

A Mast for the Philadelphia

By Carl B. Russell, Bethel Gilead, VT.

During the winter of 1989, I was walking in our woods with my friend David Thayer. He had been working in the woods with me, from time to time, and I wanted to show him a stand of particularly nice white pine trees.

This forest stand is located in a small valley with a stream at the bottom. As Adder Brook trickles through its course of obstacles, it fills the stand with a gentle poetic babble. There are a few small openings with apple trees and fiddlehead ferns, as well as medium height hardwood trees growing throughout. The white pines spread their crowns over the rest of the trees, to a height of 100 feet above the ground. They catch the wind and whisper their part in the woodland symphony, along with the songs of small birds and the rhythm of the brook.

As a logger I have admired these exquisite giant white pines. I respect them and their habitat as examples of nature's beauty. It is a place where the sights and sounds of modern timber harvesting would not be welcome. Therefore, I have tried to reserve harvest of these trees for personal, or particularly valuable, or interesting uses.

As Dave and I walked through the stand, faces to the sky, stopping and turning at nearly every tree, David said, "You know, some of these trees would probably make perfect ships masts!"

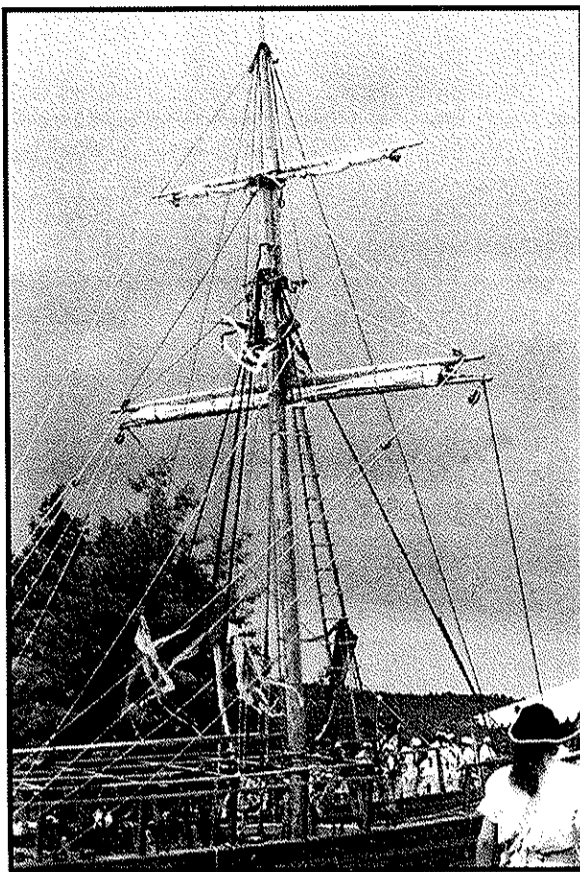
The next day I borrowed an old copy of *Wooden Boat Magazine* from Dave, and started making calls to mast and spar builders. The first call led me to The Lake Champlain Maritime Museum. Art Cohn, the director, told me of their newest project. Using blue prints procured from the Smithsonian Institute, they were going to reconstruct a full-size replica of a revolutionary gun boat named the Philadelphia.

Although most of the boat had been made from white oak, a white pine tree had been used for the mast. The museum was just beginning to assemble the needed materials, and they would definitely need a tree for the mast. Then I learned the story of the original Philadelphia.

During the summer of 1776, a portion of the British Navy was on its way up the St. Lawrence and Richelieu Rivers, in Quebec, Canada. They were to sail into Lake Champlain, then on to Fort Ticonderoga in New York. Their intent was to take that establishment by battle, and proceed to whip the revolutionary Americans back into submission.

Having received this information, Benedict Arnold, at that time a reputable revolutionary, arranged to have a fleet of vessels built to meet the British on Lake Champlain. At the town that became Whitehall, New York, he commissioned the construction of a small flotilla of boats. Six of these ships were to be Gondolas, fifty-five foot long, flat-bottomed boats, built mostly of white oak. One of these was the Philadelphia. It was designed to carry as many as forty-five men, a nine-pound cannon on each side, a twelve pounder on the bow, and as many as eight swivel guns. The main mission for this craft was to put men and fire-power out on the lake.

The British Navy stopped along the Richelieu River to build a few additional boats themselves. On October 11, 1776, the fledgling American Navy engaged in battle against the British fleet in a harbor by Valcour Island, on the New York side of Lake Champlain. Without a doubt,



Official launching of the Philadelphia II, 1991

the British Navy was superior, and victory was theirs by the end of the afternoon.

The Revolutionaries, having lost at least two boats, one of which was the Philadelphia, had to sneak away under the cover of fog and darkness. The remaining fleet was scuttled to keep the boats from the British.

The construction of additional vessels had put the British off schedule by almost six months. They decided that it was too late in the year to lay siege against Fort Ticonderoga, so retreated to Montreal, where they spent the winter in preparation for another attempt the following year. When they finally attacked the fort, the British were victorious. However, by the time they proceeded on to Saratoga, the Revolutionary troops that had assembled during the winter were enough to thwart them.

This was one of those instances where the battle lost, perhaps actually won the war. The Philadelphia had gone down in battle, America's first Navy was scuttled, but the delay created by the contest on Lake Champlain may have been one of the key factors in the eventual success of the American Revolutionary forces.

After the Philadelphia sank, it sat at the bottom of the lake until 1935. A crew led by Colonel Lorenzo Haglund found it and raised it to the surface. Certain factors had combined to preserve the boat in good enough condition that it could be retrieved. Eventually it ended up as a display at the Smithsonian Institute, where in-depth blueprints were drawn, and a scale model created. It was from these blueprints that we were able to get the specifications for the mast, top mast, yards, and booms.

One of the aspects of the project that interested me, was that Art and his crew were going to reconstruct the boat, in part, as a display of historic boat building methods. If one of our trees would fulfill the specifications, I offered to harvest it using traditional methods and equipment.

The appropriate mast tree had to be able to yield a log 45 feet in length. The tree had to be quite straight with a diameter greater than 18 inches at the stump. It also had to be 14 inches in diameter at a height of 35 feet. The finished mast would taper down from the base, then flare out again at 35 feet, where the boom, topmast, and rigging would be attached. There were some fine examples in the size class that was needed, and we found a tree that would work.

Although both David and I had been logging with our work horses, as well as being predisposed to the use of hand tools, we had a lot of preparation to do in order to make the harvest a successful event. We needed to find a good two man cross-cut saw. We needed to find out how to sharpen it, and care for it, and we needed to practice using it.

David Hyde, a farmer whom we helped during hay time, just happened to have the last saw his father had bought. It was over the shed, wrapped in an oily cloth. It had hardly been used. He also had a sharpening kit.

Next, we went to see Walt Bryan, who along with his step-brother, Frank Lambert, had a lot of experience with "one of those cussed Misery Whips". Walt and Frank started working in the woods for their father when they were eleven or twelve, and had cut a lot of timber before chainsaws became commonplace. They answered a lot of questions as to the best methods of felling and bucking timber with a cross-cut saw. Frank, having become an expert filer, helped us with the fine points of sharpening and maintenance.

We took the saw into the woods with us. Setting our chainsaws down, we used it to cut part of a load of hemlock logs. Although we didn't set any records, we did get fairly competent at felling and cutting logs. We used it enough to dull it. We sharpened it enough times to recognize, by the sawdust, how good of a job we had done. Of course, it's obvious when you're pulling on the saw, just how sharp it is. We also got more practice with our axes, cutting notches for the felling, as well as limbing.

In May we cut the mast tree. We had arranged to stage the harvest while a film crew recorded it, as part of a documentary about the reconstruction project. A day's work in the woods never took so long, as we had to stop, back up, and film everything over again, from different angles.

It was a crystal clear day, perfect for working in the pine stand. As we entered the woods, the pounding of the horses feet, the creak of leather, and the jingle of heel chains was hardly noticeable as nature's melody filled the air around us. I had to use my chainsaw to hurriedly remove a small sapling, as the photographer wasn't interested in filming me using my axe. Thankfully, it only took a few minutes. When we finally started to cut the tree, the thumping of my axe as I cut the notch, and the singing of the saw as we began the felling cut, chimed in nicely with the sounds of the stand.

Modern society often looks back at our predecessors as having been incompetent in comparison to our new improved lifestyle. It seems that the old ways are viewed as "historic", replacing effectiveness with quaintness. What we have learned, and were trying to demonstrate, was that, although they require more time and energy on the part of the operator, the old ways of timber harvesting are in fact effective.

Finally, I told the photographer that the tree was going to fall soon. At this point he inquired as to whether

or not I knew which way the tree was going to go. I imagine that my laughter must have been nearly as loud as the chainsaw had been.

Perhaps it was the concept that old tools made it more difficult to place a felled tree, or just inexperience, but our camera man was quite impressed when we told him that we intended to fell the tree in one very specific spot. He was so impressed that he wanted to go stand near where the top would fall, to film the tree as it descended from the sky. As confident as I wanted to be, I suggested that he stand a little farther away, just to make sure.

We made the last few strokes with the saw and Dave drove the wedges in a little more for security. We stepped back to watch as the mast-to-be began to move slowly toward the bed that we had prepared for it on the forest floor.

I am always touched by the image of the gentle giant as it lost its balance and began to quiver. It leaned, twisted, and finally crashed to the ground that it had worked all its life to stand above. The whole stand reacted for a few moments afterward. As the swaying of the limbs overhead began to cease, and the adjacent trees regained their composure, the death rattle could be heard as the last wind from the falling tree was forced through the nearby underbrush.

The limbs were cleaned from the tree using the axe. There was a small spot of rot at the stump, so it needed to be jump-butted. I measured out the 45 foot log, using an 8 foot long stick marked with rings at two foot intervals. Cutting the log allowed us to really let the saw sing as the camera crew seemed less interested in stopping to refilm since the excitement of the tree falling.

The horses were finally brought in for their part. Although it was a large piece of wood, we had been successful in placing it in such a way as to allow easy access and skidding. Most of the skid was downhill, which also helped out.

When white pine is cut during warm weather, blue stain fungus can infect the sapwood and spoil the log if it is not debarked soon after cutting. The shaping of the mast was not scheduled until the following season, to allow the log to dry out so that most of the shrinkage would have occurred. Using axes and peeling spuds, we peeled off the slimy early season bark.

At the end of the day, all five pieces of timber, mast, top mast, yards, and boom, were laid naked in my neighbors' field. With their bark piled beside them, they looked like skinned animals after slaughter.

I was pleased that we had been able to take a few steps back toward a time when it took a lot more effort, on our part, to take from nature the things that we want. In a way, I hoped that it reflected the respect that I had, and have, for these trees and their kin.

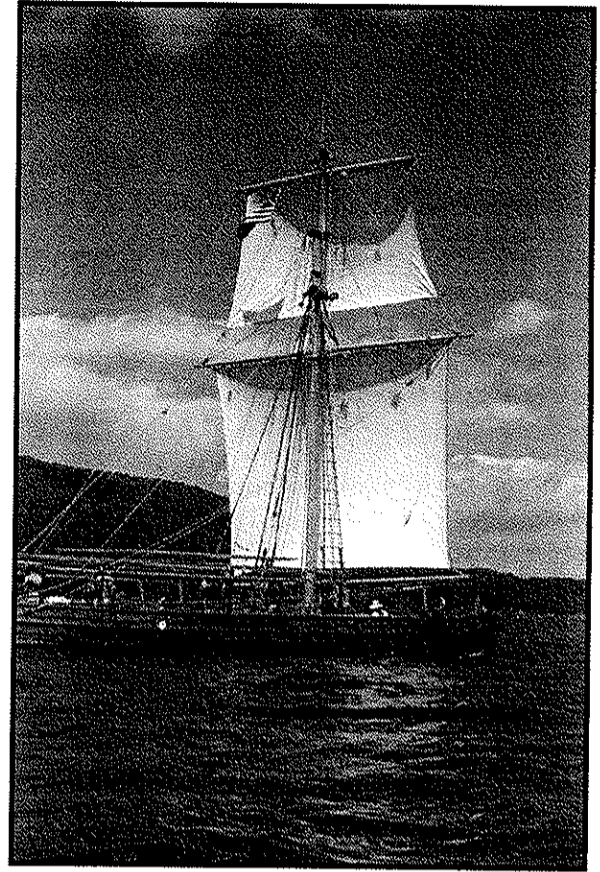
The following year, as the hull of the Philadelphia II began to take shape, I went to the museum to help shape the tree into a mast. The tree could not be used as it was as the mast had to be perfectly round, tapered down to a certain diameter, then flared out again.

The log had to be squared, then eight-sided, sixteen-sided, then thirty-two sided. Finally it would be rounded again, all the while shaping the taper and flare. I didn't have the time to work through the entire process, but I did get the chance to hew off one side and part of another, using my broad axe.

In the fall of 1991, the newly constructed Philadelphia II was launched from Basin Harbor, on Lake Champlain. My wife and I had the esteemed opportunity of accompanying the crew on the maiden voyage. The Philadelphia II, like our historic timber harvesting tools won't break any records for speed or power, but it is as effective for the intended use as it was in 1776.

As the Philadelphia II sails up the lake, as a display of working history, standing in the middle of the deck is a mast of white pine, cut from a tree that stood in a

majestic stand in Bethel Gilead, Vermont. It stands upright again, now draped with the tackle of a sailing ship, playing its part along with the sounds of open water, the creak of taught manilla, and the flutter of canvas. Once again able to catch the wind.



Maiden voyage of the Philadelphia II

Casting Call

By Mary Ann Sherman, Fresno, OH

Gathered at the watering hole
To enjoy a well-earned drink
And maybe swap a few stories,
To see what the others think.

Sure, they could drink other places
But it wouldn't be the same.
They enjoy familiar faces,
'Cause everyone knows your name.

The boss, the snob, the smarty pants,
The gal who can't keep quiet,
The nervous Nell, the beefy one
Who really needs to diet.

There's that feisty little heifer,
Disposition's pretty tart,
Plus a couple of real sweeties
Who were never very smart.

I've laughed so hard at their antics
For lo these many long years.
Talking about my milking cows,
Not the characters in "Cheers".

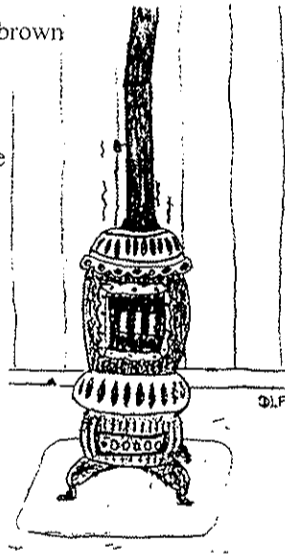
Goin' Modern

By Dennis Fischer

The old woodstove with its dusty crown
and that old stovepipe all streaked with brown
I should just tear the whole thing down
and throw it all away
That cuttin' wood is such a chore
it takes tons o' wood each year and more
an' it causes dust and dirt galore
Who needs it anyway

With gas there is no sweat or toil
the same is said of heating oil
and when winter rages this ol' boy'll
just sit back and relax
I'll read a book 'n puff my pipe
then I'll turn in 'n sleep all night
I won't wonder if the stove's alright
and them is just the facts

Yessir-ee that's what I'll do
we'll be helpin' clean the air up too
You'll be plumb tickled when I'm through
should've done it years ago
I'll buy everything we need from Sears
I haven't been in there for years
Let the neighbors know that we're
GOIN' MODERN ... Let it snow



Hello, Sears and Roebuck? this is Jake
A furnace is HOW MUCH for pete sake?
But Ma'am there must be some mistake
I'm only needin' ONE
Uh huh, Yes Ma'am ... pipes ... and flue ...
It could be HOW MUCH 'fore we're through?
Yes Ma'am I WAS hopin' you'd install it too
Well I'm a son of a gun

Now how was I supposed to know
that it would pick last night to snow
just a few more feet to go
(I know I'm gettin' close)
I found it dear, it's good as new
Yes, I'll soon have it in for you
No, my fingers usually aren't this blue
(It's my feet I miss the most)

Ahh, the old woodstove with its regal crown
and that old stovepipe all trimmed with brown
What a good ol' friend to gather 'round
on a snowy winter's day
That GOIN' MODERN is such a chore
It takes tons o' money each year and more
an' it causes grief and debt galore
Who needs it anyway