



Maine's First Ship

Newsletter



Winter 2017

Special points of interest:

- Annual Meeting
- Become a docent!
- Student-built skiff raffle
- President's Message
- Annual Gala dinner
- Knees arrive—can decking be far behind?
- Ship carpenter needed for summer program

Annual MFS Meeting March 18

Maine's First Ship's Annual Business Meeting is scheduled for Saturday March 18 at 1:30 pm in the Bath Freight Shed, followed by a look at *Virginia's* progress. She is over half-planked, and is eagerly looking at a pile of hackmatack knees to be installed as part of the deck. (See story on page 5.)

Members will also be asked to consider folding the Bath Freight Alli-

ance into MFS. The Freight Shed Alliance has been a valuable and effective partner with MFS for the past several years. The MFS Board has been discussing and finalizing details for the past several months and look forward to the membership's input on this big step. If passed, an ad hoc transition committee will implement the change. Please come with questions and comments.

In addition to voting on the officers — Orman Hines, President; Jeremy Blaiklock, Vice President; Dan Burchstead, Treasurer; and Allison Hepler, Secretary — members will also be asked to approve changes to the organization's By-laws. The proposed changes update the by-laws largely in terms of new committees that have been established since the by-laws were last updated.

Educator carpenter sought for MFS summer program

MFS is looking for a carpenter, preferably with boat-building experience with a passion for educating middle school students in traditional boat building skills. MFS builds educational programs around the construction of *Virginia*, promoting woodworking skills, history, and leadership in middle school students from the Midcoast region.

The successful applicant will work with up to 10 middle school students



to build wooden boat related projects. Additional qualifications include a good rapport with students and excellent communication skills with visi-

tors and volunteers.

The position is approximately 8 hours/day Monday through Friday for 2 one week sessions July 10 through 21. 20-40 hours of preparation time is negotiable. This position pays \$25/hour. MFS is an equal opportunity employer.

Applicants should send a cover letter and resume to Maine's First Ship, P.O. Box 231 Bath,

ME 04530 or email

mfs1@myfairpoint.net.

The deadline for applications is April 7, 2017.

Newsletter produced
courtesy of the
Publicity
Committee:
Roger Barry, Lori Benson,
Allison Hepler



Maine's First Ship: Reconstructing the pinnacle *Virginia*

President's Notes



by Orman Hines

A few warm days are starting to melt that 8 foot high wall of snow between the freight shed and the boat shed. Planking is moving along at a steady pace with at least one fitted on each day. There is much more to the planking process than meets the eye.

Each plank is carefully picked out of the large pile of rough cut planks by the plankmakers RB Omo, Dick Forrest, Roger Barry and crew to determine if it is of the right length, that it has a curve that will fit the one above it, either a smile or a frown as Rob would say.

The shape of the plank above is then transferred to a board and that shape is applied to the new plank, a process called spiling. The width is then marked off on the new plank and cut to shape.

Once cut to shape, the plank is planed to the 1 & 3/4 inch thickness on the 20 inch planer. After the thickness is planed, the top edge is

planed to fit the plank above and then a caulking plane is added onto the top 2/3rds of the edge.

Finally, it is blessed by Jeremy or Rob. Oops! you need to drill out those knots with bark around them and fill them with a plug. The plank is then soaked in the river for a few days or, if it is green, it can be put directly into the steamer for 2 1/2 hours.

Then it's "**All Hands**" to help carry it to the side of the ship and attached with clamps where it is left to dry to shape. Once it has set up we take the plank off, make any needed shape adjustments and add tar to the water tight bulkhead

frame, re-clamp the plank on with wedges and metal boat clamps so that it has a tight fit to the one above.

The plank is then ready to be drilled for the trunnels with a one inch drill bit, and the locust trunnels are driven home with the commander's mallet. Each of the trunnels are then wedged on the outside of the ship and inside. Finishing one of three planks in a row, or strake, is quite an accomplishment taking several days from start to finish, and with twenty something strakes or sixty plus planks we are only at the half way point so far.

Our dedicated crew of *Virginia* volunteers are all feeling more like old ship hands with each day, calluses and all.

John W. Bradford: In Memoriam



Sad news for Maine's First Ship community arrived November 10, news that John Bradford had passed quietly during the night in his Yarmouth home with his wife Dee Dee at his side.

He was a founding member of Maine's First Ship, devoted to public education and reconstructing a replica of *Virginia*. John worked tirelessly to make *Virginia* come to life. As the first director of the vessel committee, he produced the definitive book *VIRGINIA, An In-Context Design of Maine's First Ship* in 2011 which is our main reference for reconstructing of *Virginia*. John was also a very capable participant in the archaeology at the Popham Colony devoting many hours to the careful excavating of artifacts and doing research on the colony and *Virginia* with Dr. Jeffery Brain.

In recent years, John also taught a course at Maine Senior College, entitled "England, France and the Wabanaki: Cultural Chaos in Seventeenth Century Maine."

John leaves a big hole in our hearts as a good friend and devoted member of Maine's First Ship.

Order of First Families of Maine donates to MFS

A representative from the Order of First Families of Maine recently presented MFS with a generous donation of \$750. According to the organization's website, OFFME, as the organization is known, "honors those hardy and enterprising early ancestors who concentrated their efforts, labor, and skills in building the enduring greatness of the State of Maine."

Founded in 2003 by The Reverend Robert Todd Giffin, Founder, who served as President General from 2003-2007, OFFME currently has over 145 members.

Jeffrey LaRochelle presented the check to MFS President Orman Hines this past October. "We are very grateful for this

donation," said Hines, especially since MFS also recognizes the efforts of Maine's first European settlers.

"Building *Virginia* is a testament to the colonists' efforts to establish a foothold in the New World."

Application for membership in the Order is open to men and women 18 years of age or older who are "lineal descendants of an ancestor who was a resident of, owned land in, or was the chief proprietor of a business between 1604 and 1652 within the boundaries of present day Maine."

The donation to MFS is part of the Order's mission to be involved in "charitable and educational efforts and to support patriotic, genealogical, literary, historical and social activities that further the purposes and objec-



tives of this Order within our country."

For more information, see the organization's website, <http://offme.homestead.com>.

Docent training May 13

Join other volunteers interested in talking to visitors about *Virginia* and Maine's First Ship. Docents are critical to the success of MFS. Greeting visitors from close by and from all over the world is exciting and fulfilling. Don't worry if you feel you don't know enough about the history and archeology, or the ship *Virginia*. There are plenty of materials to answer any question. Come for a training, or for some a refresher, on Saturday May 13 at 1 pm at the Bath Freight Shed. You'll see additions to the exhibit and an update on progress of the ship *Virginia*. All are welcome! Spend part of your summer amidst the smell of freshly fashioned planks and the aura of the past all around you.



Own a skiff built by summer program students



MFS is raffling off one of the 12' skiffs made by students this past summer. Tickets for the Bevin's skiff, designed by the Alexandria Seaport Foundation are \$5 each or 5 tickets for \$20. The drawing will be held at the Annual Gala Dinner in May.

The overall length of the skiff is 11'8", with a 4'6" beam, a maximum capacity of 450 pounds, and made of marine grade plywood.



Summer student boatbuilding returns to MFS

Maine's First Ship has announced its annual summer student boatbuilding program, which is open to middle school students. The program is designed to offer students a chance to develop and hone woodworking skills related to wooden boatbuilding, including working on *Virginia* alongside MFS's volunteer shipwrights.

Camp is held in the Bath Freight Shed in downtown Bath. This year, there are two one-week summer sessions being offered: Session I is July 10-14; Session II is July 17-21. Each session is Monday-Friday 8 am until 4 pm.



Volunteers are also working with the students on the history of *Virginia* and the colony who built her. "Virginia's connection to our own maritime history excites the students," says Merry Chapin, board member and member of the MFS Education Committee. "They are also excited to be working near *Virginia*."

This is the eighth year of MFS's summer program for middle school aged students.

There is no cost to the program, and interested students and parents should contact Maine's First Ship in its new office above J.R. Maxwell's, phone



443-4242, or email mfs1@myfairpoint.net. Interested people of all ages can also stop by the boatshop on Wednesdays and Saturdays and speak with any of the volunteer shipwrights. Students can download an application from the website after April 15, www.mfship.org.

MFS connects to local, national history associations



Orman Hines and Rob Stevens were hosted by the Lincoln County Historical Association

recently, as they shared their archeological and historical knowledge of the Popham Colony and *Virginia*, both the original and the one that MFS is constructing, and Maine's First Ship. They will also be speaking to the national meeting of the Daughters of Colonial Wars in Washington DC in April.

In another example of MFS connections leading to other venues for local collaboration, Captain Scott Smith, of the *Michael Monsoor*, currently being built at Bath Iron

Works, spoke at Woolwich's Veterans Day event this past November (photo courtesy of *Wiscasset Newspapers*). He has also agreed to speak at Woolwich's Memorial Day commemoration this year. Crew members of the *Monsoor* have been regular volunteers on *Virginia*.

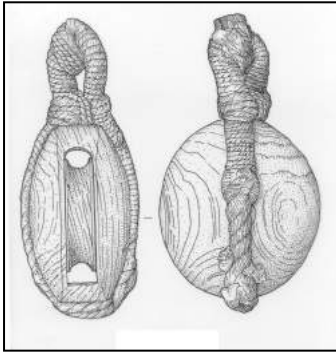


Maine's First Ship: Reconstructing the pinnacle *Virginia*

Block-making is more than meets the eye

by Jim Nelson

Virginia's rigging work this winter has centered on making blocks (what landlubbers would call pulleys) those ubiquitous and crucial parts of any ship's rig. *Virginia* will need four sizes of blocks to handle 1/2", 5/8", 3/4" and 1" rope. As simple and innocuous as the blocks might seem, their construction is surprisingly involved, requiring many stages of cutting, shaping, routing, gluing, pinning, sanding and finishing. It makes it clear why block-making was a trade unto itself throughout the Age of Sail.



Knees arrive from Nova Scotia for *Virginia's* decking



David Westergard, from Tusket Nova Scotia, delivered hackmatack knees last month. The knees will be used for the deck structure of *Virginia*. Shipwright Rob Stevens notes that one of them has already been installed, as a replacement for a futtock. Funds for the knees come from 2 sources. The first is from the Fritz Mueller Fund, created in memory of a long-time friend of Maine's First Ship. Fritz's connection to MFS came by way of Jamestown, where he had been a volunteer there, along with his wife Christa. The other source of funding came through the Davis Family Foundation, which awarded MFS \$26,000 for deck structure materials. MFS has the decking material already, and is sitting in a barn of John Morse's in Phippsburg.

Topsham white pine and ash timber for MFS thanks to neighbors and sawyers



Pat Maloy helps shipwright Rob Stevens and Bosun Jeremy Blaiklock lift a white pine log onto the trailer for transport from Topsham to the Bath Freight Shed yard. Mixed hardwood beyond Rob Stevens include green ash logs to be turned into belaying pins. Photo credit: Steve Spaeth

Topsham residents Jane and Dennis Menard decided to clear the woodlot behind her house. They contracted with Pat Maloy, a logger from Lisbon, to fell and remove mixed hardwood and white pine trees. Steve Spaeth, a neighbor of the Menards and a Maine's First Ship 'crewe' member, saw the logs and remaining trees and wondered whether some of the harvest might be used for construction of the *Virginia*. Steve wanted some freshly

to Pat as part of the contract to cut the woodlot. He encouraged Steve to contact Pat to see if some of the wood were available.

When Pat learned more about the *Virginia* reconstruction, he decided to donate the pieces that would help to build Maine's First Ship. He said that he looks forward to a cruise on the river when she sets sail.

Pat Maloy's business contacts: <http://malosyardcare.com/firewood/> (207) 353-8416

harvested ash to turn into belaying pins. Rob Stevens sent a list of the masts, spars and sprit that were still needed.

Steve approached Dennis to learn more about the harvest. Dennis explained that he had already transferred the products of the harvest



(Above) Belaying pins inserted into a prototype pin rail to refine the size and proportions for more than 50 production pins. (Below) Belaying pins turned from ash donated by Pat Maloy, and Dennis and Jane Menard. Photo credit: Steve Spaeth.



**COMING
SOON!**

Maritime History Lecture series

Jim Nelson - 17th century piracy
 Jeff Miller - 17th century navigation tools and techniques
 Harald Prins - Native/colonial relations
 Rob Stevens - How to build a 17th century pinnacle in the wilderness

**COMING
SOON!**

Treenails: the wood holding *Virginia* together

by Rob Stevens

We are fastening the *Virginia* planking with treenails, pronounced by shipwrights "trunnels," which are, as the words states, nails made of wood. People have been fastening with treenails ever since they put two logs together to make a raft. Originally the treenails would be cleaved out of billets of wood such as white oak or black locust to get the strongest run of wood grain. Then, using a drawknife or axe or a similar tool and maybe a shaving horse, the treenail-maker would shave the rough stock into round wooden bolts. Various advancements to the tools used to make treenails resulted, in the end, with patented treenail lathes in the 1800's.

Before turning the treenails, the treenail-maker would hope the treenail stock would be dry. After turning the treenails they would be stored in a dry spot in the shipyard and at the end of the day the unused ones would be returned to that dry spot.

Often on large vessels, there were workers called hole borers who drilled the treenail holes through the plank, frame, and ceiling for a long treenail. Regular treenails went through the plank and the frame, and blind treenail holes did not go all the way through a frame. The hole would be drilled with a shell bit, nose auger, and in later years a ship treenail auger. The borer would often drill a hole 1/32" or 1/16" smaller than the treenail. If he was also the one driving the tree-

nails, or at least being nice to the fasteners he would find an auger that was just the right size. The fastener would dip the auger in linseed oil, pine tar, or tallow and twist the auger about a

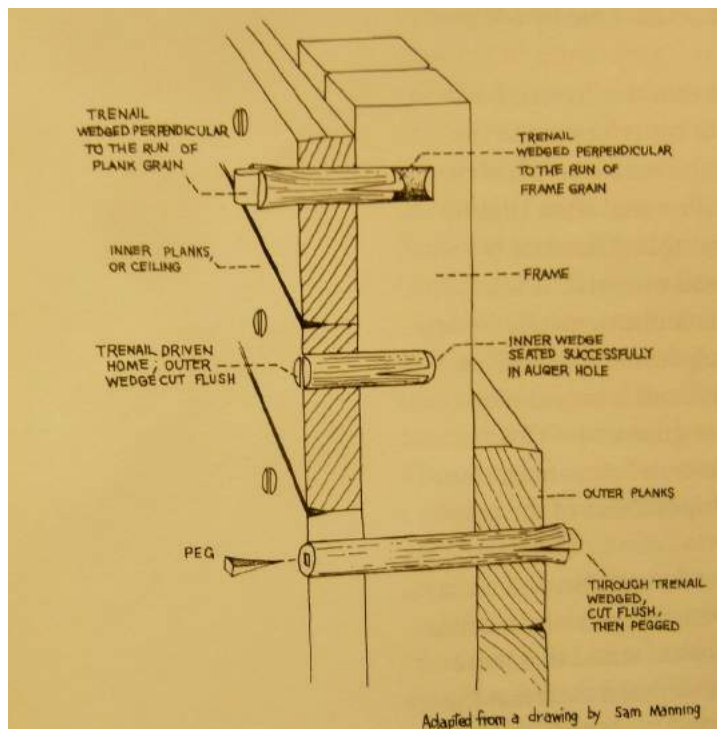
ness, and frame width would be sized according to the length of the vessel. In our case, because *Virginia* is less than 100', we are using 1" tree-nails. The treenail would have one end chamfered. The other end in early days would be slightly larger and in later days would be a larger square left over from the treenail lathe. The treenail would also be dipped in linseed oil, pine tar, or tallow and inserted with the annular rings of the wood 90 degrees to the run of the plank. This way, when the treenail takes up water, it swells more against the end grain and half as much across the grain of the plank, which could cause the plank to split.

Dave Foster taught me that a treenail should drive in an inch a blow. Less than that and it might split.

More than that, and it was too loose. Dana Story of Essex, Massachusetts, said that 1 1/4" and under treenails should take 810 blows.

After the treenail is driven, the ends are split perpendicular to the grain run of the plank on the outside of the hull and the grain run of the frame on the inside. An oak wedge 3/8" by 2 1/4" and 1/32" wider than the treenail is driven into each end of the treenail. The function of the wedge is not only to tighten it in the plank but also to make it watertight.

One, two, three, and four wedges were driven historically. They would be driven across the grain, in a cross, trian-



dozen times and pull it out so the chips would not clog the auger and repeat until it was through. He would resharpen the auger about every 50 holes drilled. And when he found the auger that was just right, he would hide it at the end of the day.

"The treenail, when you drive it with a beetle, will probably only get an inch at a time, that is the old way of doing it, and it seems it is a good way of doing it, and it is if a good strong man handles the beetle and uses his full strength on it the same as they did in the old days."

—Mr. Rustad.

Treenail diameter, plank thick-

Treenails: the wood holding *Virginia* together *(Continued)*



ground out would influence what type of wedge the shipwright would use, or if he would use a wedge at all.

Treenail drivers- often the most worthless men in the yards- sometimes slight their portion of the work" by driving fasteners slack.

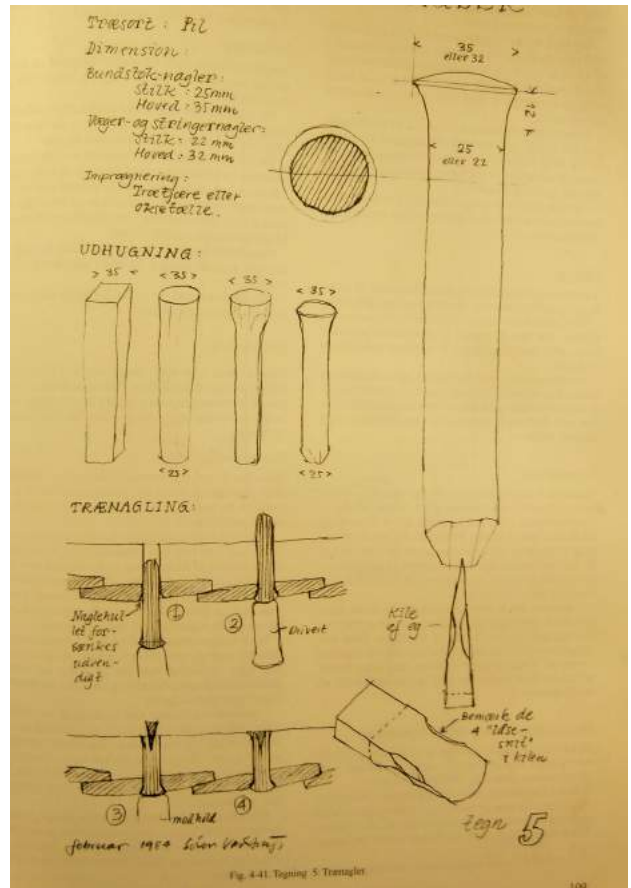
-Michael McCarthy

gle, or a square. Also the split head of the treenail in some shipyards was caulked with oakum rather than a wooden wedge. A third method was a treenail plug, a square oak wedge with a 5/8 - 3/4" head 2 1/2" long to a point. When the treenail plug was used on the outside, a regular flat wedge was used on the inside. The last method is no wedge at all. When *Virginia* was built, shipwrights in the south of England were likely to use no wedge or caulk with oakum. Depending on whether the vessel was to be used in warm climates or how it was to be used, such as bumping over a bar with a heavy load or

The use of treenails versus iron was argued over as long as boats were built. One of the arguments in favor of treenails is that treenails are cheaper to buy. Driving the treenails doesn't damage the wood fiber like iron does. Iron rusts and expands, loosening, which can allow the planks to move and leak. However, it is more expensive to drill and wedge the treenails. Treenails can rot under certain circumstances such as when used above the waterline in freshwater vessels. Treenails badly sized and badly wedged can weep. But in large vessels, the weight of the iron fasteners was enough to limit how much cargo

could be carried. For that reason, the Royal Navy experimented with not using treenails in the early 1800's and decided to start using them again.

Author's Note: I'm grateful for the work done by Michael McCarthy, in *Ships' Fastenings*, and JR



Adams, in *The Maritime Archeology of Ships*; Sam Manning's excellent drawings; and the amazing work of the folks at Vikingskibmuseet in *Roar Ege*.





In honor of International Women's Day, we recognize the female volunteers of Virginia.





Maine's First Ship: Reconstructing the pinnacle *Virginia*

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 Ph: 207-443-4242
 Visit *Virginia* at
 27 Commercial Street
 (on the water side of the
 Bath Freight Shed)

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 progress on the web**

www.mfship.org



Special Thanks to Long-Time Business Partner, Big Barn Coffee

Annual Gala Dinner features Jim Nelson

— Save the date May 2



Join us for MFS's annual gala dinner on Tuesday May 2 at J.R. Maxwell's in Bath. Featured speaker this year is *Virginia*'s rigger, MFS Board member, and former tall ship sailor Jim Nelson, who will be talking about **"Tall Ships Now: *Virginia*'s Place in the Modern World of Traditional Sail."**

Jim will discuss the rebirth of traditional sail in this country, the current state of the fleet and successful programs that can serve as a model for *Virginia*'s future. According to Jim, "when the replica *Virginia*

finally takes to the water, she will be more than just a fine tool for education and a link to Maine's historic past. She will become part of the large and active fleet of tradition sailing vessels operating in the United States and around the world."

Tickets will be available from the MFS office on Front Street (above Maxwell's), by telephone 443-4242, or by email mfs1@myfairpoint.net.

MFS is also looking for Silent Auction items. Contact the office.