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THE LONG-LEAF PINE.

Especially Adapted to Sandy Soil---Many Enemies Destroy the Young Trees.

The long-leaf pine, which is the principal forest growth in the region about Pinehurst, is an object of especial interest to our Nothern guests who seek relief and cure for weak or impaired respiratory organs. The odor of the pines of every variety is a well-known specific for the cure of diseases of the throat and lungs, but eminent authority declares the long-leaf pine to be the greatest healing agent among them. The following description of the growth of this tree is taken from the report of W. W. Ashe, of the State Geological Survey:

The long-leaf pine seems to be especially adapted by the form of its root system for growing on sandy soil. By the end of its first year's growth its root system which has grown rapidly, consists of a large tap-root which extends six to ten inches deep in the sand, and from the bottom of it branches out the smaller roots which draw nourishment from the soil. It is this deep-seated root system sent thus early far down into the soil which enables this pine to grow on the sand barrens, and it is doubtless because the roots of the loblolly are small and divide for the first year or two into a great many small divisions, lying near the surface, that it does not get sufficient moisture and nourishment from the dry surface sand to enable it to thrive on the sand barrens before this land has been cultivated. This long tap-root of the long-leaf pine frequently goes through the sand into the loam soil and secures for the tree a firm anchorage against storms and enables it to draw its nourishment from a more fertile soil.

The stem parts of the long-leaf pine are as peculiarly adapted for growing on a sand soil as the root system is. Instead of the stem's branching or growing the first year it only puts out a great number of very long thick leaves, exceedingly close to the ground. These leaves spread out and help to shade the ground close to the plant and keep it moist. At the end of the first season's growth the single (terminal) bud is not over an inch and a half above the earth and the bud itself is nearly an inch long, so that it can be said that the stem of the seedling does not grow any in height during the first year, all the energy of the plant being diverted to increasing the root and producing the great tuft of long deep green leaves which spread out immediately below the bud and make the plant resemble more a tuft of some marvelous kind of grass than a young tree. Some of the lowest leaves usually die during the first year; most of them remain on, however, for two seasons.

During the second and third year the growth of the stem in height is slight, though it increases in thickness, but after that, at least in a forest, its growth is wonderful. Frequently in a thick wood where a young tree has been allowed to grow, in eight or nine years after height-growth has begun, it will have reached a height of eighteen or twenty feet and a diameter of no more than three or four inches, and will have grown each year from only one bud, the terminal bud, at the end of the woody axis, there being no branches, and no sign of any having been formed. For leaves there will be only a single, broom-like bunch terminating the slender stem. The rapidity with which this stem is raised and the fewness of its branches until the natural height of the tree is reached makes one of the fine qualities of the timber. It gives long stocks which have no knots in them, even small ones, to produce any ununiformity of quality, or to make weak places on the interior of an apparently perfect piece of timber.

This feature which is the cause of so fine a quality of wood is a great drawback to the development of the young trees. This single terminal bud is a very large and complicated structure, and when once destroyed in any way no other bud is usually formed by which the growth of the young seedling can be continued. It is true of most conifers, (i. e., pines, firs, cypress and cedars) that they do not readily form buds and that they rarely sprout from the stump and are very difficult to reproduce from cuttings, etc., but with the long-leaf pine such buds are formed and sprouts developed even more rarely than with most other conifers.

The long-leaf pine has a severer struggle for existence than any other of our forest trees for the reason that in all stages of its reproduction and growth it is more severely and continuously attacked by a greater variety of enemies than any other. Besides the natural drawbacks to its development from the peculiar manner of forming several of its parts, and the fact that these parts when destroyed are not replaced, its large and sweet seed are eaten in large quantities by fowl of various kinds, rats, squirrels and by swine, which prefer them to all other kinds of mast and, when there is enough long-leaf pine mast, become very fat on it.

As far as has been observed, young long-leaf pines are attacked by no injurious beetles or bark-borers or by any fungi sufficiently to injure them.

The mature pines, however, have in past years several times been attacked by bark beetles in such numbers as to destroy the pine over large areas. A few trees which have been killed from their attacks can be seen at any time around the edges of districts which have been recently lumbered.

If the destruction by swine ceased with eating mast there would still be sufficient seed left to reproduce some parts of the forests, as the mature trees are gradually thinned out, for one-year-old seedlings are common after a heavy mast. No sooner, however has the young pine gotten a foot high and its root an inch in diameter than the hog attacks it, this time eating the roots, which, until two inches in diameter, are very tender, juicy, pleasantly flavored and free of resinous matter. In the loose, sandy soil the piney woods hog, or "rooter," finds little difficulty in following and devouring these tender roots to their smallest ends. Many small trees are destroyed in this way. And cattle, furthermore, are said to bite off frequently the tops of the small plants, and with them the terminal buds, in the early spring. This is doubtless done while grazing, more accidentally than otherwise.

Fires often destroy all the young pines that escape the hogs. They kill the small pines by burning the highly inflammable bracts around the bud and so stop its growth, or in high grass frequently burn all the leaves. Larger trees, even until they are three or four inches through, are easily killed in spring, when the sap is rising and the outer layer of wood is growing rapidly, by a hot fire which will burn the thin exfoliated layers of bark all over the trunk. The loblolly pine is less injured by fire because its bark is thicker and so offers more protection to the growing wood; the bark, too, lying closer to the wood in firmly appressed layers, does not so easily take fire.

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Straightened Things Out.

A little while ago lawyer Hackett of Somerville purchased some land over which there had been a lawsuit for years, until the parties had spent half a dozen times what the land was worth. Hackett knew all about it. Some of the people wondered why he wanted to get hold of property with such an incubus of uncertainty upon it. Others thought that perhaps he wanted some legal knitting work and would pitch in red-hot to fight that line-fence question on his own hook.

That's what the owner of the adjoining land thought. So he braced himself for trouble when he saw Hackett coming across the fields one day.

Said Hackett, "What's your claim here, anyway, as to the fence?"

"I insist," replied his neighbor, "that your fence is over on my land two feet at one end and one foot at least at the other end."

"Well," replied Hackett, "you go ahead just as quick as you can and set your fence over. At the end where you say that I encroach on you two feet set the fence onto my land four feet. At the other end push it onto my land two feet."

"But," persisted the neighbor, "that's twice what I claim."

"I don't care about that," said Hackett. "There's been fight enough over this land. I want you to take enough so you are perfectly satisfied you have got your rights, and then we can get along all pleasantly. Go ahead and help yourself."

The man paused abashed. He had been ready to commence the old struggle tooth and nail. But the move of the new neighbor stunned him. Yet he wasn't to be outdone in generosity. He looked at Hackett.

"Squire," said he, "that fence ain't going to be moved an inch. I don't want the blamed old land. There warn't nothing in the fight but the principle of the thing."—*Lewiston Journal.*