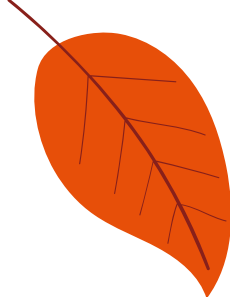


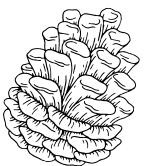
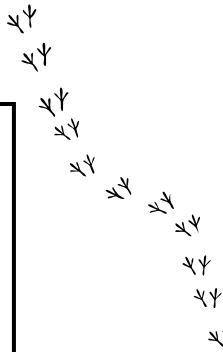


USI TRAILS AUTUMN SCAVENGER HUNT



The cooler temperature brings a whole new vibe to the USI Trails. Scavenger hunts take on a whole new color when you hit all the trails. Make sure you wear good shoes and put on plenty of bug spray!

 Harvestmen spiders are conspicuous in the fall. You can spot their messy webs in the undergrowth. Don't worry, they have poor eye site and won't bite!	The squirrels are storing their food for winter. You can find all kinds of acorns and nuts on the trails. Some you nuts you can find littering the paths include: walnut, hickory and pecan.	USI Trails are full of wildlife. Can you spot their their tracks after a rainy day? Tracks you might spot are: deer, raccoon, possum, rabbit, wild turkey, goose and worm!
 Fall is a wonderful time to insect decomposers on the trails. A good way to find them is to roll over a log. What do you see?	Don't forget the decomposers like mushrooms and fungus. You'll spot them growing on trees, branches and roots. Can you spot False Turkey Tail or mushrooms.	Lichen are also decomposers. They absorb pollution in the atmosphere. They can grow about any wear and are green or a greyish color.
 All sorts of trees means all sorts of leaves. Look for the following types of leaves: • Serrated edges • Lobed • Indiana's state tree-Tulip • a long leaf	Collect all sorts of pinecones on campus and along the trails. You can use these to make peanut butter bird feeders. Just collect some big ones and Google Pinecone birdfeeders for instructions	Look for examples of Fibonacci Sequences in that nature. They are spirals in occur in nature. They abound in flowers. Check out around the gazebo to see an example.



USI TRAILS WEATHER FOLKLORE



A STUDY ON THE PERSIMMON TREE

USI's trails have trees that produce tasty things to eat in the fall. One of our favorite trees that has culinary delights is a persimmon tree. You can find an grove of persimmons in a grassy area between the baseball and soccer field. The share the space with a shelter house, as you walk towards the USI/Burdette Trail.



Persimmons fruit during September through October. They range between orange to orange/purple. Resembling a small tomato, they are oval shaped, squishy and soft when ripe. They have are a stringy fruit, with a warm, sweet flavor.

Unripe, they are hard and shiny. They and are astringent in flavor and pucker to taste.

When ripe, they fall on the ground and continue to ripen. This grove is popular with deer at dusk and early hours of morning. As they rot on the ground, they are popular with bees.

FUN FACTS ABOUT PERSIMMONS

The scientific name for persimmon is *Diospyros virginiana*. *Diospiros* means food of the gods or divine fruit.

Persimmons orginated in China, where over 2000 types of cultivars were developed In the 1800's, the persimmon tree made it's way to California.

The word "persimmon" is from the Powhatan language and was probably pronounced putchamin, which means choke fruit. People think it was called choke fruit because it is so sour when not ripe, it makes you choke.

The indigenous people of America used the fruit of the persimmon to make bread and medicine for the throat and mouth.

Early pioneers claimed persimmons cured diseases like dysentery, thrush and hemorrhoids!

Those same pioneers made wine from the fruit and called it possom toddy.

The hard seeds were used as buttons during the Civil War. People also roasted and ground the seeds for coffee, claiming it tasted as good as the real thing!

They are best eated when the skin is wrinkly and looks nearly rotten.

They are a highly perishable food that doesn't store or freeze well.

A detailed botanical illustration of a persimmon. On the left is a single, round, orange-brown fruit with a small, dried, lobed calyx at its top. To the right is a woody branch with several large, ovate, green leaves that have prominent veins. At the end of the branch is a cluster of small, yellowish-green buds or young fruits.

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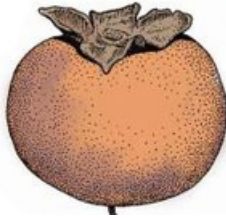
USI TRAILS

STUDY OF PERSIMMON TREES

OTHER RESOURCES

EVPL books about Weather
Folklore and Persimmons

Let's Explore Weather Lore
Sandra Hanson
ebook



Grandma Says: Weather Lore from Meteorologist Cindy Day
ebook

Can it Really Rain Frogs? The World's Strangest Weather Events
Spencer Christian and Antonia Felix
book

Weather Legends: North American Lore & the Science of Weather
Carol Vogel
webite

Groundhog Day
Don Yoder

The Groundhog's Day Book of Facts and Fun
Wendy C. Old

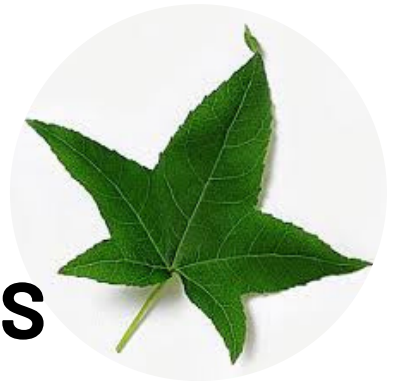
Groundhog Day
Rachel Grack

The Perfect Persimmon: History, Recipes, and More
Michelle Medlock Adams



US Trails

SWEET GUM TREES



A BAD RAP

People have a love/hate relation ship with Sweet Gum trees! They love the beautiful dark red color they turn in the fall.....they HATE the hundreds of little spiky gumballs they shed late summer/early fall! Ever step on one? OUCH!

- The edible sap used used to be used for making chewing gum
- Shikimik acid that is found in the gumballs that is also found in the flu medicine-Tamiflu
- Tea can crushing the green leaves and steeped in boiling water.
- They make a great mulch around plants. Insects don't like the spiky surface of the seed pods.
- In the spring, the flowers of the sweet gum tree are a source of nectar for hummingbirds and over 30 kinds of pollinators
- In the fall, the the seed pods are a great meal for wild turkey, chickadees, ducks, wrens, sparrows and cardinals. Goldfinches are known to descend upon a Sweet Gum tree enmasse to eat the tiny seeds.
- Indiginous peoples and pioneers used sweet gum twigs as tooth brushes!
- The spikes on the gumballs are actually a pair, that open when dying to revel the capsules that contain two types of seeds.





USI TRAILS SWEET GUM TREES



THE FRUITS AND THE SEEDS OF THE SWEET GUM TREE

The fruit of Sweet Gum Tree has wooden pods covered in spikes. Inside the fruit are little capsules containing two types of seeds: tiny black seeds that look like sawdust and a few black, winged seeds that are able to produce another Sweet Gum Tree.

OTHER NAMES FOR THE SWEET GUM'S GUMBALLS:



- Space bugs
- Sticker balls
- Spike balls
- Burrs



Experiment #1

- Gather green sweet gum gumballs. These should be easy to find in August/September. The green ones will have no holes in them, just the spikes that surround the seed pod.
- Put the green gumballs in a bright sunny place on a napkin or under a lamp.
- Estimate how many days it takes for the gumballs to open.
- Compare your estimate with how many days it took for them to open
- Try your experiment again, this time putting your gumballs in a sack in a dark place

Experiment #2

- Gather green Sweet Gum gumballs. These should be easy to find in August/September. The green ones will have no holes in them, just the spikes that surround the seed pod.
- Drop the gumballs into a bowl of water. Does it sink? Why or why not?
- Dry the gumballs and then let them sit until they open. Be careful not to shake all the seeds out.
- Carefully drop it in the water. Does it sink? Why or why not? Do the seeds sink?
- Let the gumball dry out and turn brown
- Drop it into the bowl of water. Does it sink? Why or why not?



USG Trails

SWEET GUM TREES



How Gum Balls are made



Male-pollen producing part of Sweet Gum tree



Female part of Sweet Gum tree

A Sweet Gum tree has two parts to ensure that it propagates. A male part and a female part. The male part is hard to see from the ground, but it produces the pollen that the wind carries to the soft sticky female part to catch the pollen.

You can see that the male portion of the flower is made up of many flowers that look a little like broccoli.

Sweet gum produces ALOT of pollen

Lucky for us, the pollen is not the allergic kind to humans!

After pollination, the flower dries up and falls to the ground. The female part then is fertilized to turn into the gumball we are all familiar with.



Here's what the male part of the sweet gum looks like late spring, when after pollination, it falls off the tree.

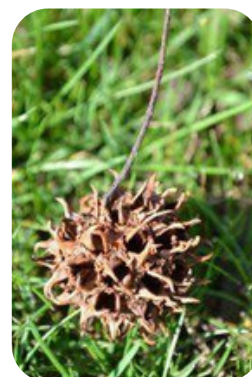


The soft green female parts of the sweet gum tree harden and turn woody and brown over the summer, full of seeds.



Experiment #3

- Take a green gum ball/seed pod and put it in a paper sack.
- Guess how many fertilized seeds are in the seed pod. The fertilized seeds are long and slim and brown colored. The unfertilized seeds look like saw dust.
- Check it daily as you watch gumball dry out and the seed tubes open.
- When all the seed tubes are open, shake your closed paper sack hard for one minute
- Pour out the seeds into a bowl and count your fertilized seeds. Where you close?



Experiment #4



- Take 3 green gumball/seed pods and put them on a paper plate in a warm dry place. Make sure the seed tubes are not open yet.
- Let the gumball/seedpods dry out over a few days. This should take less than five days. Do not handle them though!
- Guess how many fertilized seeds are in each tube? Is it one? Two? Three? More?
- When all the gumball/seed pods are open, very carefully, shake it out onto a plate, watching to see the fertilized seeds come out of one or more of the tubes. How many are in one tube.
- Repeat the experiment to see if you can replicate the same amount of fertilized seeds per tube. Is it the same? Is it more? Is it less?

