

Poisonous Plants of Paradise

Suncoast Tropical Fruit Club

February 2020

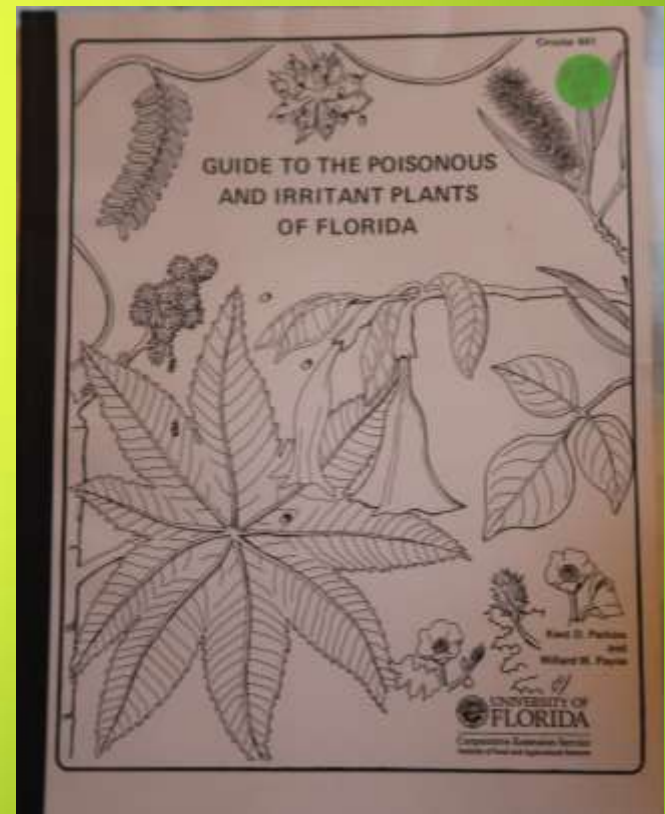
Marc Williams

www.plantsandhealers.org

www.botanyeveryday.com

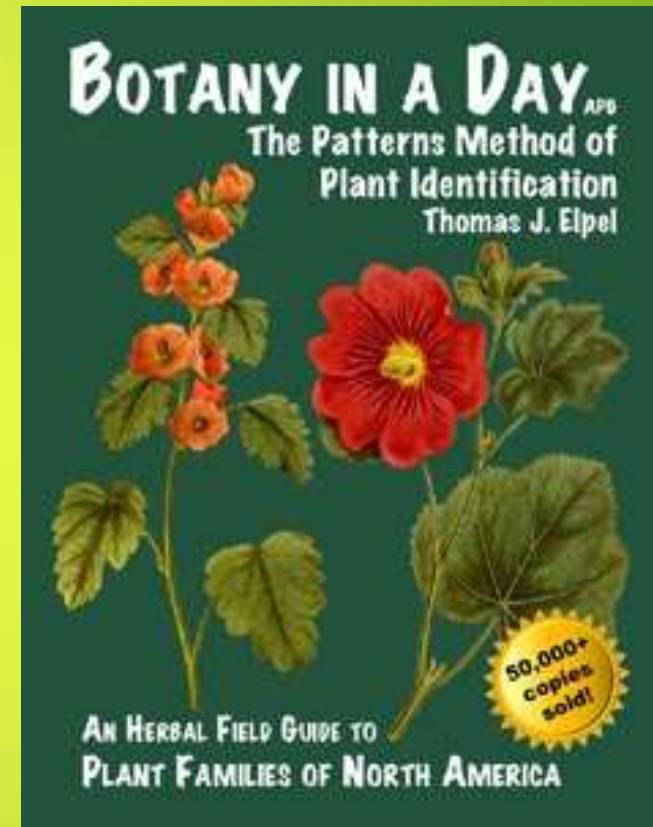
Overview Poisonous Plants

- Difference is the Dosage!
- Plant Family Trends
- Colored Sap
- Poisonous Plant Families
- Types of Toxins
- Phytochemicals
- Major Poisons of the Florida Indigenous
- Other Notable Plants
- Exotic Invasives
- Wild edibles
- Food preparation
- Further Resources



Uses Follow Plant Family Trends

- Edibility
- Medicinal Qualities
- Poisons
- Natural Dyes
- Insect interactions
- Other wildlife value
- Invasiveness
- Aesthetic qualities
 - Cut flowers, Baskets, Lumber
- Ecological functioning/Habitat



http://www.hopspress.com/Books/Botany_in_a_Day.htm

Colored Saps

- Often Poisonous

- Anacardiaceae
- Apocynaceae
 - Asclepiadaceae
- Clusiaceae
- Euphorbiaceae
- Haemadoraceae
- Papaveraceae
 - Fumariaceae



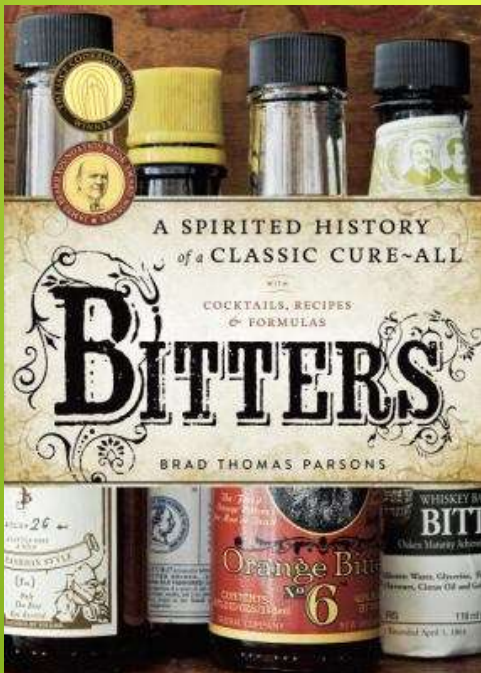
- Mostly Edible

- Asteraceae
- Caricaceae
- Clusiaceae?
- Moraceae
- Sapotaceae



Bitters

- Potentially Helpful
 - Asteraceae
 - Gentianiaceae
 - Verbenaceae
- Potentially Poisonous
 - Cucurbitaceae
 - Ranunculaceae
 - Solanaceae



Major Poisonous Plant Families

- Bean and Pea family (Fabaceae)
- Buttercup family (Ranunculaceae)
- Celery family (Apiaceae)
- Coontie family (Zamiaceae)
- Dogbane Family (Apocynaceae)
- Dutchman's Pipe (Aristolochiaceae)
- Euphorb family (Euphorbiaceae)
- Lily family (Liliaceae)
- Morning Glory (Convulvulaceae)
- Olive family (Oleaceae)
- Philodendron family (Araceae)
- Poison Ivy (Anacardiaceae)
- Tomato family (Solanaceae)
- Rhododendron family (Ericaceae)
- Sandalwood (Santalaceae)
- Yam (Dioscoreaceae)



Celery Family (Apiaceae)



- **Family patterns Do Not Always Hold True!**
- Example: Apiaceae the Celery (*Apium graveolens*)
 - Carrots, Cilantro, Coriander, Cumin, Dill, Fennel
 - Wild edibles
 - Sweet cicily (*Osmorhiza* spp.) Honewort (*Cryptotaenia canadensis*), Angelica (*Angelica* spp.), Wild Cilantro (*Eryngium* spp.)
 - Also has the **POISONOUS**
 - Water Hemlock (*Cicuta maculata*) Used topically by Seminoles for arthritis and itching! (Snow, Stans 2001) and fever (Austin, 2004)
 - Poison Hemlock (*Conium maculatum*)
 - Can cause photosensitivity and skin irritation
 - Celery (*Apium graveolens*) Wild Parsnip (*Heracleum, Pastinaca*)

Bean and Pea Family (Fabaceae)

- Alfalfa (*Melilotus* spp.)
- Beach Pea (*Lathryus* spp.)
- Black Locust (*Robinia pseudoacacia*)
- Devil's Shoestrings (*Tephrosia* spp.)
- Crab Eye Tree (*Adenathera* sp.)
- Lupine (*Lupinus* spp.)
- Rosary Pea (*Abrus* sp.)
- Rattlebox (*Crotalaria* spp.)
- *Wisteria* spp.



Buttercup Family (Ranunculaceae)

- Anemone
- Black Cohosh (*Actaea racemosa*)
- Columbine (*Aquilegia* spp.)
- Buttercup (*Ranunculus* spp.)
- Larkspur (*Delphinium* spp.)
- Monkshood (*Aconitum* spp.)
- Virgin's Bower (*Clematis* spp.)



Dogbane Family

- Fragipani (*Plumeria* spp.)
- Golden Trumpet (*Allamanda* spp.)
- Luckynut (*Thevetia* sp.)
- Milkweed (*Asclepias*, *Calotropis*)
- Oleander (*Nerium oleander*)
- Periwinkle (*Vinca* spp.)
- Rosy Periwinkle (*Catharanthus* sp.)



Lily Family (Liliaceae sensu lato)

- Crocus (*Colchicum*)
- Daffodil (*Narcissus* spp.)
- Death Camus (*Zigadenus*)
- Gloriosa Lily (*Gloriosa*)
- Hellbore (*Veratrum*)



Philodendron Family (Araceae)

- *Caladium*
- Calla Lily (*Zantedeschia* spp.)
- Dumbcane (*Dieffenbachia*)
- Elephant Ear (*Alocasia*, *Colocasia*, *Xanthosoma*)
- Jack in the Pulpit (*Arisaema*)
- Peace Lily (*Spathiphyllum*)
- Pothos (*Epiprenum* sp.)
- Swiss Cheese Plant (*Monstera deliciosa*)



Poison Ivy Family (Anacardiaceae)

- Brazilian Pepper (*Schinus terebinthifolius*)
- Burn Plum (*Metopium toxiferum*)
- Cashew (*Anacardium occidentale*)
- Mango (*Mangifera indica*)
- Pistachio (*Pistacia vera*)
- Poison Ivy/Sumac (*Toxicodendron* spp.)
- Sumac (*Rhus* spp.)



Rhododendron Family (Ericaceae)

- Climbing Heath (*Pieris phillyreifolia*)
- Doghobble (*Leucothoe* spp.)
- Maleberry (*Lyonia* spp.)
- Mountain Laurel (*Kalmia* spp.)
- Rhododendron/Azalea (*Rhododendron* spp.)



Spurge Family (Euphorbiaceae)

- Castor Bean (*Ricinus communis*)
- Cassava (*Manihot esculenta*)
- Croton (*Codiaeum variegatum*)
- *Jatropha*
- Katuk (*Sauropus androgynus*)
- Manchineel/Manzanillo
 - (*Hippomane mancinella*)
- Poinsetta (*Euphorbia* spp.)
- Sandmat (*Chamaesyce* spp.)
- Spurge Nettle (*Cnidoscolus stimulosus*)
- Queen's Delight (*Stillingia* sp.)
- Tung Oil Tree (*Aleurites* spp.)



Tomato Family (Solanaceae)



- Angel Trumpet (*Brugmansia* spp.)
- Cup of Gold (*Solandra* spp.)
- Horse Nettle/Soda Apple (*Solanum* spp.)
- Hoy, Ayer, Manana (*Brunfelsia* spp.)
- Jessamine (*Cestrum* spp.)
- Jimson Weed (*Datura* spp.)
- Tobacco (*Nicotiana* spp.)



Categories of Toxins

- Heart
 - Apocynaceae, Liliaceae, Scrophulariaceae
- Oxalate Crystals
 - Araceae, Arecaceae (*Caryota urens*)
- Stinging
 - Euphorbiaceae, Loasaceae, Urticaceae
- Thorns
 - Amaranthaceae, Cactaceae, Euphorbiaceae, Fabaceae, Rosaceae, Solanaceae



Allergies

– Skin

- Photosensitivity

- Fabaceae, Hypericaceae, Poaceae, Polygonaceae, Rutaceae, Verbenaceae

- Rashes

- Anacardiaceae, Annonaceae, Bignoniaceae, Euphorbiaceae

– Nasal

- Asteraceae, Myrtaceae, Pinaceae

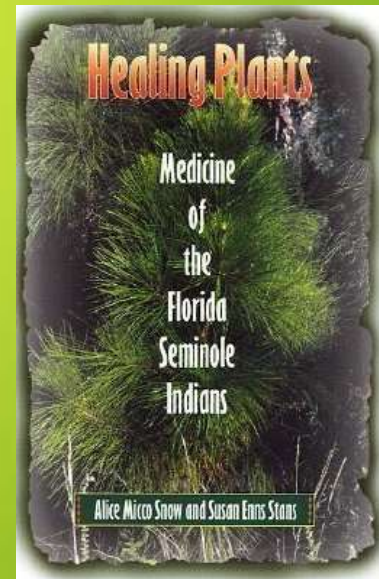
Phytochemicals

- Chemicals protect plants but are also sometimes very useful to us
 - Acids
 - Aristolochic Acid
 - Oxalic Acid
 - (Amaranthaceae, Oxalidaceae, Polygonaceae, Portulacaceae)
 - Tannins
 - tea, wine, persimmons
 - Alkaloids (suffixes ine, ane)
 - Cardiac Glycosides
 - Cyanogenic Glycosides
 - Saponins
 - Heavy metal uptake
 - Mercury, Lead, Cadmium, Arsenic



Some Potential Poisons of FL Indigenous

- Coontie (*Zamia pumila*)
- *Sassafras albidum* Timucua Leaves/Bruises
 - Miccosukee (Cat Sickness (nausea), Cow Sickness, Dog Sickness (appetite loss, drooling), Monkey Sickness, Otter Sickness (diarrhea, vomiting))
- Black Drink or Asi
 - Traditionally from Yaupon Holly (*Ilex vomitoria*)
 - Three other types
 - Button Snake Root (*Eryngium* sp.)
 - Southern Red Willow (*Salix* sp.)
 - The above plus Ginseng, Red bay, Sweet bay, Pennyroyal, Blueberry, Wild grapes, Lizard's tail, Red cedar, Mistletoe, Rabbit tobacco and more!



Other Notable Plants



- Akee (*Blighia sapida*)

- Carolina Jessamine (*Gelsemium sempervirens*)

- *Lantana*



Exotic Invasives

Plants in the southeast

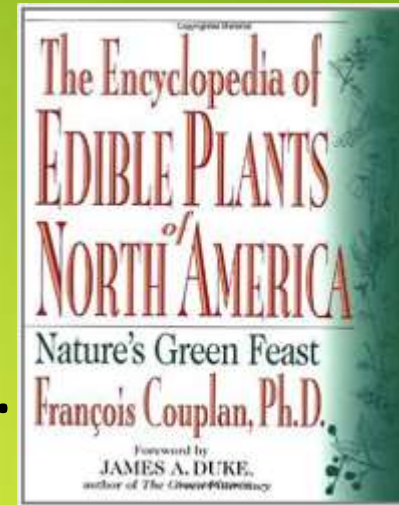
- Approx 300 species,
- 76 families
 - » Bean (Fabaceae) (27spp.)
 - » Aster (Asteraceae) (28 spp.)
 - » Grass (Poaceae) (59 spp.).
- 3 families make up one third the total!

Control by use

- 123 species out of the 300 species listed have some beneficial use mostly as food or medicine (Williams May, 2019)



Wild Edibles



- There are 4000 edible plants in the U.S.
(Couplan, 1998)
 - Just because it is edible doesn't mean it is good... 😊
- Take the time to know the most toxic plants as well as the choice ones
- Proper identification is essential
 - Direct interaction with experienced people is best
 - Good guide books
 - Scientific names

Wild Edible Diversity

- Several hundred species probably used in Florida
- Some Main Woody Families
 - Cashew (Anacardiaceae)
 - Laurel (Lauraceae)
 - Myrtle (Myrtaceae)
 - Oak (Fagaceae)
 - Palm (Arecaceae)
 - Rose (Rosaceae)
- Main wild food families include the
 - Aster (Asteraceae)
 - Carrot (Apiaceae)
 - Grass (Poaceae)
 - Grape (Vitaceae)
 - Knotweed (Polygonaceae)
 - Lily (Liliaceae)
 - Mustard (Brassicaceae)
 - Mint (Lamiaceae)
 - Nettles (Urticaceae)
 - Wood Sorrel (Oxalidaceae)



Wild Edible Rules

- Know what part to use
 - Root, Shoot, Leaf, Stem, Fruit
- Know time of year to harvest
 - Spring, Summer, Fall, Winter
- Don't harvest from synthetic chemical intense areas
 - Roadsides (Heavy metals i.e. Lead, Mercury, Cadmium, etc.)
 - Florists (Not tested for food)
 - Ornamental areas (Not tested for food)
- Use all of your senses

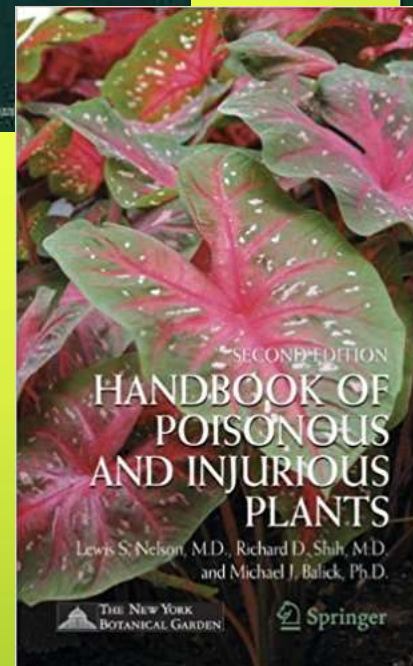
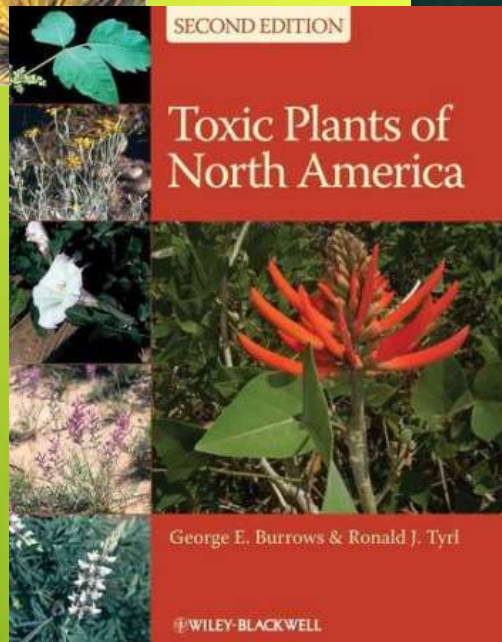
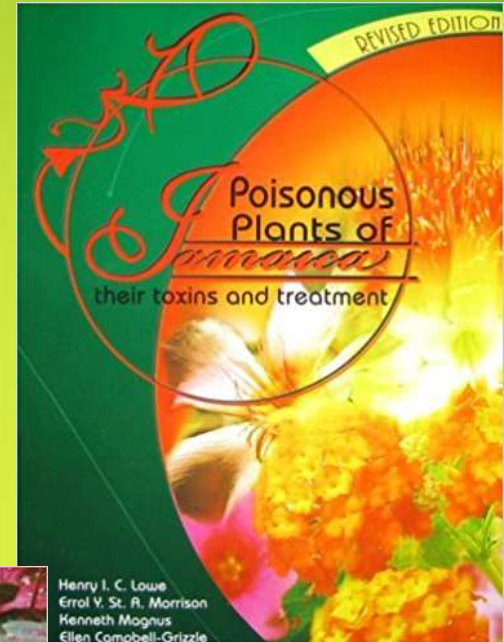
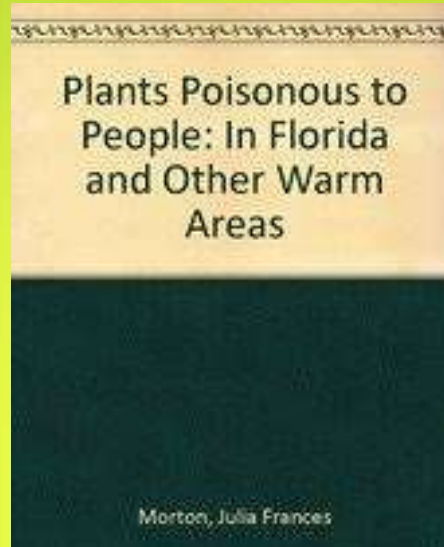
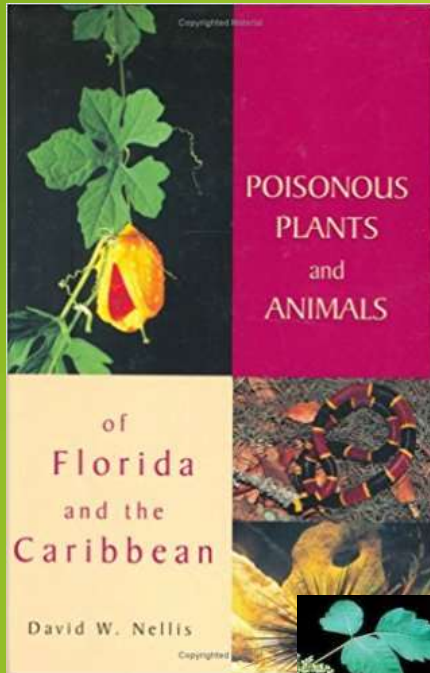


Food Preparation

- Proper preparation is also essential
 - Raw
 - Boiled
 - Sauté
 - Steamed
 - Tea
 - Tincture
 - Oil infusion



Further Resources



Thanks



Questions???