Pinus strobus L., the eastern white pine

Posted by markf12 - 10/09/2007 11:25am

Region: Northeastern US, down to the northern edge of Georgia in the Appalachian Mountains.

Height and age (average to extreme): Mature trees easily reach 70-90 feet. On good sites, the oldest trees can get to 120-150 feet. There is a 178 foot champion tree recorded in North Carolina, and reports of taller trees. Undamaged trees on a good site easily reach 200 years in age, and the oldest may possibly exceed 500 years.

Diameter (average to extreme): Mature climbable canopy trees are more than a foot in diameter, really big ones can exceed 4 feet.

Shape: (pole to a spreading form): Shape is a pole with nearly horizontal branches, often with several branches emerging from about the same level, until the plant nears the maximum height for a given site. Then, like many other trees of the same general form, the top spreads into an umbrella-like form with more nearly vertical branches.

1st pitch height: (average to extreme): A big open-grown tree in a park will have branches nearly to the ground, but in a typical forest situation (where white pines emerge from a deciduous canopy) the first pitch will be 30-70 feet up, and higher if the surrounding trees are close in and tall. Eastern white pines are more tolerant of shade than most other pines, so they do not self-prune quite as high in a forest stand.

Common hazards:
- Pick that first pitch carefully; the lowest branches on a big white pine are dead, and it may take some work to throw (or slingshot) through them to get to a big sound branch. Unless you have a REALLY large branch, tie in pretty close to the trunk - white pine wood is not noted for strength, and the branch-to-trunk junctions can be pretty weak on a small branch. Opportunities for limb walking on a white pine are limited. As with any tree, watch out for fungi, signs of stress on the ground, cracks, and so forth.
- In the crown of a mature tree with a spreading crown and narrow branching angles, watch out for stuck hardware. Climb lightly and carefully at the top, since the bark up there (and on any young branch) is quite thin.
- Expect to get pine pitch on yourself and your gear. Rubbing alcohol is nice for getting pitch off of hands and metal hardware, but probably shouldn't be used on rope and harness. I just keep climbing on my rope and it wears off eventually. A really pitchy tree, with streaks all over the bark and branches, is probably stressed or diseased (the lesions of white pine blister rust often weep pitch). The most considerate thing to do with such trees is probably to stay out of them.

Notable features (why you like it):
- The best of them are quite a friendly climb, for a big tree. Once you get past that first or second pitch, the rest of the climb is often pretty straightforward, with branches conveniently located. Often the branches are so close together at the top that an "alternate lanyard" climb is the simplest way to advance.
- If you climb trees for the view, this is the one to pick over most of the NE US. Over much of its range, the eastern white pine is the tallest tree around; it commonly exists in forests as a "canopy emergent" - sticking up over the crowns of the surrounding trees, where it can be seen from a couple miles away. A good breeze is enjoyable up there, and you have the reassurance of being in the crown of a tree that's survived a lot of wind storms during its 2-4 century life. At about 50-70 feet in most forests, the view suddenly opens out and the ground, with all of its worries, goes away for a while.

Sound during breeze (example-high hissing of needles, flapping large leaves): A soft whisper. The needles (in bundles of 5) are thin and flexible, and they make a correspondingly soft sound. To paraphrase Teddy Roosevelt: white pines talk softly and are a big stick.

Interesting information: Historically the most valued timber tree in the eastern US. Most stands were "high graded" (big stems removed) of their white pine in the late 19th and early 20th centuries, and the trunks were valued for ship masts and general construction. The remaining really old stands are rare and treasured. Fortunately, white pine grows pretty fast on good sites, so some younger trees are coming into their own as climbers. Dense stands of only white pine are not unheard of, but they are not typical; most trees grow as scattered individuals in stands dominated by other species.

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Re:Pinus strobus L., the eastern white pine

Posted by moss - 10/09/2007 03:35pm

These are the tallest available trees in my area. Healthy trees in the woods have surprisingly little pitch.

The 178 footer in North Carolina was over 200 feet but had the top blown out during a hurricane.

As Mark mentioned the most challenging and exposed part of climbing a white pine in the forest is from the ground to the first branch which is usually a good distance and you're often working your way through an obstacle course of dead branches. I don't break them out for a variety of reasons unless they're very rotten and I want to protect a climber who's following. One reason being that if you break off more firm dead branches you end up creating sharp spears points protruding from the trunk. I hate getting stabbed in the ribs while I'm climbing or descending. Once you're in the crown it's much smoother sailing.

To add to Mark's comment about the thinness of the bark in new growth at the top: the branches break very easily near the top, don't tie into small stuff, put your lanyard around the spar if you can when you're nearer the top.
-moss

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Re:Pinus strobus L., the eastern white pine

Posted by treeman - 10/10/2007 09:43pm

Notable features: The needles are very soft to the touch. They are not sharp. The tree has a distinct sweet odor on hot days. You can limit gumming of hair and rope by using cambium savers as sap tends to puddle in crotches. The sap seems to solidify somewhat on freezing days too.

Hazards: Wet snow and ice loading snap branches easily. Do not go near these trees during these conditions.

Interesting info: strobus is Latin for "whorl". The branches grow in clusters or groups in a whorl around the trunk. It makes for easy rope settings and lots of choices for rope placement.

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Re:Pinus strobus L., the eastern white pine

Posted by nickfromwi - 10/11/2007 12:01pm

I've climbed a lot of these trees in WI, ME, and NJ. The point has been made several times- but I'd like to re-reiterate...if ever there was a tree where a cambium saver should be used, this is it!

I also used to work on a ropes course in ME and most of the trees in the forest where White Pine. Sap flowed profusely from the points where hardware entered the tree.

I found it easy to remember the name of this tree because WHITE has 5 letters in it, and there are 5 needles per fascicle (your vocab word for the day).

I haven't seen a white pine for years now!

love
nick

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Re:Pinus strobus L., the eastern white pine

Posted by moray - 10/12/2007 12:37pm

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nickfromwi wrote:
I've climbed a lot of these trees in WI, ME, and NJ. The point has been made several times- but I'd like to re-reiterate...if ever there was a tree where a cambium saver should be used, this is it!

As others have mentioned, pitch is a huge issue with these trees, so much so that I almost never enter one without installing a cambium saver first. But almost inevitably I will still get pitch on my rope and split tail. I always clean it off right away with denatured alcohol or acetone, and have done this hundreds of times with no apparent effect on the rope other than to quickly render it clean and usable.

I wish the rope manufacturers would come right out and say isopropanol, ethanol, and acetone are harmless to nylon and polyester. If you buy a can of one of these at the hardware store, it will contain a small amount of other compounds, mostly small related molecules, and it is at least conceivable that one of those could be damaging to your rope. That is

probably the only real risk of using one of these to clean the pitch from your rope. But if you don't clean it off, you are assuming that none of the many components of pitch are damaging to your rope...

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