How To Use Pine Trees For Survival

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If you find yourself in a survival situation in the middle of a pine forest, you actually have a lot of resources available in your natural surroundings.

Most parts of the pine tree have some sort of survival use including the bark, sticky resin, and wood which is a good fire starter.

Resin is a liquid which is stored in the outer cells of pine tree's branches and trunk. When a tree is cut or when a branch is cut off, resin oozes out and clogs the broken area similar to the way blood clots in wounds. Resin is normally red and clear. It starts off in a highly viscous state, and then as the damaged area heals, the resin gets harder.

How to Identify Pine Trees and Growth Habits

There are many different species of pine trees. They generally prefer open and sunny terrain for optimal growth. They are found abundantly throughout North America, Central America, Europe, parts of North Africa, in the Caribbean region, and in Asia.

Pine trees grow in an inverted cone-shaped, and can be referred to as evergreen coniferous resinous trees. They rarely grow as shrubs, and grow between nine and a half feet on the smaller side to about 260 feet on the tall side.

They can also be recognized by their bundles of needle like leaves which grow in clusters, as opposed to having single needles emerging from the branch. If the needles emerged singly from a branch, the tree is more likely to be a spruce or a fir instead of a pine.

Pine bark is usually reddish brown in color and grows in a rectangular scale like pattern around the trunk of the tree. The bark of most pine trees is thick with square scales. Some species have flaky bark that you can easily pick off with your fingers.

Most pine branches are produced in a very tight spiral appearance like a ring of branches arising from

the same point. The new spring shoots are sometimes called candles, because they are covered in the brown or whitish bud scales and point upward at first, then later on turn green and spread outward.

Pine trees are long-lived, typically reaching ages of 100 years old to over a thousand years old. For example, one of the oldest living trees, now cut down, was dated at over 4900 years old. The age of the tree, which was located in the White Mountains of California, was obtained by counting the tree rings.

Pines have four types of leaves.

- Seed leaves: Are located on seedlings.
- Juvenile leaves: Which follow immediately on seedlings and young plants. They are green or blue green in color, and arrange spirally on the shoot. These are produced for the first 6 months to 5 years.
- Scale leaves: Similar to bud scales, small brown, and arrange spirally like the juvenile leaves.
- Needles: These are the adult leaves which are green, bundled, and clusters. The needles persist from one and a half - 40 years, depending on the species. If one shoot is damaged, the needle fascicles just below the damaged area will generate a bud which can then replace the lost pine needles.

Most pine trees have both male and female cones on the same tree. The male cones are usually smaller than the female cones and are only present for a short period, usually in the spring to the autumn, and fall as soon as they have shed their pollen.

The female cones take 1.5-3 years to mature after pollination, with actual fertilization delayed by 1 year. At maturity the female cones are from 3 to 12 inches long depending upon variety. Each cone has numerous spirally arranged scales with two seeds on each fertile scale. The scales at the base and the tip of the cones are small and sterile, with no seeds.

Pin tree seeds are usually small, winged, and dispensed by the wind. Others are larger and have only a vestigial wing. These are usually dispersed by birds. At maturity, the female cones usually open to release the seeds. In some other species, they are only released when birds break open the cones. In others, the seeds are stored in closed cones for many years until the environmental cue triggers the cones to open then releasing the seeds.

The most common way that pine cone seeds are spread is by forest fires. The cone is is kept closed by a coating of resin. When there is a forest fire the heat melts the resin off the cones and the seeds are scattered by the hot winds of the forest fire.

Pine trees grow well in acid soils, but most require good soil drainage, preferring sandy soils. Some pine trees will tolerate poorly drained wet soils. A few species of pines are able to sprout after forest fires, and actually need the help of fire to regenerate their populations.

These species slowly decline under fire suppression regimes. Some species have adapted to extreme conditions imposed by elevation and latitude. While other pines are particularly well adapted to growth in hot, dry, and semi desert climates.

The Many Uses of Pine Trees

Pines are valued worldwide for their timber and wood pulp. In temperate and tropical regions, they

are fast-growing softwoods that grow in relatively dense stands where their acidic, decaying needles inhibit sprouting of competing hardwoods.

Commercial pines are grown in plantations for timber that is denser, more resinous, and therefore more durable than spruce. Pine wood is widely used in high valued carpentry items such as furniture, window frames, paneling, floors, and roofing.

The resin of some species is an important source of turpentine. Many pine species make attractive ornamental plantings for parks and larger gardens with a variety of dwarf pines being suitable for smaller spaces.

Pines are also commercially grown and harvested for Christmas trees. Pine cones, the largest and the most durable of all conifer cones, are craft favorites. Pine needles are also used for making decorative articles like baskets, trays, and pots. Pine needle handicrafts are made in the US, Canada, Mexico Nicaragua, and India.

Because Pines have no insect or decay resistant qualities after logging, they are generally recommended for construction as indoor use only. This wood, when left outside can be expected to last no more than 12 to 18 months depending on the local climate.

For food - some species have large seeds called pine nuts that are harvested and sold for cooking and baking. The soft, moist, white inner bark found clinging to the woody outer bark is edible and very high in vitamins A & C. It can be eaten raw and slices as a snack or dried and ground up into a powder to be used as a thickener in stews, soups, and other foods such as a bark bread.

Survival Uses of Pine Resin

An important use of pine tree resin in a survival setting is to make a torch. The following are the instructions on how to make a pine tree resin torch.

- Choose a thick green branch pole for the base of the torch.
- Cut the branch to create a torch head that is several inches wide.
- Use your knife or saw to remove the branches from the torch pole.
- To create a receptacle for the resin split the head of the torch pole. Create at least two deep cuts in a crossed configuration.
- To make the split, use a saw, a hatchet, or an improvised wedge with one sharp-edged rock and another rock as a hammer to pound it in.
- To hold the splits open, place a small rock at the bottom of the splits. This will form a natural holder for the resin.
- To locate pine resin on pine trees, look for knots and gouges on the outer bark.
- To collect resin, scrape it off the tree with a stick.
- Press resin in the gaps of the slits on the torch head. Continue to fill the space in the splits with resin until the torch head is full.
- Collect extra resin and place it on a flat rock or tin can if one is available. This can be used to refill your torch for future use.
- Light the torch when you need it.

If you are going to use the torch in a fixed location, you will have to dig a whole about 1 foot deep and stack rocks around it to keep the torch in place. You must clear the area of all debris before lighting the torch.

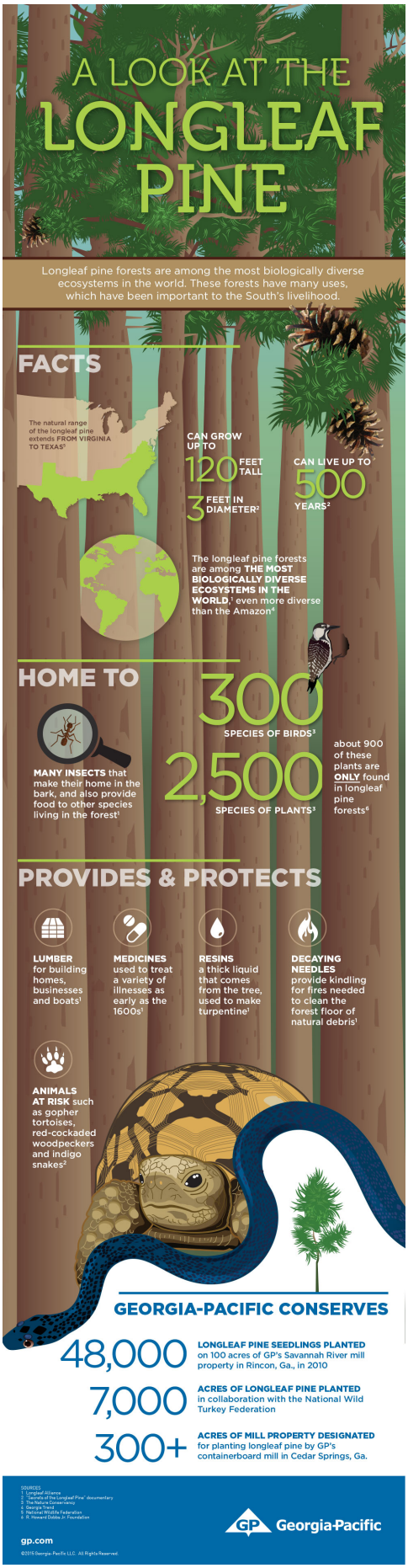
If you have a tin can to be used for the pine tree resin holder, this is a lot safer then using a torch pole with splits at the top to hold the resin. If you are using a torch with splits on the top, there is a chance of flaming pieces resin to falling out of the torch and starting a ground fire. If you are using a tin can mounted to the top of the torch, you will not have this problem, or dripping flaming resin falling to the ground and starting unwanted fires.

Heat and light: Pine resin can be used to make a Lamp. Look for a stone with a depression. Next you will need a can, a clam shell or anything else that can be filled with resin. For a wick, use some twisted cloth or a piece of string. Fill the depression with the resin, lay the wick on top, and ignite the wick. The wick material will ignite the resin which will burn like a candle. Add more resin to maintain the flame.

To use pine resin as a heat source, get a metal container, like a drinking can, and punch holes in its side. Place this metal container over the ignited resin. The metal will absorb the heat and conduct it to the surrounding area. This will not heat a large area, but you can get enough heat to warm your hands and your feet.

Pine tree resin is very flammable and can be used as a fire starter. The pine tree knot can be used as a fire starter because of the high quantity of resin in it. If you are using green or wet wood. The tree knot will burn with a high heat and flame to help dry out the wood and help the green wood to burn better.

Another way you can use pine resin to start a fire in damp conditions is to look for some hardened pine resin and some pine sticks. You will see the streaks of resin when you split the pine sticks. Lay some dried pine needles on the resin. Use magnesium shavings and a flint bar to make sparks to ignite the resin. Another way is to use a Ferro rod to ignite the resin and dry pine needles. When you ignite the resin, it will burn long enough to dry the pine needles. Next, you can add small pieces of the pine sticks, which will burn even if somewhat damp because of the resin. Once you have a sizable flame going, you can start drying out other wood.


A LOOK AT THE
LONGLEAF PINE
Longleaf pine forests are among the most biologically diverse ecosystems in the world. These forests have many uses, which have been important to the South's livelihood.
FACTS
The natural range of the longleaf pine extends FROM VIRGINIA TO TEXAS[2]
CAN GROW UP TO
120 FEET TALL
3 FEET IN DIAMETER[2]
CAN LIVE UP TO
500 YEARS[2]
The longleaf pine forests are among THE MOST BIOLOGICALLY DIVERSE ECOSYSTEMS IN THE WORLD,[1] even more diverse than the Amazon[4]
HOME TO
300 SPECIES OF BIRDS[3]
2,500 SPECIES OF PLANTS[3]
about 900 of these plants are ONLY found in longleaf pine forests[6]
MANY INSECTS that make their home in the bark, and also provide food to other species living in the forest[1]
PROVIDES & PROTECTS
LUMBER for building homes, businesses and boats[1]
MEDICINES used to treat a variety of illnesses as early as the 1600s[1]
RESINS a thick liquid that comes from the tree, used to make turpentine[1]
DECAYING NEEDLES provide kindling for fires needed to clean the forest floor of natural debris[1]
ANIMALS AT RISK such as gopher tortoises, red-cockaded woodpeckers and indigo snakes[2]
GEORGIA-PACIFIC CONSERVES
48,000 LONGLEAF PINE SEEDLINGS PLANTED on 100 acres of GP's Savannah River mill property in Rincon, Ga., in 2010
7,000 ACRES OF LONGLEAF PINE PLANTED in collaboration with the National Wild Turkey Federation
300+ ACRES OF MILL PROPERTY DESIGNATED for planting longleaf pine by GP's containerboard mill in Cedar Springs, Ga.
SOURCES
1 Longleaf Alliance
2 "Secrets of the Longleaf Pine" documentary
3 The Nature Conservancy
4 Georgia Trend
5 National Wildlife Federation
6 R. Howard Dobbs Jr. Foundation
Georgia-Pacific
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How to Use Them for First Aid

Pine resin can either be chewed on or made into a beverage by mixing with water. It was known to be very effective in treating stomach ulcers and rheumatoid arthritis. Another medical use of the pine tree is to boil the pine needles to make a tea. This tea has 5 times more vitamin A and C than oranges.

Some also claim that pine resin has healing and antibacterial properties. Use the resin to treat burns, abscesses, and blisters. Like so many “old world”, non-pharmaceutical cures, modern medical experts have refused to verify the medical benefits of pine resin.

When you're outdoors camping or in a survival situation, cuts and other wounds are bound to happen. Pine resin can be applied directly over the wound to stem the blood flow almost at once. The resin will also inhibit the growth and spread of bacteria because of its sticky nature, which will deny bacteria the moisture it needs to survive. Leave the resin in place until it dries out and then peel it off. The resin will close up the wound the same way stitching it up would. You may reapply resin as needed.

How to Make Pine Pitch Glue

- Collect the resin from the pine tree. (Refer to the section on how to obtain the resin from a tree).
- Melt the resin. If it ignites, blow out the flame, and move the container so the heat is lessened. Try not to overheat the resin, as the compounds are destroyed the longer they are subjected to heat.
- Add one part hardwood charcoal powder. This helps temper the resin and reduces its stickiness.
- Add one part filler material. This can be ground plant material crushed to a fine powder or animal scat or droppings dried and ground up. In a pinch you may also substitute sawdust, bone dust, or animal hair. The filling material help strengthen the glue compound.
- If you wish to make the glue more flexible so it can be easily worked, add one part fat, tallow, or beeswax to the mixture.
- Mix thoroughly.
- To help apply the liquid pitch, find a short green stick and repeatedly strike one end of the green stick on a hard surface to create bristles in the wood. This will make a nice, but crude paint brush to apply the liquid pitch. Another way to make a brush is simply chew on one end of the green stick.
- After the glue dries it will resemble hardened glass unless you choose to add beeswax or fat in which case it will be more elastic.

How to save the extra pine pitch glue

- Dried pine pitch glue can be reheated to converted back to its liquid state.
- Dip a stick into the mixture and remove, allowing the glob of glue to harden on the stick.
- Re-dip the stick to add additional layers of glue.
- As the resin glue cools you may wish to roll it between your hands to compress and shape it.
- The finished pine pitch glue can then be carried with you and reheated when needed.

Pine pitch glue has thousands of uses in survival situations. Here are just a few that you should keep in mind:

With the pitch glue, it is possible to make or repair the following items:

- Form fish hooks
- Repair holes in water containers and food containers.
- Repair the soles of your shoes
- Apply feathers to a homemade arrows
- Harden the end of hunting spears to keep them from splintering.
- Apply to the material you want to make waterproof such as the lower half of your hiking boots.
- In boats to prevent leaks.
- When using pitch to repair holes in canvas or heavy nylon, lay the material flat where the rip or the seam is exposed. Once the pitch is heated to a liquid form, apply using your homemade paint brush.

How to Collect Tree Resin

When you're collecting your pine tree resin be conservation minded. First, look for damaged and fallen limbs before you purposely cut into a pine tree to harvest the resin. If you have to damage the tree do it in a small area on one side of the tree only. Only take as much as you need, because you must allow some resin to remain on the tree so it can protect the cut and to prevent boring insects from destroying the tree.

To begin with and to get the best results, find a mature, live, good size, and tightly barked pine tree for collecting the pine resin. Pine trees are evergreens, thus resin will run faster in the early spring, early fall, and in the warm weather.

- Using a machete, or similar tool, hack away the bark from the wood about three feet from the ground to create a 10 inch wide by 6 inch high cleared area. It is in this area that you will score the tree to reach the resin. Do not cut all the way around the tree.
- Place a bucket flat against the bottom of the cleared area and tie it tightly against the tree so it remains in place. The bucket will need to fit tightly against the tree to collect resin as it is oozing from the tree.
- If the bucket is not flexible enough to conform to the shape of the tree, use a piece of metal flashing to form a funnel leading into the bucket.
- Next hack"V"-shaped notches into the cleared area above the bucket.
- The bottom of the scored "V" should point towards the bucket.
- Leave the bucket attached to the tree to collect the resin as it drains from the tree wound. It may take days for the resin to ooze and collect in the bucket.
- If the resin flow decreases cut additional fresh "V" notches in the tree.
- When you occasionally check the bucket, remove any debris that may have fallen into the container.
- Now that you have enough resin collected, it is time to use it for your survival needs.
- When done correctly, trees can be tapped for well over 20 years and are then used for other purposes including timber since the wood is not damaged during the tapping process.

Pine trees most suitable for tapping include:

- Southern Yellow Pine
- Black Pine
- Loblolly Pine

- Improved Slash Pine

In conclusion pine trees are very useful and valuable in a survival scenario. All of the parts of pine trees can be used from the bark, branches and the tree trunk, knots, needles, and mostly important the resin. Pine trees can be found throughout the world. If you find yourself lost or in dire circumstances the pine tree will be there to help you survive.