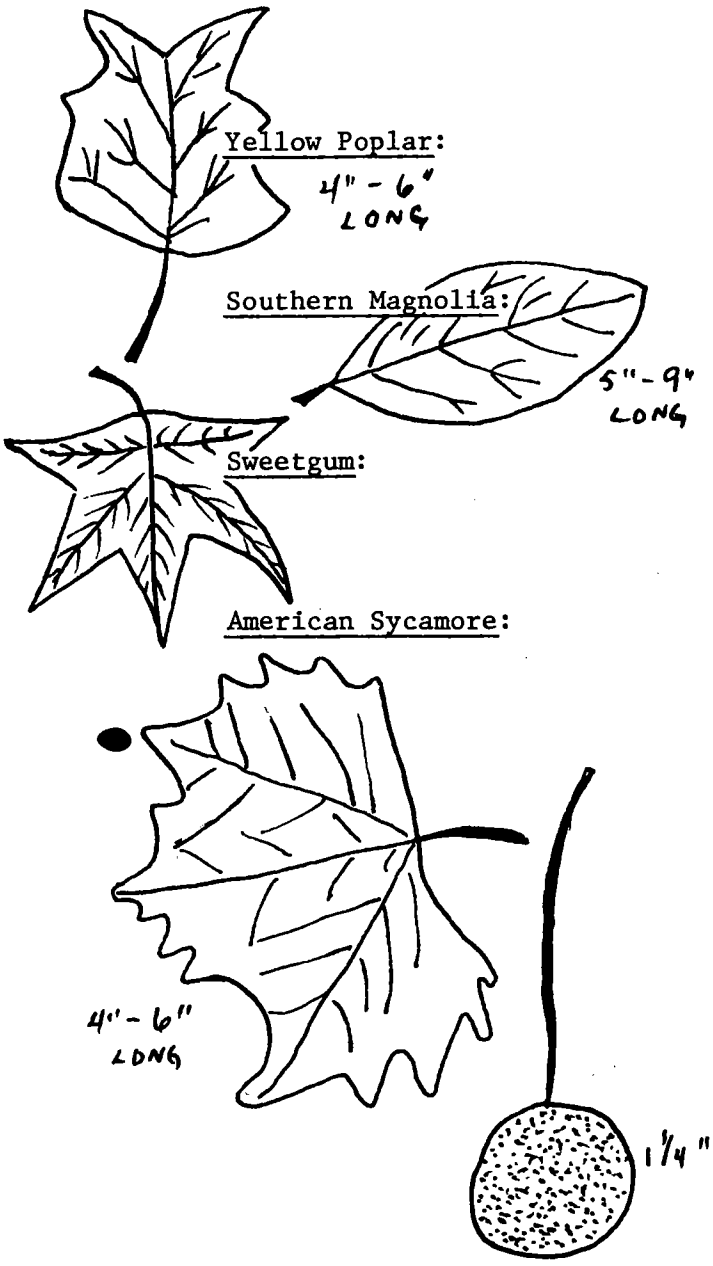
(Q. laurifolia) Moist soils everglades north. Narrow eliptical leaves, short round acorns.

(Q. marilandica) Scrub oak ridge land. Poor dry soils west of Suwannee River. Large entire obovate leaves.

(Morus rubra) Hammocks - statewide. Red edible fruit. Leaves smooth above, rough beneath. Valuable wildlife food.

(Celtis laevigata) Almost statewide except extreme south. Damp rich woods. Warty gray bark, smooth entire leaves.

(Coccoloba unifera) Coastal hammocks, dunes, and beaches south Florida. Big rounded leaves, grape-like fruit.



Yellow Poplar: (Liriodendron tulipifera) Orange County north. Rich hammocks. Squarish leaves, green-cup shaped flowers.

Southern Magnolia: (Magnolia grandiflora) DeSoto County. Hammocks. Smooth gray trunks, large shining evergreen leaves, large fragrant white flowers.

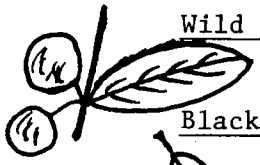
Sweetgum: (Liquidambar styraciflua) Brevard and Manatee Counties north. Star-shaped leaves, spiny fruits. Hammocks, old fields.

American Sycamore: (Platanus occidentalis) White patchy bark, angular leaves. Gadsden County westward in stream bottoms.

A Riverbank Community

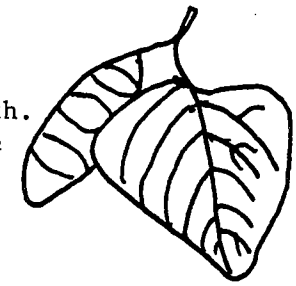
Sweetbay (Magnolia virginiana)
Dade County north. Bayheads and swamps. Slender smooth gray trunks. Evergreen leaves silvery beneath. Very fragrant flowers.

Hawthorn (Many species)
Dry sites. All through north Florida. Small leaves and fruits.



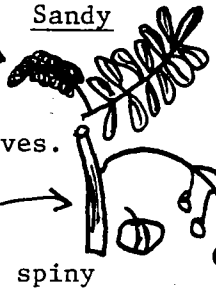
Wild Plum (Prunus Sp.)
In fence rows and hammocks through north Florida.

Black Cherry (Prunus serotina - wild cherry)
ake County north. Fence rows, hammocks, juicy fruit in long spikes.



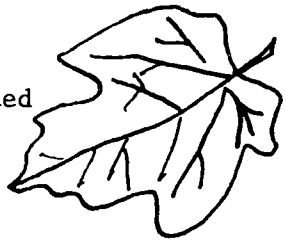
Eastern Redbud (Cercis canadensis)
Rich woods (hammock) Marion and Levy County north. Heart-shaped leaves. Small pink flowers on bare trunks in spring.

Shining Sumac (Rhus copallina)
Florida Keys north - usually a shrub. Smooth pinnate leaves, clusters of dark red fruit. Sandy soils.



Poison Sumac (Rhus toxicodendron)
Bayheads, Marion County north. Pinnate leaves. Drooping clusters of white fruit.

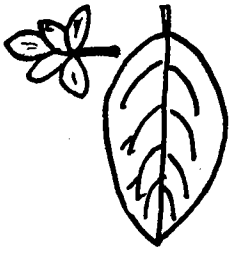
American Holly (Ilex opaca)
Hammocks, Orange County north, red berries, spiny leaves.



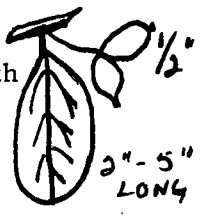
Red Maple (Acer rubrum)
Moist or wet ground every county. Red stalked leaves 3 lobes. Very early red flowers.

Loblolly Bay (Gordonia lasianthus)
Lake Okeechobee north, swamps and ditches. Shallow-toothed persistant green leaves, 5 parted white flowers.

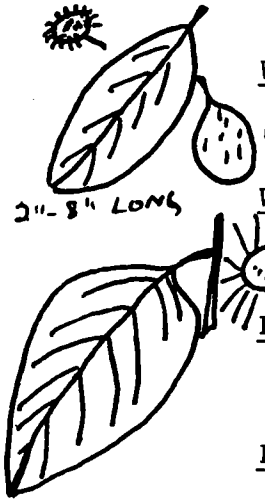
Sassafras (Sassafras albidum)
Orange County north. Aromatic lobed leaves, dark blue fruit. Most common on clay soils.



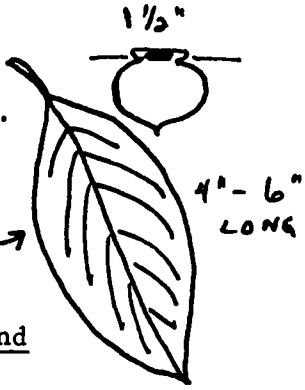
Flowering Dogwood (Cornus florida)
Orange County north. White flowers -- red fruit.



Swamp Blackgum (Nyssa biflora)
Swamps - wet areas. Most of Florida. Smooth elliptic leaves, blue fruit in pairs.



White Tupelo (Nyssa ogeche)
Western Florida along river and stream banks.
Large simple leaves. Fruit longer than stalk.

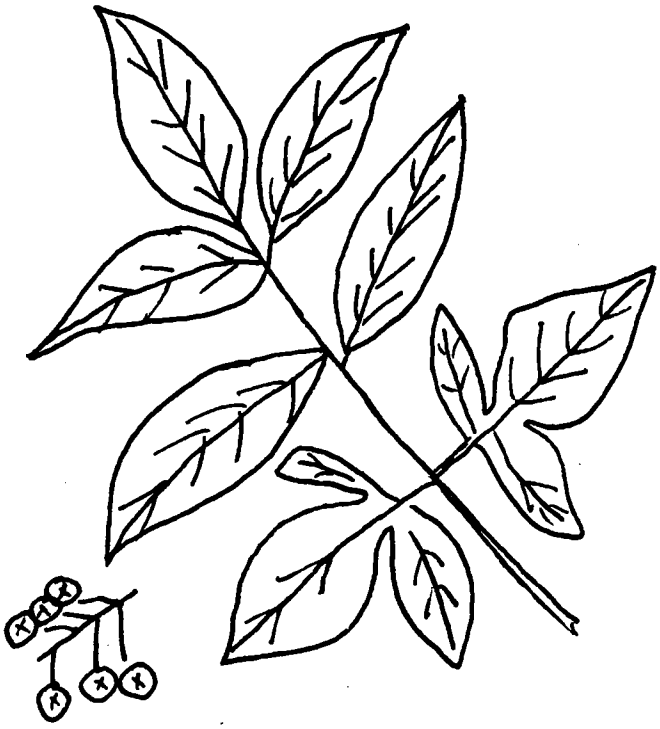


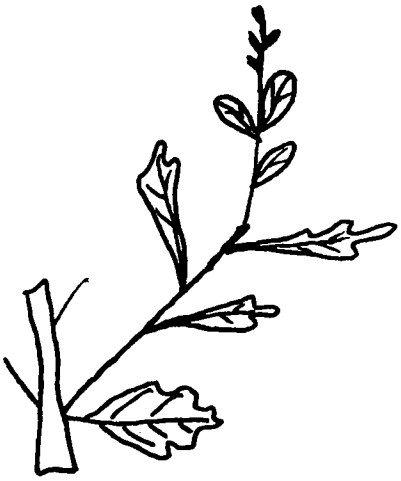
Wild Persimmon (Diospyros virginiana)
DeSoto County north. Large darkgreen leaves, large edible fruit.

Button Bush (Cephalanthus occidentalis)
All Florida except Keys. Along streams, around ponds. Round dense flower heads.

Elderberry (Sambucus simpsonii)
All counties. Flat-topped white flower clusters, black berries.

Eastern Baccharis (Baccharis halimifolia)
All Florida. Coarse-toothed gray-green leaves, silver white tufted flowers.





NOTE: These are only a few of our many native Florida trees. Study other common trees in your area as well. Keep studying and perhaps one day you will be one of the few people who can identify all 314 native Florida trees.

Lesser Forest Plants of Florida

Florida has over 3,000 native flowering plants (including 314 native trees).

The native plants listed below are a total of 40 of the more common ones found in many areas of Florida. Learn these 40 to be prepared for the Florida 4-H Forest Ecology Contest. But remember, study any other common plants you encounter.

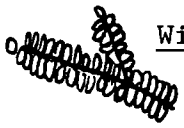
Shrubs and Bushes

Saw Palmetto - (Serenoa repens) Common flatwoods plant found statewide. Known to most Floridians.

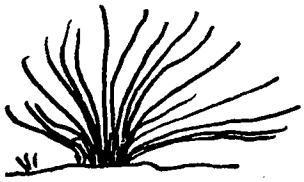
Gallberry - (Ilex glabra) Flatwoods bay head edges. Small gray-green leaves. Small flowers, black berries. Good nectar plant.

Fetterbush - (Lyonia lucida) In dense thickets covering low wet flatwoods, leathery leaves. Vein on outer leaf margin.

Blueberry and Huckleberry - (Vaccinium or Gay lusacia Sp.) Many species big and small. Acid flatwoods, statewide.



Wicky - (Kalmia) Small bush. Many minute leaves. Found together with blueberry, gallberry, and saw palmetto.



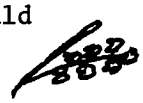
Grasses

Wiregrass - (Aristida) Common grass of flatwoods. Long brownish-green "wire-like" leaves.

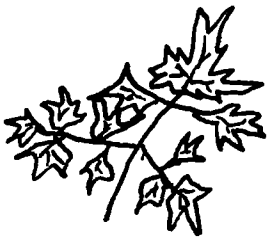
Carpet Grass - (Axonopus affinis) Moist meadows and flatwoods. Common wood and pasture grass.

Broomsedge - (Andropogon Sp.) Several species. Common native grasses known to most people. Old fields.

Sandspur - (Cenchrus Sp.) Many species. Everybody should know this one! Everywhere.



Vines



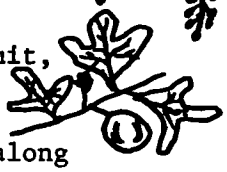
Peppervine - (Ampelopsis arborea) Climbing vine, compound leaf with 22 leaflets (blackberries). Old fields, hammocks.

Trumpet Creeper - (Campsis radicans) Woody vine in hammocks, fence rows, and fields. Orange funnel-shaped flowers, long seed pod.

Virginia Creeper - (Parthenosisis) Climbing vine - 5 leaflets. Moist woods.

Wild Grape - (Vitas Sp.) Several common species. Moist woods, fence rows.

Smilax - (Smilax Sp.) Several species. Moist woods. Field edges.

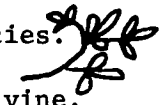


May Pop - (Passion Flower) Climbing vine. Round green fruit, purple flowers. Old fields, thickets.

Japanese Honeysuckle - (Lonicera japonica) Climbing vine along streams, fence rows, woods borders.

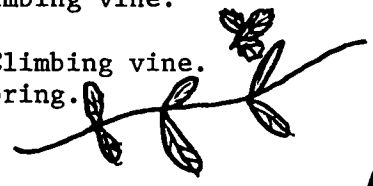
Blackberry - (Rubus Sp.) Several species. Common, many sites.

Milk Pea - (Cracca Sp.) Acid flatwood, several species.



Poison Ivy - (Rhus radicans) Three leafed climbing vine.

Yellow Jessamine - (Gelsemium sempervirens) Climbing vine. Moist woods, yellow flowers in early spring.

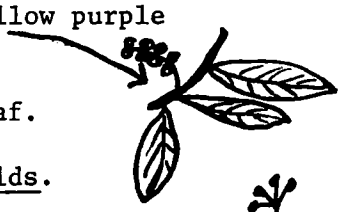


Weeds and Herbs

Deer Tongue - Acid flatwoods. Purple flower stalk in fall.

Teaweed - (Sida acuta) Tough stems, yellow flowers. Old fields.

Pokeweed - (Phyto laca) Large green leaves, big hollow purple stems, black berries.



Ragweed - Common plant of old fields. Compound leaf.

Florida Beggarweed - (Desmodium sp.) Abandoned fields.

Elephant Foot - (Elephantopus sp.) Hairy gray-green leaves lying close to the ground. Tall woody flower stalk. Common in flatwoods and on oak ridges.

Dogfennel - (Eupatorium) Many stems, small white flowers, disturbed woods, old fields.

Partridge Pea - (Cassia fasciculata) Compound leaves, yellow flowers. Abandoned fields, roadsides.

Spanish Needle - (Bidens pilosa) Compound leaves, white flowers. Roadside, old fields.

Red Sorrell - (Rumex sp.) Old fields. Red flowerstalks common in early spring.

Stinging Nettle - Gray-green hairy leaves. White flowers, old fields, pastures, waste places.

Florida Dandelion - Deeply lobed leaves, yellow composite flowers. Roadsides, old fields.

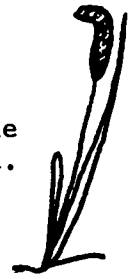
Water Plants

Yellow Waterlily - (Cowlily) Most Florida ponds. Yellow blossom with "bud-like" appearance.

White Waterlily - White blossom. Many ponds and ditches.

Cat-Tail - (Typha sp.) Long bunches of leaves. Common in many marshes, pond margins.

Pickerel Weed - Most wet areas. Blue flowers.



Water Hyacinths - Floating water plants. Blue-purple flowers. Many ponds and wet places state-wide.

Other Plants

Eastern Bracken Fern - Broad triangular leaf blades. Flatwoods.

Cactus - (Prickley Pear) Common field cactus of Florida.

Cladonia - (Deer Moss) Several species. Dry sands.

Sources of Information

1. Local libraries and bookstores
2. Local county foresters
3. Local industry foresters
4. Local 4-H leaders
5. Botany, biology, and science teachers
6. Your local Cooperative Extension office
7. Your Extension Foresters at the University of Florida

References on Florida plants

Baker, M. F. (1959) - Florida Wildflowers - now in paperback.

Kurz and Godfrey (1962) - Trees of North America - University of Florida press.

Barret, M. F. (1956) - Exotic Trees of South Florida - University of Florida press.

Zim (1965) - Trees - Golden Nature Guide

Alexander, T. R. (1970) - Botany - Golden Nature Guide

D. O. F. (1970) - Common Trees of Florida - Single copies free

Remember, just borrowing or buying a book does not help alone -- you must use it! Get the reading habit!

I N F O R M A T I O N

MEMBER'S NAME _____ AGE _____

PARENTS OR GUARDIAN'S NAME _____

MAILING ADDRESS: STREET OR BOX NUMBER _____

CITY _____ STATE _____ ZIP _____

NAME OF YOUR CLUB _____ COUNTY _____

NAME OF YOUR SCHOOL _____ GRADE IN SCHOOL _____

YEARS YOU HAVE BEEN IN CLUB WORK _____ IN THIS PROJECT _____

NAME OF COUNTY OR HOME DEMONSTRATION AGENT _____

NAME OF YOUR LOCAL CLUB LEADER _____

Florida Cooperative Extension Service
Institute of Food and Agricultural Sciences
University of Florida, Gainesville

ANSWER THE FOLLOWING QUESTIONS:

(1) What is the difference between a tree and a shrub?

(2) What is a native tree?

(3) What is an exotic plant?

(4) How many native trees do we have in Florida?

(5) What is your favorite native tree?

(6) What native trees are growing around your home?

(7) Name 6 common native plants:

a. b. c.

d. e. f.

(8) Would you like to enter the State 4-H Forest Ecology Contest? _____

If no, why not?

(9) In 50 words or less, tell what you learned in this project.

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