Florida’s Water Resources

In Florida, life is all about water. Learn all about our amazing and unique water resources.

What Is a Watershed?
A watershed is a land area whose runoff drains into any stream, river, lake, and ocean. A watershed boundary is the divide separating one drainage area from another. Watersheds may be as small as the portion of a yard draining into a mud puddle or as large as the Mississippi River Basin, which drains 1.2 million square miles.

All land area is part of a watershed. Whether we live in Florida or any other state or country, we all live in a watershed.

You can find the watershed in which you live by browsing a map and looking for the stream located closest to you. If you trace the stream upward to its beginning you will reach the headwaters, whereas if you trace it downward you will eventually reach a larger stream or river, a lake, or the Atlantic Ocean or Gulf of Mexico. Everything between is your watershed.

Watersheds
Much of Florida was once swampland—naturally covered with water at least part of the year. The state was thought to have too much water, and beginning in 1845, several engineering programs were initiated that changed Florida’s landscape forever. These programs:

- Drained the swamps to make way for houses and farming
- Cut canals across the state to facilitate drainage and to make navigation faster and safer
- Were designed to hold back flood water

While drainage and flood control are still issues in several watersheds, new problems related to water have emerged in most watersheds. After all of the human alterations to the waters of Florida, there is now not enough water in several watersheds of Florida, and many areas of the state have problems with water quality.

How Watersheds Work
As water flows downhill to progressively larger streams and rivers, it moves over land and provides water for urban, agricultural, and environmental needs. A watershed community is made up of all the people who live in that watershed, plus all other animal and plant life. These humans, plants, and animals all depend on the watershed and influence its function.

Flowing water carries organic material that provides food and shelter for aquatic life. Water may also carry pollutants like motor oil, fertilizers, and pesticides.

Many things degrade water quality. Even in pristine watersheds where water quality is not directly affected by humans, "natural" pollutant sources are abundant, including sediment from stream bank erosion, bacteria and nutrients from wildlife, and chemicals deposited by rainfall.

Watersheds have five important functions. They:

1. Collect water from rainfall
2. Store water of various amounts
3. Release water as runoff
4. Provide diverse sites for chemical reactions
to take place
5. Provide habitat for flora and fauna

Human activities affect all the functions of a watershed. For example, where buildings and parking lots cover the ground, it is harder for water to soak back into the ground (this is called infiltration), and most of it runs off into collection ditches where stream channel erosion may occur.

Reduced infiltration may also mean that less water gets back into Florida’s aquifers, which provide almost all of the state’s drinking water. This means that residents could be faced with water shortages.

With both urban and agricultural land uses, chemicals such as fertilizers and pesticides can mix with rain entering the soil and may reach groundwater, causing pollution of public and private wells.

Rainfall
Florida receives an average of fifty-five inches of rainfall a year. The nation as a whole averages thirty inches per year. Nevada, the driest state, has an average rainfall of only nine inches per year.

Total annual rainfall for Florida typically varies (sometimes greatly) from one part of the state to another, from one season of to another, and from one year to the next. Such rainfall variations have direct impacts upon surface water and groundwater supplies.

When it doesn’t rain for a few weeks, Florida’s mostly sandy soils dry out, streams shrivel, and the groundwater level falls.

Rivers
Of Florida’s five largest rivers, four are in the drainage basins of northern Florida, with headwaters in Alabama or Georgia. The fifth largest river, the St. John's, flows northward beginning in Indian River County and ending at the Atlantic Ocean near Jacksonville. Southern Florida is dominated by the Kissimmee-Okeechobee-Everglades basin which extends from central Florida (Orlando area) to the southern tip of the peninsula.

Many streams in south Florida have been altered by an extensive system of canals and levees that provide flood control, drainage, and water for agriculture near Lake Okeechobee and for cities on the lower east coast.

Some portions of the original Everglades have been used as shallow water conservation areas during the past four decades. The remaining Everglades areas at the southern tip of the peninsula comprise the Everglades National Park, which receives water from this managed system.

Groundwater
The principal source of groundwater for most of Florida is the Floridan Aquifer. It is the source of municipal water supply for such cities as Tallahassee, Jacksonville, Gainesville, Orlando, Daytona Beach, Tampa, and St. Petersburg. It also yields water to thousands of domestic, industrial, and irrigation wells.

The thick layers of porous limestone comprising the Floridan Aquifer underlie the entire state, but in South Florida, the water the limestone contains has too many minerals to be used for domestic, industrial, or agriculture purposes. Water in the Floridan Aquifer is replenished by rainfall in central and northern Florida.

Public Policy & Water in Florida
Water Allocation Policy
The early history of water policy in Florida dealt mostly with drainage and flood control, especially in central and southern Florida. Special acts of the legislature created special drainage districts which, in more recent years, provide water storage and conservation as well as drainage and flood control. The United States Army Corps of Engineers, with federal government funding, built the Central and Southern Florida Flood Control Project between 1949 and 1965.

The Florida Water Resources Act of 1972 established a form of administrative water law that brought all waters of the state under regulatory control. Five water management districts were formed, encompassing the entire state. Each district covers one or more important water basins. The five districts are the South Florida Water Management District, the Southwest Florida Water Management District, the St. John’s River Water Management District, the Suwannee River Water Management District, and the Northwest Florida Water Management District.

Each district is controlled by a governing board of nine members who reside within the district, except the Southwest district, which has eleven board members. The members are appointed by the governor and confirmed by the Florida Senate to serve four-year terms.

The districts are required to implement regulatory
programs for well construction, consumptive water use, and alterations to the management and storage of surface water. In addition to permitting authority, the districts have broad powers with respect to maintaining, regulating, altering, or constructing waterways and appurtenant facilities.

Statewide authority for water resource management was vested in the Department of Environmental Regulation (which has since merged with the Department of Natural Resources by an act of the 1993 Florida Legislature to become the Department of Environmental Protection (DEP)).

**Water Quality Policy**
The Air and Water Pollution Control Act provides the DEP with broad powers and duties to protect and improve water quality throughout the state. The DEP classifies surface and groundwater bodies according to their most beneficial uses; establishes water quality criteria; develops standards of quality for wastewater discharges; and runs a permit system for operations that may pollute water (industrial plants, farms).

**Management, Education & Stewardship**
Florida faces difficult challenges regarding watershed resource management. The current pressures that humans place on these watersheds are already causing stress on the environment, and Florida's population is expected to grow from seventeen million in 2003 to twenty million by 2020. One thousand people move to Florida every day. This growth poses great challenges in water resource management.

Watershed management involves three main activities:
1. Rehabilitation of abandoned and misused lands
2. Protection of natural and sensitive areas
3. Enhancement of water resources

Watershed planning is a process in which communities can make better choices about future growth. Watershed stewardship programs involve developing watershed educational programs for the residents of the watershed.

Excerpted and adapted from:
**Watersheds: Function and Management (ABE350)** by S. Shukla. Published by: Department of Agricultural and Biological Engineering (4/2004).
These programs are free to the public, so please call us at 904-491-7340 or 904-879-1019 or e-mail rljordi@ufl.edu if you plan to attend. If response is too small, the program will be canceled.

Landscape Matters 10AM-11AM

- **Bulbs**
  - Wednesday September 11
  - Master Gardener Sue Ray

- **Herbs**
  - Wednesday October 9
  - Master Gardener Claudie Speed

Plant Clinics 10AM-2PM

Bring us your tired, diseased, insect infested plants yearning to be free of problems. When possible place your plant in a plastic bag to prevent chances of spreading issues to other plants. You will receive current researched based information on proper plant care, disease management and insect control. These sessions are free to the public. No registration required. Come anytime between 10AM - 2PM for expert advice.

Trouble-shooting Landscapes: Efficient Irrigation

County Extension Director/Horticulture Agent, Rebecca Jordi and Master Gardener volunteers Paul Gosnell and Nelson Peterson will assist homeowners in reducing insect and disease issues on lawns and landscapes. These problems often result from too much water, shallow irrigation, or uneven coverage. They will demonstrate how to properly measure irrigation at one zone and then provide solutions for correcting discrepancies. Other cultural practices such as fertilization, proper mulching, planting depth of trees and shrubs, etc. will also be provided. In addition, Jordi and the Master Gardeners will diagnosis disease or insect issues on ornamentals at the site. The goal is to reduce frustrations and the cost of managing North Florida landscapes. Jordi requires at least 6 homeowners and will come to your subdivision for these free sessions. To schedule a "Trouble-shooting Landscapes" session for you and your neighbors, please call the Extension office at 904-879-1019, or email Ms. Jordi at rljordi@ufl.edu.

Spotlight on Nassau Gardens

Ben and Martha Pennington have many different vegetables growing in their Yulee garden. To name a few, they grow Russet and Kinnebeck potatoes, Kentucky Wonder pole beans, bush lima beans, tomatoes, carrots, lettuce, garlic, turnips, acorn squash, cabbage, mustard greens, okra and much more! They also love flowers.

The first citrus tree that they grew was a Valencia Orange that bears fruit from January through June. They also have tangarine, grapefruit and Sitsumi lime. They use posts to hold up the limbs when they are heavy with fruit.

He also enjoys potting plants, usually grows plants from seed, has a greenhouse, fertilizes with real animal manure and organic compost, uses cages to protect some plants from squirrels, and has some pink beans that are generations old from Martha's family. What prolific gardeners!”
Hello everybody! Welcome back to Harvest Gold! This month, I would like to talk about herbs. I don’t know a lot about herbs, but have always been fascinated by them, their uses, and their lore. To learn more about herbs, I consulted an expert on the subject, Claudie Speed, a fellow Master Gardener and good friend of mine. Claudie is affectionately known among us Master Gardeners as the “Herb Queen.” When I asked Claudie how she came about this moniker, she replied, “One day, wonderful Becky Jordi (our County Extension Director and Horticulture Agent) gave me an apron adorned with many pictures of herbs, and said to me, ‘This is for the Herb Queen.’ The name stuck, and, to tell you the truth, I love it!”

Claudie is a Suwannee County native (and a true Southern Lady, I might add), with a life-long love of gardening. Claudie is not only an active Master Gardener, who was recently honored by the Nassau County Board of County Commissioners for 15 years of volunteer service with the Nassau County Extension Office, but is also a former nationally accredited Flower Show and Horticulture Judge, who specialized in the field of flower arranging. According to Claudie, the training she received in the Master Gardener program, combined with her love of growing and arranging flowers, led her to “more fully appreciate Florida and its natural beauty.”

Claudie lives in Fernandina Beach with Callie, her aptly named calico cat. When she is not busy with her duties as a Master Gardener, she volunteers at Micah’s Place Domestic Violence Abuse Shelter, where she has been a Victim’s Advocate for the last ten years. She is also an active member of the Rose Garden Club on Amelia Island, which has been in existence for over forty years.

Several years ago, Claudie decided to take a college speech class. In that class, each student was to research a topic of his or her choice, and then speak on that topic. The class was made up of students of various ages, but most were eighteen year olds fresh out of high school. She felt these students would be “bored to tears” if she “talked about digging holes for plants,” so she decided to focus on plant myths. Recalling the Master Gardener training she had received on herbs, Claudie did a little research on herbs, and found a bountiful supply of tales. Her speeches began with “colorful, fantastic, on the edge of not quite believing” stories about “these wonderful plants…. And with that began my love of herbs,” Claudie said.

I asked Claudie to share a few things about herbs in general. She thought for a moment, and responded, “Herbs have always been important to mankind, physically, mentally, and spiritually. Herbs seasoned and preserved food, they were used medicinally, they were used in worship practices, and they were even used cosmetically. In the Middle Ages, there was no such thing as a weed. All plants were classified as herbs, and had their uses. Today, synthetic ingredients have replaced many herbs in order to serve millions of people,
but even now, some herbs are still being used in medicine and cosmetics. Herbs are plants that serve and delight us. Herbs give us a quick harvest to enjoy, savor the fragrance, and marvel at their blooms. And herbs are so easy to grow: A little sun, a little shade, a little water, and a little fertilizer, and they will reward us whether we plant them in the ground or in a patio container.”

Herbs come in three basic types, annuals, which must be replanted each year; biennials, which have a two year life-span; and perennials, which live for many years. Biennials and perennials should be planted separately from annuals, so when the time comes to prepare the ground to replant the annuals, the biennials and perennials are not disturbed.

There are various ways to start herbs. Annuals and biennials are best started from seed in the location where they will grow, although many can be started as transplants. Perennial herbs are best started from seeds or cuttings in containers for transplanting later into the garden.

Herbs do not require a lot of space. A small raised bed located near the kitchen, or several pots placed on the patio, will produce more than enough herbs for the average family. Hanging baskets are also ideal for many varieties of herbs. Just be sure to locate the herb garden where it will get the proper amount of sun. Most herbs enjoy full sun, at least six hours a day, but here in hot, sunny Florida, it is best to plant herbs where they will catch their six hours of sun in the morning, and receive at least a little bit of afternoon shade.

Many herbs can be used either fresh or dried. Since dried herbs are usually more potent than fresh, recipes should be adjusted accordingly. The ratio of fresh to dried herbs is about three measures of fresh herbs to one measure of dried. For example, if a recipe calls for one teaspoon of dried basil, use three teaspoons of fresh; or if the recipe calls for one teaspoon of fresh basil, only use 1/3 teaspoon of dried. (Of course, when using herbs, the amount can always be adjusted according to taste.)

Young, tender leaves of herbs can be harvested and used fresh at any time during the growing cycle. Fresh-cut herb leaves can be wrapped in a paper towel, and stored in a re-sealable plastic bag in the refrigerator for up to a week or so. (Press the air out of the plastic bag before refrigerating.) To dry, preserve, and store leaves, harvest the leaves just before the plants begin to flower, wash in cold water, and drain on paper towels. Allow leaves to dry thoroughly in a dark, dry, well-ventilated location. More succulent herbs, such as rosemary, sage, and thyme can be partially dried in the sun before transferring to a dark, dry location to complete drying. Once completely dried, remove the stems, and store in an airtight container in a cool, dry location.

If seeds are to be preserved, harvest the seeds when they are fully mature, and dry the seeds thoroughly before storing to prevent molding and loss of quality. Cure the seeds in a dry, well ventilated area. When completely dry, store in an air tight container in a cool, dry location.

I then asked Claudie what her favorite herbs were, and she replied, “That is a tough question, because I love them all!” When I pressed her, she finally answered, “Well, I guess a few of my favorites are parsley, sage, rosemary, and thyme.”

Parsley is a biennial that is usually grown as an annual, and grows well...
in Florida. It comes in several different varieties, from the more familiar curly-leafed variety, to the flat-leafed Italian variety. Parsley is a cool-season herb, and is best planted in the fall or winter. Sow the seeds thickly, about one-quarter inch deep, and thin to about six inches apart when the plants are about an inch tall. The leaves are used fresh or dried, and are commonly seen as garnishes in restaurants. Parsley is used extensively in Middle Eastern and European cooking, where it is often sprinkled on top of chicken, fish, lamb, potato, and rice dishes, or added to meat and vegetable stews. It is also a key ingredient in the traditional Arabic salad tabbouleh.

While discussing parsley, Claudie shared the following tale: “In the days of Kings and Queens, they often gave lavish feasts that lasted for hours. Everyone wanted to be invited. For those in power, the preferred method of eliminating someone they no longer liked was the use of poison. Legend has it that if the host liked you, he would place a sprig of parsley on your plate, and if you consumed poisonous food, the parsley was the antidote and would save you. The astringent taste of parsley gave rise to this belief. Today, when I eat at a restaurant and find a sprig of parsley decorating my plate, I think of this myth, and hope it still works!”

Sage is a medium-sized hardy perennial, that once established grows well in Florida. It has grayish-green, pointed, oblong leaves about two to three inches long. Sage is best started from fall to early spring using seeds or cuttings, and transplanted into the garden when the plants are about three inches tall. Sage loves the sun, but will also tolerate some shade. Sage leaves are used fresh or dried. Many people use sage to season their stuffing at Thanksgiving and Christmas. According to Claudie, “There is an ancient Chinese proverb that goes something like this, ‘How can a man grow old when he has sage in his garden?’ Sage is often associated with wisdom. In fact, the Chinese valued sage so much, that it was said they would trade three chests of tea for a few leaves of sage. Aside from the growing old bit, sage is not just for the turkey dinner. Sage is great used as a flavoring for pork, duck, and sausage. The leaves can also be dipped in batter, fried, and then eaten. In addition, sage attracts bees, a beneficial insect and important pollinator for our other crops.”

Rosemary is a shrub-like evergreen perennial with a spicy, pine-scented aroma. Small, narrow, dark green leaves that look like tiny pine or spruce needles grow on two to three foot long branches. Rosemary plants resembling small Christmas trees are even sold as topiaries around Christmas time. Under the right conditions, small blue or pink flowers will emerge in the second year of growth. Rosemary is best started from cuttings, or purchased from a local nursery. Set out the plants in fertile, well-drained soil at least two to three feet apart. The fresh or dried needles are the parts of rosemary that are used in cooking. Lamb, pork, chicken, sausage, and meatloaf are delicious when seasoned with rosemary. It is also used to scent and flavor cookies, cakes, butter, and breads, and rosemary biscuits are a great addition to any meal.
“The Spanish named rosemary after the Virgin Mary, as it was said the rosemary bush sheltered her, St. Joseph, and the Infant Jesus on their Flight into Egypt…. When Mary spread her cloak over the rosemary bush, the flowers, which were reputedly originally white, turned blue.” Claudie concluded her remarks on rosemary by adding, “Give rosemary plenty of room, and you will soon have enough to share with the entire neighborhood!”

Thyme is a small, perennial herb that comes in a wide variety of shapes and sizes, from the low-growing creeping thyme, to the more bushy common thyme. Thyme has tiny, one-quarter inch grayish-green leaves that grow all along the stems. When the plants mature, small purple flowers adorn the ends of the stems. Start plants in the fall or early spring from cuttings, or by sowing seeds about one quarter inch deep in small containers for transplanting later into the garden. Set plants out into the garden about a foot apart when they are several inches high. Thyme can be used either fresh or dried in recipes. Thyme is often used to flavor soups, stews, and stock, as well as bean, egg, and vegetable dishes. Thyme is also a common ingredient in Cajun cuisine.

When I asked Claudie to share a story about thyme, she responded, “Thyme is a cottage herb that has been revered since ancient times. Thyme is considered an herb of purification and protection, and symbolizes humility, fortitude, strength, happiness, and affection. The ancient Greeks and Romans associated thyme with courage, and soldiers would often bathe in thyme water before going into battle to ensure bravery. During the Middle Ages, thyme, along with basil, germander, lavender, sage, and other sweet smelling herbs, was used as a ‘strewing herb’, and was often scattered on the floors of cathedrals, churches, and homes because of its pleasant smell. Also at that time, thyme was frequently referred to as ‘Our Lady’s Bedstraw’, because it was said that St. Joseph collected the herb from the fields outside of Bethlehem to make a soft bed for the Virgin Mary when she gave birth to Jesus. Mary in turn then used it to line the manger in which the Infant slept after He was born.”

Well my friends, that about does it for today. I have run out of thyme (please pardon the pun—I could not resist!). Before I go, I would like to thank Claudie for the time she spent with me discussing herbs (Thanks Claudie!), and pass on a few great recipes using herbs that she shared with me. I hope you enjoy them as much as I have. Until we meet again, God Bless, and Happy Harvesting!

Peace and Goodness,

Joseph
Claudie’s Bacon Fat Fried Shrimp

Ingredients
- 1 Pound Fresh Fernandina Beach Shrimp (Peeled and Deveined)
- 2 Slices Bacon
- 2 Large Fresh Fennel Bulbs (Diced, With Some Fronds Chopped and Reserved)
- ½ Red or Green Bell Pepper (Diced)
- ¼ Teaspoon Salt
- ½ Cup White Wine
- 3 Cups Cooked Brown Rice

Directions
Fry bacon on medium-high heat until crisp (use a large skillet). Drain, and let cool on paper towels. To bacon fat, add fennel and a pinch of salt, and sauté for about 3 minutes, or until just a little bit soft. Stir in bell pepper, and continue to sauté for 3 more minutes, or until slightly tender. Add shrimp and remaining salt. Cook, turning once, for about five minutes, or until shrimp turns pink. (If you wish, you can substitute frozen, ready-to-eat shrimp for the fresh shrimp.) Add wine, lower heat to a simmer, and crumble in bacon. Stir, and simmer just long enough to heat through. Serve over brown rice, garnished with reserved fennel fronds.

Notes
I love making this dish for family and friends, as here in Fernandina, we have the freshest (and best tasting) shrimp in the world!

Recipe courtesy of Claudie Speed.

Claudie’s Buttermilk Thyme Biscuits

Ingredients
- 2 Cups All-Purpose Flour
- 1 Tablespoon Baking Powder
- ¾ Teaspoon Salt
- ½ Teaspoon Baking Soda
- 1 Tablespoon Fresh Thyme (Chopped)
- 4 Tablespoons Cold Butter (Cut into Small Pieces)
- 1 Cup Buttermilk (More if Needed)

Directions
Preheat oven to 425 Degrees Fahrenheit. Combine flour, baking powder, salt, baking soda, and thyme. Incorporate butter into flour mixture using a pastry blender or fork, and blend until mixture resembles coarse meal. Mix in buttermilk until a sticky dough forms. (You might need to add up to 1 tablespoon more buttermilk.) Drop 8 mounds of dough onto a nonstick baking sheet. Lightly pat tops to flatten slightly. Bake for 15 to 25 minutes, or until golden brown.

Notes
This recipe was inspired by one in Taster’s Choice Festivals, by Linda Cunningham. These biscuits are delicious with any home cooked meal. They are quite easy to make, and your guests will marvel at the taste. Just be sure to make plenty, as they will disappear rather quickly! Almost any favorite herb can be substituted for the thyme in the recipe, and the biscuits will still turn out great. (My mother tried this recipe, but used rosemary instead of thyme. The biscuits were delicious! JS)

Recipe courtesy of Claudie Speed.
Claudie’s Four Herb Stew

Ingredients

- 3 Tablespoons Olive Oil
- 2 Medium Onions (Chopped)
- 3 Cloves Garlic (Minced)
- 2 Pounds Fresh Mushrooms (Use Two Different Varieties of Your Choice, Roughly Chopped)
- 1 Pound Red Potatoes (Cut into ½ Inch Pieces)
- ½ Cup Fresh Parsley (Chopped)
- 2 Tablespoons Fresh Sage (Minced)
- 2 Tablespoons Fresh Rosemary (Minced)
- 2 Tablespoons Fresh Thyme (Minced)
- 2 Cups Vegetable, Mushroom, or Chicken Stock
- Salt and Pepper (To Taste)

Directions

In a pot, sauté onions and garlic in olive oil until tender. Add stock (I prefer chicken stock, because it gives a richer flavor), mushrooms, potatoes, sage, rosemary, and thyme, and cook on medium for about 10 minutes, or until potatoes are soft and tender, stirring occasionally. Add salt, pepper, and parsley. Gently stir, and cook for two more minutes. (If stew is too thick, more stock can be added.) Serve with salad and fresh homemade thyme or rosemary biscuits.

Notes

This delicious stew is a family favorite, and is great served for supper on a cold winter evening.

Recipe courtesy of Claudie Speed.
Claudie’s Cornmeal Thyme Cookies

Ingredients

- 1 ¾ Cup All-Purpose Flour
- 1 Cup Stone-Ground Yellow Cornmeal
- 1 ¼ Cup Sugar
- 2 Sticks Butter (Softened)
- 2 Eggs
- ¾ Cup Ocean Spray Craisins Dried Cranberries with Cherry Juice Infused
- 1 Teaspoon Baking Soda
- ½ Teaspoon Salt
- 1 ½ Tablespoons Fresh Thyme (Minced)

Directions

Preheat oven to 350 Degrees Fahrenheit. Line baking sheets with parchment paper, and set aside. Thoroughly mix flour, cornmeal, baking soda, and salt. Set aside. Cream butter and sugar in mixer on medium speed until pale and fluffy (takes about 3 minutes). Mix in eggs, one at a time. Gradually add flour/cornmeal mixture, and mix on low speed until just combined. Mix in cranberries and thyme. Using a tablespoon, drop rounded balls of dough about 2 inches apart on baking sheets. Bake, rotating and switching positions about halfway through, until cookies are pale golden yellow (about 10 to 12 minutes). Transfer cookies to a wire rack, and let cool completely.

Notes

I got the original recipe for these cookies from the Martha Stewart website on the internet. As I usually do, I made some changes to the recipe. The original recipe called for currants instead of cranberries. I recommend cranberries, as the cranberry/cherry red color is pleasing to the eye, as well as to the palate. These sweet and savory cookies would be perfect with an afternoon cup of your favorite tea. The unusual flavor, with a hint of stone-ground cornmeal, would very nicely replace your favorite scone at teatime! Actually, they are yummy anytime! My 16 year old granddaughter Bayde tried her hand at making this recipe, and it was a great experience for both of us. I gladly washed up the dozens (it seems like) of utensils, pans, and mixers, as well as the flour that generously dusted the kitchen. I do hope you will try these cookies. You will not be disappointed.

Recipe courtesy of Claudie Speed.
Natural Area Weeds: Chinese Tallow (*Sapium sebiferum* L.)

by K. A. Langeland, professor, Agronomy Department, Florida Cooperative Extension Service

**Introduction**

Florida's natural areas--a great source of pride and enjoyment to its citizens--provide recreation, protect biodiversity and fresh water supplies, buffer the harmful effects of storms, and significantly contribute to the economic well-being of the state. Natural areas are protected in over nine million acres of state, federal, local and private managed conservation lands in Florida. Unfortunately, many of these natural areas can be adversely affected when they are invaded by nonnative invasive plant species. An estimated 25,000 plant species have been brought into Florida for use as agricultural crops or landscape plants. While only a small number of these have become invasive, those that do can adversely affect native plant communities by competing for space and resources, disrupting hydrologic and fire regimes, or hybridizing with native species. They must be managed for the protection of native communities in natural areas. Chinese tallow (*Sapium sebiferum* L.) is one of these invasive plant species.

1. Chinese tallow tree (*Sapium sebiferum* L.) can be identified by its simple, alternate leaves with broadly rounded bases that taper to a slender point and dull white seeds that remain attached after leaves have fallen.

2. In Spring, Chinese tallow tree displays spikes to 8 inches of small yellow flowers.

**How to Recognize Chinese Tallow**

Chinese tallow is a deciduous tree with a milky sap that commonly grows to 30 ft tall. Leaves are simple, alternate, 1-2.5 inches wide, with broadly rounded bases and tapering to a slender point (Figure 1). Leaf stalks are 1-2 inches long. Small yellow flowers that are borne on spikes to 8 inches long occur in spring (Figure 2). The fruit is a 0.5 inch wide, 3-lobed capsule that turns brown at maturity to reveal 3 dull white seeds (Figure 1). The seeds, which often remain attached to the tree through the winter, resemble popcorn, suggesting the other common name of popcorn tree.

**Distribution**

Chinese tallow was introduced to the US before 1800. In a letter from Benjamin Franklin written in 1772 to Dr. Noble Wimberly Jones of the Georgia colony, Franklin wrote: "I send also a few seeds of the Chinese Tallow Tree, which will I believe grow & thrive with you. 'Tis a most useful plant". As early as 1803, Chinese tallow was spreading into coastal forests according to the noted French botanist Andre Michaux. Since Franklin's time, Chinese tallow has been introduced repeatedly to the United States as an ornamental and potential oil crop species. It is now naturalized from Richmond County, North Carolina, south through Central Florida, extending west into Texas and northwest Arkansas. Within Florida, Chinese tallow was naturalized in 57% of the counties in 1993 and found as far south as Dade County.
Invasiveness

Chinese tallow has been recognized as a pest plant in the Carolinas since the 1970s. It is found throughout Florida where it invades mesic flatwoods, scrubby flatwoods, alluvial floodplain forest, strand swamp, and ruderal communities. Chinese tallow has been extensively used for ornamental planting and is a common plant on landscaped property. These trees present a constant source of seed for infestation of natural areas because the seeds are transported by birds such as pileated woodpeckers, cardinals, yellow-rumped warblers, American robins, and grackles, as well as by water. While the length of time needed to deplete the seedbank is unknown, indications are that seeds remain viable for many years. There is speculation that seeds may remain dormant for up to 100 years with little or no loss in viability.

The Florida Exotic Pest Plant Council included Chinese tallow on its 1993 List of Florida's Most Invasive Species. Chinese tallow was added to the Florida Department of Agriculture and Consumer Services Noxious Weed List in 1998. Plants on the Florida Noxious Weed List may not be introduced, possessed, moved, or released without a permit.

Remove and Replace

Homeowners can help mitigate the problem of Chinese tallow trees in Florida's natural areas by removing them from their property. Mature trees should be felled with a chain saw by the property owner or a professional tree service. The final cut should be made as close to the ground as possible and as level as possible to facilitate application of a herbicide to prevent sprouting. Stumps that are not treated with a herbicide will sprout to form multiple-trunked trees (Figure 3). If it is not objectionable for dead trees to be left standing, certain herbicides can be applied directly to the bark at the base of the tree (basal bark application).

Herbicides that contain the active ingredient triclopyr amine (e.g., Brush-B-Gon, Garlon 3A Ultra) can be applied to cut stumps to prevent resprouting. The herbicide should be applied as soon as possible after felling the tree and concentrated on the thin layer of living tissue (cambium) that is just inside the bark. Herbicides with the active ingredient triclopyr ester can be used for basal bark applications. Concentrated products (e.g., Garlon 4) must be diluted, according to instructions on the herbicide label, with a penetrating oil, manufactured for this purpose. Herbicides with the active ingredients triclopyr ester can be used for basal bark applications. Herbicide products are available for basal bark application that are pre-diluted with penetrating oil (e.g., Pathfinder II). Only certain triclopyr amine products may be applied to trees that are growing in standing water. Suckers may grow from remaining roots, even if herbicide is applied to the parent tree. These suckers can be cut or treated with a foliar herbicide application. It is illegal to use a herbicide in a manner inconsistent with the label's instructions; therefore, read the label carefully and follow the instructions.

If trees are cut at a time when seeds are attached, make sure that the material is disposed of in such a way the seeds will not be dispersed to new areas where they can germinate and produce new trees. Seedlings should be continually pulled by hand before they reach seed-bearing maturity.

Space in a landscape left after removal of Chinese tallow can be used to plant a new native or noninvasive non-native tree for shade, or some other landscape purpose. Tree species recommended in Table 1 are similar in size to Chinese tallow. Blackgum, maples, dogwood, and crepe myrtles provide fall color similar to Chinese tallow. Fact sheets that provide additional information on landscape plants can be viewed at http://hort.ifas.ufl.edu/database/trees/trees_scientific.shtml. For information on the availability of native landscape plant species contact the Association of Florida Native Nurseries (877/352-2366 or http://www.afnn.org). The Cooperative Extension Service Office in your county can help you identify plants appropriate to your property conditions, the ecosystems on and near your site, and your aesthetic preferences.
The honeybee is only one of many bees and pollinators in Florida; however, it is the most important bee for Florida and the nation’s agricultural economy. Honeybees supply approximately 1/3 of the national food supply through their pollination activity. Sometimes agricultural producers “rent” bee colonies for pollination, but most bee and pollination activity occurs naturally from bees in the area. In Florida, between 10,000 and 12,000 beekeepers manage 350,000 to 400,000 honeybee colonies.

Each year the beekeeping industry is impacted by pesticide use. Foraging bees come into contact with agricultural insecticides and pesticides. Cooperation between agricultural operators and beekeepers can minimize these effects.

Poisoning
Pesticide poisoning of honeybees depends on the bees’ developmental stage. Colony disruption and population decline in the hive can occur from the poisoning of bees in any developmental stage.

Larval stage
- Most susceptible to poisoning
- Killed by contaminated pollen and nectar

Adult house bee
- Active in the hive
- Tend larvae (brood)
- Killed by contaminated stored pollen

Adult field bee
- Active outside the hive
- Forage for pollen and nectar to bring to the hive
- Killed by direct contact with pesticides and sprays
- Bring back contaminated pollen and nectar to the hive

Bee Kills
Only one main symptom presents good evidence of pesticide poisoning—many dead and dying bees near a colony’s entrance. The dead bees are quickly removed by wind and scavengers, so beekeepers who do not frequently visit their hives may not know their bees have been poisoned. Other signs of possible poisoning are as follows:
- Irritable (aggressive), paralyzed, “chilled,” or other abnormally behaving bees
- Superseded queens or “banished” queens outside of the colony

These symptoms are not definite signs of poisoning, and other management problems can produce the same effects.

Protecting Bees
Understanding how bees forage helps to realize how susceptible to pesticides they are. Bees range 2–5 miles from a colony and seek out nectar and pollen in a systematic way. Once a food source is found, bees tend to collect only from that single source until it is used up before switching plants.

Most major bee poisoning occurs when plants are in bloom. Bees that establish flight patterns in an area before a pesticide is applied usually are most affected. Bees that come to an area after pesticide applications are less affected since it takes time to scout and find food sources.

To eliminate damage to honeybees, pesticide applicators should keep the following suggestions in mind:
- Use only when needed. Factor in the value of beneficial insects (pollinators and predators) for crop yields when deciding whether or not to spray for pests.
- Do not spray while crops are in bloom. Apply during bud stage or after petal drop.
- Identify other blooms. Look for weeds or other plants that might be blooming and attractive to bees, even if the crop being sprayed is not in bloom.
- Apply when bees are not active.
Bees fly from roughly 8 AM to 5 PM when temperatures are above 55°F–60°F. Early evening is the best time for pesticide application. Do not contaminate water. Bees use water to cool the hive and feed brood.

Use less toxic compounds. Products hazardous to honeybees must say so on the label. Consult your local Extension agent for less-toxic compounds and use.

Use less toxic formulations. Microcapsules, dusts, wettable powders, and ULVs are more hazardous than liquids and emulsifiable concentrates.

Notify beekeepers. Beekeepers can move or confine bees if they have prior notification. Under Florida law, every apiary or bee yard must display the owner’s name, address, and telephone number.

**Confining Bees**
Beekeepers can cover hives with burlap or coarse cloth. This keeps bees from foraging but lets them congregate outside of the hive. Sprinkling the covers every hour with water prevents overheating. Never screen or seal colonies or cover with plastic sheeting. This can cause overheating, suffocation, and bee death.

**Special Problems**
Two products especially harmful to honeybees are malathion and carbaryl (Sevin®). Both have been responsible for bee kills when the products have been used improperly, such as under the wrong conditions, without beekeeper notification, and with the most toxic formulations.

Encapsulated methyl parathion (PennCap M®) and other microencapsulated pesticides are the most damaging to honeybees. We strongly recommend using this formulation only when honeybee exposure is not a possibility.

**Cooperation and Communication**
Protecting honeybees from pesticides requires cooperation not only between growers and beekeepers, but also with Extension agents and government officials.

Growers need to be aware about the interactions of honeybees and pesticides, consider honeybee safety, and keep pesticide applications from affecting area bee colonies. Generally colonies are only harmed when decisions are made without knowledge of or regard for honeybee safety.

For more information on the safe application and appropriate use of pesticides, contact your local Extension agent.

*Adapted and excerpted from: M. Sanford, Protecting Honey Bees from Pesticides (CIR534), Entomology and Nematology Department (rev. 09/2011).*
WASHINGTON – In an ongoing effort to protect bees and other pollinators, the U.S. Environmental Protection Agency (EPA) has developed new pesticide labels that prohibit use of some neonicotinoid pesticide products where bees are present.

“Multiple factors play a role in bee colony declines, including pesticides. The Environmental Protection Agency is taking action to protect bees from pesticide exposure and these label changes will further our efforts,” said Jim Jones, assistant administrator for the Office of Chemical Safety and Pollution Prevention.

The new labels will have a bee advisory box and icon with information on routes of exposure and spray drift precautions. Today’s announcement affects products containing the neonicotinoids imidacloprid, dinotefuran, clothianidin and thiamethoxam. The EPA will work with pesticide manufacturers to change labels so that they will meet the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) safety standard.

In May, the U.S. Department of Agriculture (USDA) and EPA released a comprehensive scientific report on honey bee health, showing scientific consensus that there are a complex set of stressors associated with honey bee declines, including loss of habitat, parasites and disease, genetics, poor nutrition and pesticide exposure.

The agency continues to work with beekeepers, growers, pesticide applicators, pesticide and seed companies, and federal and state agencies to reduce pesticide drift dust and advance best management practices. The EPA recently released new enforcement guidance to federal, state and tribal enforcement officials to enhance investigations of beekill incidents.

More on the EPA’s label changes and pollinator protection efforts: http://www.epa.gov/opp00001/ecosystem/pollinator/index.html

View the infographic on EPA’s new bee advisory box: http://www.epa.gov/pesticides/ecosystem/pollinator/bee-label-info-graphic.pdf
APPLICATION RESTRICTIONS exist for this product because of risk to bees and other insect pollinators. Follow application restrictions found in the directions for use to protect pollinators.

Look for the bee hazard icon in the Directions for Use for each application site for specific use restrictions and instructions to protect bees and other insect pollinators.

This product can kill bees and other insect pollinators.
Bees and other insect pollinators will forage on plants when they flower, shed pollen, or produce nectar.

Bees and other insect pollinators can be exposed to this pesticide from:

- Direct contact during foliar applications, or contact with residues on plant surfaces after foliar applications
- Ingestion of residues in nectar and pollen when the pesticide is applied as a seed treatment, soil, tree injection, as well as foliar applications.

When Using This Product Take Steps To:

- Minimize exposure of this product to bees and other insect pollinators when they are foraging on pollinator attractive plants around the application site.
- Minimize drift of this product on to beehives or to off-site pollinator attractive habitat. Drift of this product onto beehives or off-site to pollinator attractive habitat can result in bee kills.

Information on protecting bees and other insect pollinators may be found at the Pesticide Environmental Stewardship website at:
http://pesticidestewardship.org/PollinatorProtection/Pages/default.aspx.

Pesticide incidents (for example, bee kills) should immediately be reported to the state/tribal lead agency. For contact information for your state, go to: www.aapco.org/officials.html. Pesticide incidents should also be reported to the National Pesticide Information Center at: www.npic.orst.edu or directly to EPA at:
beekill@epa.gov
DIRECTIONS FOR USE

1. FOR CROPS UNDER CONTRACTED POLLINATION SERVICES

Do not apply this product while bees are foraging. Do not apply this product until flowering is complete and all petals have fallen unless the following condition has been met.

If an application must be made when managed bees are at the treatment site, the beekeeper providing the pollination services must be notified no less than 48-hours prior to the time of the planned application so that the bees can be removed, covered or otherwise protected prior to spraying.

2. FOR FOOD CROPS AND COMMERCIALY GROWN ORNAMENTALS NOT UNDER CONTRACT FOR POLLINATION SERVICES BUT ARE ATTRACTIVE TO POLLINATORS

Do not apply this product while bees are foraging. Do not apply this product until flowering is complete and all petals have fallen unless one of the following conditions is met:

- The application is made to the target site after sunset
- The application is made to the target site when temperatures are below 55°F
- The application is made in accordance with a government-initiated public health response
- The application is made in accordance with an active state-administered apiary registry program where beekeepers are notified no less than 48-hours prior to the time of the planned application so that the bees can be removed, covered or otherwise protected prior to spraying
- The application is made due to an imminent threat of significant crop loss, and a documented determination consistent with an IPM plan or predetermined economic threshold is met. Every effort should be made to notify beekeepers no less than 48-hours prior to the time of the planned application so that the bees can be removed, covered or otherwise protected prior to spraying.

3. Non-Agricultural Products:

Do not apply [insert name of product] while bees are foraging. Do not apply [insert name of product] to plants that are flowering. Only apply after all flower petals have fallen off.
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Do not apply [insert name of product] while bees are foraging. Do not apply [insert name of product] to plants that are flowering. Only apply after all flower petals have fallen off.

Cross-reference list of common, trade, and chemical names of neonicotinoid insecticides.

<table>
<thead>
<tr>
<th>Common name*</th>
<th>Trade names**</th>
<th>Chemical Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acetamiprid</td>
<td>Acetamiprid®, Assail®, Tristar®</td>
<td>(E)-N-(6-chloro-3-pyridinyl)methyl)-N1-cyano-N-methylacetamidine</td>
</tr>
<tr>
<td>Clothianidin</td>
<td>Acceleron®, Arena®, Belay®, Celer®, Clutch®, Nipsit Inside®, Poncho®</td>
<td>(E)-1-(2-chloro-1,3-thiazol-5-ylmethyl)-3-nitroguanidine</td>
</tr>
<tr>
<td>Dinotefuran</td>
<td>Alpine®, Dinotefuran®, Safari®, Scorpion®, Venom®</td>
<td>N-methyl-N’-nitro-N”-[(tetrahydro-3-furanyl)methyl]guanidine</td>
</tr>
<tr>
<td>Imidacloprid</td>
<td>Admire®, Advantage®, Gaucho®, Merit®, Premise®, Touchstone®</td>
<td>1-(6-chloro-3-pyridin-3-ylmethyl-N-nitroimidazolidin-2-ylidenamine</td>
</tr>
<tr>
<td>Thiamethoxam</td>
<td>Cruiser®, Platinum®</td>
<td>3-(2-chloro-1,3-thiazol-5-ylmethyl)-1,3,5-oxadiazinan-4-ylidenene(nitro)amine</td>
</tr>
</tbody>
</table>

*Basic molecule; isomers not listed.
**Does not include manufacturers’ prepackaged mixtures; major agricultural brands for basic manufacturers.

For More Information: University of Florida Publication Pesticide Toxicity Profile: Neonicotinoid Pesticides
http://edis.ifas.ufl.edu/pdffiles/PI/PI11700.pdf

Pollinators are responsible for assisting over 80% of the world’s flowering plants. Without them, humans and wildlife wouldn’t have much to eat or look at! Animals that assist plants in their reproduction as pollinators include species of ants, bats, bees, beetles, birds, butterflies, flies, moths, wasps, as well as other unusual animals. Wind and water also play a role in the pollination of many plants.
Citrus: Depending on citrus fertilizer label, apply fertilizer every six weeks or as directed. Check for citrus insects and disease. Weed as needed. Water as needed. Last month to fertilize citrus.

Fruit: Weed as needed.

Flowers: For instant color plant marigolds and garden chrysanthemums.

Bulbs: Bulbs to plant now include amaryllis, Aztec lily, calla, elephant ears, grape hyacinth, iris, leopard lily, narcissus, snowflake, watsonia, and zephr lily.

Roses: Apply organic materials (same as February). Water, water, water. September 1, apply granular rose fertilizer. September 1, prune back just beyond previous cut (about 1/3 down the stem).

Herbs: Plant anise, basil, borage, chervil, marjoram, parsley, sesame, and thyme.

Laws: Use a slow release fertilizer such as 15-0-15. Most Florida soils are high in phosphorous, the middle number, so this nutrient is rarely needed. Keep mower heights on highest level all year to promote deep roots. Watch for large patch fungus disease, which attacks lawns when the weather is cool and wet. It is most commonly found in St. Augustine, centipede and Bermuda lawns. The grass dies in roughly circular areas 5 to 6 feet in diameter. In St. Augustine grass, the leaf blades rot where they attach to the runner. Apply an approved lawn fungicide according to label directions.

Perennials: This is the time of year to prune. When pruning, make cuts back to the branch angle, or to the ground. If you want the plant to fill in from the base, make the cut about 1 foot above where you want the new branches to begin.

Trees: Palms should have a “palm special” fertilizer applied over the root system under the spread of the fronds. The configuration should be 8-2-12-4 (N-P-K-Mg). Ideally this would also include manganese, boron, sulfur, etc. with appropriate formulations. Use a slow release fertilizer. If not using slow release, make monthly applications during the warmer months. Many palms are deficient in potassium, in spite of using palm fertilizers. Apply Muriate of Potash to correct this deficiency. For fall color plant deciduous trees such as bald cypress, Chickasaw plum, crape myrtle, redbud, red maple, river birch, sugarberry, sweet gum and winged elm. Trees to plant include black olive, dogwood, golden raintree, hollies, loquat, southern juniper, sugarberry, and wax myrtle.

Vegetables: Snap beans, pole beans, beets, broccoli, cabbage, carrots, cauliflower, endive/escarole, lettuce, cucumber, bulbing onions, bunching onions, radishes, summer squash, and turnips.

Selected from Florida Vegetable Guide by JM Stephens, RA Dunn, G Kidder, D Short, & GW Simone, University of Florida and Month-by-Month Gardening in Florida by Tom MacCubbin
"To Do" List for October

**Citrus:** Check for citrus insects and disease. Apply horticulture oil if insects are detected. Weed as needed.

**Fruit:** Weed as needed. Apply azalea fertilizer to blueberry shrubs at 1/2 pound per 3’ of shrub

**Flowers:** Buy spring flowering bulbs (narcissus, tulips, etc.) and store in the refrigerator for 60 days. Plant bulbs immediately upon removal. Keep them away from ripening fruit during storage. Plant cool season flowers like dianthus, pansy, petunia, shasta daisy, snapdragon, viola, million bells, status, thunbergia, flowering kale and cabbage. Bulbs to plant include agapanthus, gladiolus, kaffir lily, marica, moraea, society garlic, spider lily, anemone, hyacinth, pineapple lily and Star-of-Bethlehem.

**Roses:** Continue spray program. Water, water, water. Cut and remove spent blooms. Fertilize with liquid fertilizer (same as March)

**Herbs:** Anise, basil, bay laurel, borage, caraway, cardamom, chervil, chives, coriander, dill, fennel, garlic, ginger, horehound, lemon balm, lavender, lovage, marjoram, Mexican tarragon, mint, nasturtium, oregano, rosemary, sage, savory, thyme and watercress can be planted now.

**Lawns:** Do not fertilize the lawn this late in the year. For a green winter lawn that will have to be mowed, overseed with annual ryegrass. Watch for large patch fungus disease, chinch bugs, sod webworms, army worms, and mole crickets.

**Trees:** You can remove diseased or dead limbs any time of year. If you plant a tree this month, remember water is the most important part of early tree care. Be sure to dig the hole wider than deep. Do not fertilize now, wait until next spring. Let the tree put its effort into producing roots.

**Vegetables:** Plant strawberries in late October through November. Plant in rows 36” apart and 12” apart within the row. Elevate rows 6” above existing soil to ensure good drainage. Use pine straw to reduce weed problems and slugs. Beets, broccoli, cabbage, carrots, cauliflower, Chinese cabbage, collards, kohlrabi, bulbing onions, bunching onions, radishes, spinach, and turnips may also be planted this month.

Selected from Florida Vegetable Guide by JM Stephens, RA Dunn, G Kidder, D Short, & GW Simone, University of Florida and Month-by-Month Gardening in Florida by Tom MacCubbin
Q: I was walking along Egan’s Creek and saw a plant I thought was Queen Anne’s lace but my friend seems to think it is elderberry. Do you have any ideas?

A: It could have easily been elderberry but after looking over the site and sending photographs to the University of Florida, we determined the plant to most likely be a water hemlock. Water hemlock is the most violently toxic plant growing naturally in North America. Only a small amount of the toxic substance in the plant is needed to produce poisoning in livestock or in humans. The toxin cicutoxin acts directly on the central nervous system causing convulsions.

Cicutoxin has a strong carrot-like aroma. Water hemlock has small, white flowers that grow in umbrella like clusters which looks very similar to the flower of the wild carrot, elderberry and poison hemlock. However, there are some very distinct differences which make the identification easier. Queen Anne’s lace and poison hemlock have very convoluted or lobed compound leaves called tri-pinnate. The leaves of water hemlock and elderberry are more similar to each other but without the deep lobes. Water hemlock stems are herbaceous and smooth (no hair) whereas Elderberry stems are woody (more like a shrub). Queen Anne’s lace has green, hairy stems whereas poison hemlock has smooth, purple spotted stems. In cases of any type of plant poisoning in humans, contact a poison Florida control center (open 24 hours a day) at 1-800-222-1222 as quickly as possible. All parts of the plant are poisonous but the root is especially potent. The green seed heads have caused death losses in cattle. The leaves and the stems lose their toxicity as they mature. Good reason to not eat something unless you are absolutely certain of the identification. Since I have said all this scary stuff, I know there will be some concerns about water hemlock growing in a conservation area but there is no reason to become overzealous to remove these plants. If we start removing poisonous plants (azaleas, lantana, coral bean, oleander, etc.), where will it end? All types of poisonous plants have been around for thousands of years and very seldom cause any harm. As a reminder - we should respect all plants and their potential power to both help and harm. However, people who have livestock and a water source should be vigilant to ensure poisonous plants are not growing on their property where animals could ingest them accidentally.
Q: I love the large bamboo growing along some of the roadsides along A-1-A. Someone told me it was called Giant reed and it is invasive. I was thinking about planting it along my retention pond but thought I might ask you about it first.

A: I appreciate you calling me about this plant and I admire your desire to do the right thing for the local community and environment. In the 1820s, Giant reed, *Arundo donax*, was introduced in California for erosion control. It has since escaped and become a major invasive weed problem in California and Texas watersheds. Giant reed can be found throughout the southern United States and as far north as Maryland, but the date and location of its initial introduction in the eastern United States is unknown. Although giant reed has been present in Florida for many years, it has not become a problem species. However, because of its growth characteristics and competitive ability it should be monitored closely. This plant is a clumping, perennial grass which can reach heights between 16 to 20 feet. Giant reed interferes with rivers and lakes by increasing sedimentation and narrowing water channels which can lead to flooding and erosion. The best management of the reed is to mow it and remove the cut material. To totally get rid of it, the rhizome must be destroyed by using a non-selective herbicide combined with other grass controlling herbicides. It will most likely take more than one application. It is always important to be careful when choosing plants to place around bodies of water. I would always advise against any plant which might be a potential invasive. This information was combined from the following publications: http://edis.ifas.ufl.edu/ag307 and http://plants.ifas.ufl.edu/node/48
Q: I found this in my neighbor’s yard. It grows about waist height – can you tell me what it is? My friend says it is a hibiscus but it doesn’t look like the leaf of any hibiscus I know.

A: I am using your photo, which helped me tremendously in identifying this plant. I thought it might be a swamp mallow but I believe it is most likely a Red-leafed hibiscus – so your friend is correct. This hibiscus may be one of the common varieties called ‘Panama Red’, ‘Panama Bronze’ or ‘Red Shield’. It is a short lived perennial which blooms from the spring through the fall. It grows well in full sun to partial shade in cold hardiness zones 8-11. It does not tolerate long dry spells so be prepared to apply some occasional irrigation. It only reaches heights up to 4 feet but it spreads up to 6 feet. The color of the flowers range from rose to pink to cream but the real reason for getting this plant is the foliage. The color of the leaves ranges from burgundy to a shiny, bronze. The leaves are deeply lobed and the edges are serrated. Flower blooming may be somewhat sporadic. It will die back when the cold temperatures arrive but it should return for a few years in the spring.