Lark is a sailing skiff similar to many early Chesapeake Bay crabbing skiffs. The boat has been in the collections of the Museum since 1986.

Dozens of types of crabbing skiffs appeared along the creeks and rivers of the Chesapeake Bay in the late 19th century. A smaller predecessor of the bateau and skipjack, the crabbing skiff typically had a deadrise (V-bottom) hull, diagonally cross-planked in "herringbone" fashion. The narrow washboards and decks provided suitable work surfaces and ample space in the cockpit.

Lark’s rig consists of a leg-of-mutton mainsail and club-footed jib on a single unstayed mast – typical of Chesapeake Bay workboats, large and small. She is 20 feet long and 5 feet, 10 inches in beam. Narrower than most working skiffs, she was used mostly for pleasure, including recreational fishing, crabbing, and oystering.

Built about 1918-1920 on the shores of the West River in Anne Arundel County, Maryland, she originally may have been equipped with an engine and later converted to sail. Although her builder is unknown, she was probably built for yacht captain, Charles Kerr of Rock Hall, Maryland.

The Chesapeake Bay Maritime Museum is located on the harbor in St. Michaels, Maryland. Established in 1965, the Museum is dedicated to preserving and exploring the history, environment, and people of the Chesapeake Bay. Exhibits include traditional boatbuilding, water fowling, yachting, and the evolution of the Bay. Major features include a screw pile lighthouse built in 1879, a bugeye, skipjack, racing log canoes, and a large collection of Bay small craft, decoys and hunting artifacts. The Howard I. Chapelle library with thousands of bound volumes, periodicals, reference works, and artifacts, is an important resource for researchers of maritime history and related fields.

Chesapeake Bay Maritime Museum
St. Michaels, Maryland
(410)-745-2916
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The Chesapeake Bay Maritime Museum is a nonprofit educational institution accredited by the American Association of Museums.
Lark
Chesapeake Bay Crabbing Skiff

Instructions for how to build a model boat – or – Lessons in discovering and correcting mistakes and overcoming frustrations on the pathway to universal enlightenment.

NOTE: Read completely through the instructions before starting construction. Study the plans – you will find answers to many of your questions about vessel terminology and the sizes and locations of small parts. Study the pictures too for additional building details before starting. Lines taken from the original vessel in the Museum’s collection are included as a reference - model details vary to facilitate ease of construction.

Parts Legend: Included in the instructions is a thumbnail page identifying the pre-cut parts provided in the kit.

Basic Tools and Materials Suggested: You probably have some of them, and won't need others, so you can pick and choose from this suggestion list. Most are readily available in craft stores, hardware stores, and hobby stores.

#2 pencil or mechanical pencil with .5mm or .3mm soft lead.
X-Acto knife with #11 blade.
Single edge safety razor blades.
These can make almost every cut you need to build this kit. They can be used to scrape off excess glue also.
Large nail clipper – can also be used to cut toothpicks, thread, the small wire in the kit, as well as small wood strips.
Sandpaper in grits #100, #150, and #220. (Course, medium, fine)
Sanding boards can be made in a variety of sizes by using adhesive-backed sandpaper, or stick glue, or two-faced tape, to stick sandpaper to a flat piece of wood. A good size to start with is 1/8" x 3/4" x 6". Cut sandpaper with razor blade or old scissors – it will ruin good scissors.
Drills and drill bits – Hobby, hardware, and craft stores have small hand and electric drills, and drill bits.
Double-ended pin-vise – finger powered. (The holes needed in the boat can even be made with a cut-off straight pin in a finger powered pin-vise.)
Electric or battery powered drills.
Tiny drill bits. "Number bits" (60 – 81) are handy to have. Available in many hobby outlets.
A 1/16" drill bit is useful to drill holes for toothpicks.
6" steel rule with 1/32" divisions - handy for checking small dimensions.
See-through ruler – one with a 0-center scale is handy for checking symmetry.
Drafting compass – used to check symmetry, to scribe deck coaming line, scribe other parallel lines, and transfer measurements from plans to model. (Steps 5, 24, 26.)
Forceps 3" to 5" long, and hemostats.
Alligator clips or other small metal clamps.
Spring-loaded wooden clothes pins – can be modified in many ways to make useful clamps. Glue small pieces of sandpaper on the clamping ends to prevent slipping.

Toothpicks - used as temporary "nails" and for applying glue. Often called tree-nails or "trunnels."

Straight pins – useful to help position and hold parts temporarily. Cut the head off at an angle to make a drill bit.

Rubber bands – can help hold parts in place.

Chain-nose and round-nose pliers – good ones are often found in craft store jewelry making departments as well as hobby and hardware sources.

Quarter-inch, thin masking tape for masking paint lines. Look in hobby and craft stores.

Blue painter's masking tape, ¾" or 1" – useful for protecting surfaces from inadvertent sanding.

Wood filler – there are always a few voids to fill.

A piece of soft foam or a pad of terry-cloth towel to lay hull on while building. The model is very light weight and tends to move about when you are working on it. A ziplock baggy filled partially with sand works nicely to keep it from moving.

Acrylic paints. See Step 57 for discussion of paints.

**Construction Hints:**

Measure and fit twice before gluing. Before gluing anything, it is best to have a dry run positioning parts and noting finger and clamp positions because you have only a few moments before glue hardens.

Use soft pencil, well sharpened, to ensure accuracy.

Where controlled drops of glue are needed, use flat toothpicks or pin points to apply them.

Sand components with fine grit sandpaper before final painting and assembly.

Direct measurements can be made from the full-sized plans drawings. Rely on given dimensions and templates where provided, but additional fitting might still be needed.

Stay close to sequence of steps.

Save scrap wood for future small parts.

Pay attention to the materials list and usage.

Rigging line – Place CA on about ¾" of line at the thread tip to harden it into a kind of needle. This makes it easier to thread the rigging through small holes.

**Glues and Gluing:**

**Yellow "carpenter's" glue** and cyano-acrylic glues are the standards used by model makers. For this model both glues are useful depending on which you find more comfortable and convenient to use. Yellow glue dries more slowly so it gives more time for adjustment of tricky pieces but must be held or clamped longer until it sets. Titebond II and Elmer's are readily available brands.
Cyanoacrylic glues (crazy-glue, CA, "cyano") are also readily available. Cyanoacrylate glue is the general term for the many quick-bonding super glues available. They act almost instantly so the pieces being bonded must be in position first. Dry-fitting and positioning preparation are essential.

Often the best way to apply any glue is to place a large drop on a non-absorbent surface (a plastic lid or piece of masking tape) and use a toothpick or pin to pick up a tiny drop and accurately place it into position.

The bonds of both glues can be carefully broken apart if you make a big error. Just be sure to freshen the surfaces with sandpaper before repositioning and regluing.

Stick-glue glue-sticks can be very useful. These solid adhesives glue wood almost as well as they glue paper. Because it rubs on and is a paste it holds almost immediately. The bond is easily broken and the residue readily sanded away. It can be used as a temporary clamp to hold parts in position.

Use **white glue** diluted 50/50 with water to secure rigging lines. It can be used on wood but is slower to grip and not as strong.

Avoid using polyurethane (urethane) glues. Some foam as they cure and tend to push the small pieces apart.

Always glue wood-to-wood. Avoid gluing to already painted surfaces; those joints are weak.

Unsightly glue on surfaces is often best removed by using a razor blade as a scraper. Carefully used, a scraper can remove the glue and leave the wood surface intact. Sandpaper tends to remove the wood too.

Fabric Glues -- For this model acrylic matte medium is an excellent fabric glue to use on the sails. Also very good are the thick fabric glues available in crafts stores. Elmer's, Aleen's, Sobo are some brands. Very thin fabric glues do not work well in this application.

**Step 1: Mold Base:** The supplied mold base (building board) is slotted and marked to facilitate alignment of the mold parts. Be sure to note the bow-stern orientation and the location of the station molds on the correct side of the timbers – indicated by a black mark.

Molds in place, inner stem, keelson, and transom pieces ready.
**Step 2: Station Molds and other Mold Parts:** Prepare the four station molds, stem mold, and three transom support molds. Position timbers in slots and glue in place – light sanding of the slots and timbers may be needed - a drop or two of glue at each end should be more than enough. Glue station molds to the ½” timbers, being sure they are flat on the building board, and that centers are on the center line. It is important to place the station molds properly – centered, and on the correct side (the black ink mark) of the station line. Several small drops of glue will hold nicely but still allow for repositioning if need be. Center the stem mold in position and glue it to the base and station mold #2. Glue a short piece of timber to its base for added support. Center the keelson/transom support and glue it to station #8. Glue 1 ½” timbers on either side and then position and glue the two outer transom supports in place. Be sure the three transom support notches are in line and square to the centerline. Using a side plank as a fairing batten, place it in position across the molds from bow to stern and see that it touches each of the molds in a smooth curve. If it does not, make appropriate adjustments with thin wood shims or minor sanding. Major corrections should be made by removing and repositioning the out of position mold.

**Step 3: Keelson:** The keelson (keel) is in two identical parts in order to more easily cut the centerboard slot. Gently sand away the char between the marks for the centerboard trunk slot. On both pieces, mark a line 1/32” from the inner surface on the top and bottom edges, between the marks identifying the centerboard trunk location. (Be sure to make a left and right keelson piece, with the marks and cuts facing each other.) Using a razor saw or sharp blade, make cuts 1/32" deep at both ends of the trunk slot location on each keelson piece. Then make a series of cuts between them, about 1/8"-1/4" apart to facilitate removing wood in this area. Chip out the wood with a knife or razor blade and carefully sand to finish. When finished, the assembled keelson parts should have a slot 1/16" wide to receive the trunk ledges (Step 17). Before gluing, clamp the keelson halves together and check the fit with a 1/16” thick piece of wood. When satisfied with the slot, check the fit of the keelson on the building mold, adjusting if necessary. Finally, glue the pieces of the keelson together and give it a finish sanding, especially on the top to remove char and even the surface. Settle the keelson into position in the mold slots. Be sure the flat transom surface lines up with the center transom support mold.

Keelson halves marked and notched.
Secure the keelson to the mold with toothpicks drilled into the top of the stem mold and mold #8. Sand the flat spot on the keelson transom-end to be in line with the transom support molds. Final sanding of the centerboard slot can be done with a small sanding stick made from scrap 1/32" wood.

**Step 4: Preparation of Mold:** To prevent gluing parts of the boat to the building mold (a disastrous event), treat the mold edges to a coating of wax. This can be a paste wax rubbed into the mold edges, or candle or bee's wax melted in with a hair dryer.

**Step 5: Inner Stem (b):** (apron, stem-liner) Find the inner stem piece (b). Trim it to be 2 ¼" long - It should fit under the keelson on the mold and later will be glued to the keelson. (Step 8)
The stem can most easily be held in position on the mold using toothpick "nails" driven into drill holes near the top and bottom into the stem mold. Fair the stem sides by sliding the sanding board handle along station #2 while watching the sandpaper create the stem bevel. Reference the stem cross-section detail on the plan to see how the inner stem, outer stem, and planking will come together. Use a chine log as a fairing batten to check that the bevel is fair with the mold stations and check to be sure the front face of the inner stem is no more than 1/16" wide. Later, after the hull is removed from the mold, the inner stem will be trimmed to the sheer level to support the deck. (Step 26)

**Step 6: Transom:** The transom should sit in the three transom support notches provided for it and touch the flat place on the keelson. Center and then secure the transom with toothpicks in the two outer transom supports. Glue the transom to the flat area on the keelson. (Step 8) A toothpick nail can help secure the joint. Bevel the transom side and bottom edges by sliding the smooth handle of the sanding board along station mold #8 as the sandpaper end removes material from the transom. The light lines serve as a sanding reference. In order not to over-sand the transom bevels, stop when the char becomes a thin line on the forward edge of the side and bottom bevels. The curved top of the transom is not shaped and beveled now, but will be later when the hull is right side up with the after deck beam in place (Step 24). Again, check the bevels, fore and aft, using a side plank as a fairing batten.
Step 7: Chine Logs: Place the chine logs in position on the molds and check for fairness – some gentle trimming of the mold notches may be needed. Using clamps secure the forward end in the stem mold notch, against the inner stem and against the keelson. An easy way to fasten the chine log to the transom is to cut a notch in the transom to receive it. Hold the chine log against the transom and mark it where a 1/32" deep notch can be cut with a sharp blade. (This was not often done in real construction but it works here.) Check for a smooth fit.

Chine log fits against inner stem and keelson in the stem mold notch. Ready to glue. Note toothpicks holding parts in position. **Do not** glue chine logs to molds!
Step 8: Gluing parts held by the mold: Be sure of proper centering and alignment before gluing anything. First glue the transom to the keelson. Then glue the inner stem to the keelson. Bend the chine logs into position and glue first to the stem and keelson and then into the notches you cut into the transom. Be sure the chine log lies fairly in the mold notches. It should stand a bit high of the molds as it will be sanded to a bevel to receive the bottom planks later. It may be necessary to slightly adjust the notches with blade or sand paper.

Step 9: Side Planks: Position the side planks in the mold sheer-notches. Check that the planks rest fairly in the notches, and that they bend happily from stem to transom around the mold, touching the mold edges, chine log, and the stem and transom bevels. Practice holding a plank in position for gluing with clamps at the stem and along the chine log. Use fingers, clothes pins, and tape as needed. Glue a toothpick or scrap wood along the forward edge of the plank to reinforce it and serve as a clamping cleat. The toothpicks at the bow and in the transom will be trimmed off later. The chine edge of the side plank should touch, and project a bit above, the chine log. It will be trimmed and beveled in Step 10. Clamp the after end in place to prevent it from slipping out of position. Now spread glue on the stem bevel and along the chine log for about 2-3 inches. Clamp the side plank to the stem and to the chine log with many clamps. Continue gluing piece-meal, to and including, the transom bevel. Clamp the plank stern ends in place – be sure they are flat against the transom bevel. Tape or rubber bands can do a good job here. When glue is dry trim the plank bow end back to the inner stem face. At the stern sand the protruding chine-log and side plank flush with the transom. Glue the other side plank and trim its ends. Trim the end of the keelson to be flush with the face of the inner stem.
**Chunk Placement:** The bow fore-foot is built using "chunks" of solid wood shaped with knife and sandpaper. Bay skiffs and larger skipjacks used this same method of bow construction. Large blocks of lumber were first held in place with large wooden pegs. The chunks were then hewn to shape with ax and adze. The wooden pegs were then supplemented with metal rod "drift-pins" to hold all together.

The kit chunks are $\frac{1}{2}$" x $\frac{1}{2}$" x 1 $\frac{1}{2}$" triangle-cut basswood timber. Glue the chunks to the keelson sides and chine, flush with the tip of the keelson. After fitting the bottom planks the chunks will be trimmed to shape.

**Step 10: Fair Keelson & Chines:** Using a #100 grit sanding board, slide the smooth handle of the sanding board along the keelson, and then, in turn, along the chine log/side plank edge (chines) as the sandpaper bevels the opposite surface. Carefully sand the keelson and chines alternately until both the keelson and chines bevels are fair and the bevels on each side of the hull are equal. On the chine the char should be a thin line on the inner edge from the chunk to transom. The keelson will show a shallow V-like intersection at the center through most of its length. The bottom planks will lie on these bevels in Step 11.

**Step 11: Bottom planks:** This is the trickiest part of the whole construction - take your time. The plank edge should lie along the center line as closely as possible. Some trimming will probably be needed along the mid-line. When the keelson and chine bevels are fair, butt the bottom plank end against the chunk. Some careful sanding may be needed to get a tight joint.
Align the bottom over the keelson and chine. Use rubber bands, tape, or pin it to the transom, to help keep it in place. Starting at the forward end glue it to the chunk, chine, and keelson, then glue piecemeal to the transom. Proceed with the other side. It is not critical if the center seam does not close precisely because the shoe covers this in Step 14. Use the sanding board to flatten the ridge on the bottom planks at the centerline so that a flat surface results on which the skeg and shoe can be glued. Trim off the overhanging chine edges of the bottom. Make light pencil cross-hatching along the side plank where it meets the bottom plank. Wrap a layer of masking tape around the end of a sanding stick. Slide the taped end along the side plank as the sandpaper removes the bottom plank chine edge. Stop sanding when your pencil marks start to disappear. Keep the chine edge, and all edges sharp.

Trim the after end square and allow it to protrude 1/32"-1/16" past transom. (In building real boats this overhang prevented the plank from splitting when nails were hammered along this edge.) Protect the transom with a razor as shown.
**Chunk Shaping:** Figures 1 - 9 show the sequence of shaping the chunks.

1-Chunk glued in place – front end flush with the keelson tip and face of the inner-stem. 2-Keelson and chine bevels ready to receive the bottom plank. 3-Bottom plank glued in place. Protruding edge of the chunk carved and sanded flat and flush with the side plank.

4-Further carving and sanding creates the final shape emerging in 5 and 6. Use a narrow (1/8" – 1/4") sanding stick, or sandpaper wrapped around a small dowel, to sand the constantly changing angle of the chunk. Do not add the stealer or shoe until this step is done.

**Step 12: Outer Stem (c):** See dimensions on drawing. It is tapered from 5/16" at the top, to 1/4" at the bottom. Center and glue, then sandpaper to the bow deadrise shape. Be careful to preserve the chine edge and the chunk/keelson joint. This area requires thoughtful sanding. Blue tape placed along the side plank at the chine and along the keelson can help avoid accidentally sanding into those structures. Both sides will be sanded to make the face 1/16" wide. The overall length is generous for later trimming at deck level.
Step 13: Skeg: Fit the skeg to the bottom. This will require careful sanding to achieve a close fit. Center the skeg on the bottom – it helps to hold it in place with pins. Align the stern-post with the centerline on the transom. Glue the stern-post/skeg unit in place. Sand the skeg bottom edge to fair smoothly into the bottom. There should be minimal gap at the skeg forward end when you fit the shoe in Step 14.

Step 14: Stealer and Shoe: The 1/16" x 1/8" shoe is applied in one piece, in a straight line from stem to stern. Pins can be used to hold it in place. Use a piece of the shoe material to make the wedge shaped "stealer" shown in the plans. Mark the centerboard trunk location to be cut out later. Glue all in place. Carefully cut and sand the opening for the centerboard slot. Trim the shoe ends. Remove tooth-picks from the inner stem. They can be drilled out or driven into the mold if there is not enough end to grab.

Note tip of skeg faired into the bottom so there is minimal gap under the shoe. In Step 35 the rudder pintles and gudgeons will be installed as shown here.
**Step 15: Wale:** (Bend) Bevel one end of a long 1/16” x 1/8” strip to fit to the outer stem. Bend it around the side plank at the sheer notch. For ease of handling, cut off the excess about 1/2" past the transom. Put glue on about 3” of the forward end and glue in place holding it flush with the side-plank sheer. Then work your way aft. Do both sides and trim flush at the transom.

![Wale beveled against outer stem and glued along sheer. Stealer piece and shoe in position.](image)

**Step 16: Remove from Mold:** This is the first big moment in boat building - Exceeded in emotional impact and importance only by the launch into the water. Remove the toothpicks from the transom. Gently raise the aft end a little, and then the same amount forward. If it sticks use a wedge under the stem and under the transom as needed. It should then "pop" off. If stuck, see-saw gently. If you were careful gluing any popping or snapping is probably small glue spots or toothpicks letting go. Spend some time admiring your new boat, then put it aside and breathe a sigh of relief and joy.

![Sand the side-wale edges along the sheer, flat. First cross-hatch the edge with pencil, then slide the sanding board handle along one side while the sandpaper removes material on the other. Swap sides frequently. Sanding is finished when the pencil lines on the wale almost disappear and the wale almost has a sharp edge.](image)

**Step 17: Centerboard Trunk:**

From the sheets gather the centerboard trunk sides, logs, and ledges (head-blocks, end-boards). Clamp the two sides together lining up the pivot holes – a toothpick or drill bit through the holes can be helpful.
On each side piece carefully position and glue a trunk log to cover the hole. (Take care not to glue the sides together.) Remove the clamps and open the pivot holes through the trunk logs with a drill bit. Glue the ledges to the ends of one of the sides. They should be flush with the trunk top and project below the bottom of the boat for trimming after assembly.

Use a toothpick or drill bit to help line up the two sides and glue the second side to the ledges. Sand all of the edges to a smooth appearance.

Test the fit of the ledges into the slot in the keelson. (If the keelson slot is too tight sand it until the centerboard moves easily.) This keelson slot has been lengthened on the after end so the ledges will slide comfortably into position. After fitting is complete set the centerboard assembly aside. It is much easier to complete the rest of the boat with it out of the way. Final installation is after Step 26.

**Step 18: Centerboard:** Sand board edges smooth with fine sandpaper. As shown on the plan, bend a short piece of 26 gauge wire into a "U" for tang. Make two small cuts into the board so tang ends will fit flush in board. Glue the tang in place. Gently sand the surface smooth with fine sandpaper. The centerboard can be painted with bottom paint now. Make a 1/16" hinge-pin hole where shown.
Centerboard handle:

See the handle pattern on the plans sheet. The 3/32" dia. jib club happens to be a good size to form the centerboard handle. A drill shank works well too.

A shallow notch has been cut in both sides of the top of the centerboard to receive the bent wire tang. The hook of the handle wire has been slipped under the tang and pinched closed. Use a drop or two of glue to fix the tang in place. Be sure the finished assembly can slide with minimal friction in the trunk slot.

Centerboard Trunk Installation: Final permanent installation should wait until after the deck is in place, the floorboards are fitted, and the mast is stepped - after Step 26. Check that the ledges fit comfortably all the way into the keelson slot and the trunk logs bottom out on the top of the keelson. Be sure it is vertical. Adjust as needed. After all the hull interior structures are in place and the deck is on, you will put a dab of glue on each side of the ledges and a very light amount on the lower edges of the trunk sides. Until the final gluing it is handy to be able to put it in and out.

Step 19: Frames: (3/32" x 1/8" strips) Refer to the cross sections on the plans. To use the frame spacing jig place the arrow end against the face of the inner stem and lay the jig on top of the chine log. Hold it there with clamps as needed and mark the nine frame locations on each side. The first seven frames are installed perpendicular to the chine log. The last two are parallel to them and more or less perpendicular to the sheer. A see-through ruler, held on the chine log is helpful in drawing positioning guide lines. Frames are installed with the 3/32" (narrow) dimension against the side planks. Cut notches in the lower ends for the chine logs and be sure the fit is good before each is glued in place after it is made. Install all the frames before adding the deck support knees. Later the tops of the frames and the knees will be trimmed even with the sheer.
Make this tool to facilitate making the frames.

Glue a piece of fine sandpaper to a scrap of 1/32" x 3/16" wood and glue that to a piece of smooth wood. Draw a pencil line 3/16" from the edge of the sandpaper.

The arrow on the frame spacing jig has been butted against the inner stem.

Frame spacing jig in place and marks for frame positions made.

See-through ruler resting on chine log to mark forward seven frame locations.

See-through ruler, more or less perpendicular to the sheer, and parallel to the forward frame locations, marking the last two frame locations.
Place the frame stock end against the sanding board and make a 1/32\" deep cut at the pencil line.

Turn the frame on the side and cut out the notch.

Slide the frame back-and-forth over the sandpaper until the notch is smooth.

Sand a 45° bevel on the frame end. Glue into the boat and make the next frame.
Step 20: Deck Support Knee Template:  Is used to mark the deck support knees for the proper deck camber in the next steps.

Step 21: Deck Support Knees:  After all the frames are in place lay out the triangular pieces for 14 individual knees.  The first and last frames on each side do not need them. One short edge is glued to the side. The other short edge will be trimmed to support the deck. Hold a knee in place on the after side of the frame with a clamp – the corner should be just a bit above the sheer - then glue. Use the template to mark the amount to be trimmed off and then sand to that mark. This distance will change as you move from one end of the boat to the other. When you have sanded enough the template will slide across the top of the knee without catching. If it does catch – sand a bit more.

Step 22: Mast step:  Make this part from piece (a). Trim the forward end to fit between the chine logs. Glue in place on top of the keelson.

Step 23: Floor Boards: (1/32" x 3/16" strips)  Build the floor boards directly on the paper pattern supplied. Tape the pattern to a flat surface. Assemble all of the floor board material and gently fine sand to remove any wood fuzz. Make floor board cross-cleats. Use stick-glue to fasten their tips to the paper over the pattern. Position the center plank in one full length piece and glue with CA or yellow glue to each cleat. Use short pieces of 1/32" as spacers and lay the next plank snuggly against them as the plank is glued in place on each cleat. When all the planks
are glued in place use a razor to cut along the dotted line shown on the pattern. Carefully remove from the paper pattern. As each hull will be a bit different you will need to customize the fit of your floor boards. Fit the cleats to have their ends resting on top of the chine logs. Mark and cut the floor planks to fit at frames and sides planks. Measure and cut the center plank away to fit the mast step, the centerboard trunk, and the keelson. The measuring stick shown on the plans can help here.

1-Using stick glue to place floor cleats. 2, 3-Short 1/32" thick pieces used as spacers between planks.

4-Cut floor boards apart as shown. 5-Carefully remove from the paper pattern
1-As each model hull is a bit different the cleat and floorboard lengths have been made a little long. Fitting them can be challenging. First, slide the stern floor section cleats in to the chine – the middle one should rest against the frame as shown. Lightly pencil mark their locations.

2-Make and use measuring device drawn on the plans to measure the cleat length as shown here – chine to chine. (The model shown here had the deck in place first. It is much easier to fit the floor boards before adding the deck beams and deck.)

3-Place device over the floorboard cleat, center the device and mark cleat at the ends. A large nail-clipper is an excellent tool to clip off the cleat ends.

4-The floorboard cleats will rest on the chine log top when remaining small adjustments have been made. Make symmetrical side-to-side adjustments so middle floor board plank stays centered over the keelson. Pencil marks on the planks show trim lines still to be made.

5-Cut away the trunk location and fit the trunk in place. When everything fits easily into place, cut away the small plank/cleat piece just forward of the trunk. 6-This will make it possible to insert and remove the forward floor section after the centerboard trunk is permanently installed.
**Step 24: Deck Beams:** The deck beams are located as shown on the plan. A good way to locate the beam positions is to use a compass. Take the distance from the plan and transfer that length to the model. Bevel beam ends to fit hull and glue in place. The after deck beam is located so the deck will overhang it by about 1/16". After the deck beam is in place, shape and bevel the transom top edge to the after deck beam curve by sliding the smooth end of the sanding board on the beam while watching the sandpaper remove the wood parallel to the curved transom reference line. The transom top should transition smoothly into the side/wale top. The deck must lie smoothly here with no gap.

1, 2-Sequence showing use of compass to take measurement from plan and transfer it to model. 3-Also using compass to mark deck beam before cutting and beveling to fit in place.

4-Deck beam marked with reference lines. Cut and sand to fit.

5-Compass drawing a sanding reference line with the point sliding in the laser line.
Step 25: Jigs for Thwart Risers and Thwarts: (1, 2, 3) The main thwart (seat) riser jigs (1) sit on the chine log between frames # 6 and #7. Place the risers on top of the jig. Glue one riser in place, then adjust the other until the thwart is level and perpendicular to the center line of the boat. Glue the second riser. Remove the jigs. The thwart may need to be trimmed slightly to fit on them.

The forward thwart installation is a little trickier. Place each chine log jig (2) on the chine log between frames #2 and # 3 as shown on the plans. Sit the trunk log jig (3) on the trunk log – and adjust until the thwarts sit level and square to the trunk. Glue the risers in place but not the thwarts. Remove the jigs, thwarts, and the centerboard trunk assembly from the boat. Set them aside for installation later.

Step 26: Deck: Glue the two deck piece edges together. As these joints may be weak, reinforce them by gluing a strip of paper over them with stick-glue. This paper will be removed after the deck is on the boat. Carefully sand the side-plank sheer edge until the char just disappears. Check the deck fit along the transom, sheer, deck beams, and the deck support knees, to be sure there are no high spots that will prevent the deck lying smoothly on all glue surfaces from stem to transom. Sliding the deck support knee template along the sheers can help find high spots for trimming.

Carefully cut and remove the inner stem at sheer level but leave the outer stem intact.
Position the deck on the boat. This will require removing a notch of deck at the bow about \( \frac{1}{2} \)" deep to allow moving the deck forward over the outer stem. Adjust the deck, fore-and-aft, to cover the two deck beams. Check the center line at each end. Check the deck fit to the sheer and transom. The transom-sheer corner often needs some careful sanding. Adjust as necessary. Clamp deck in place for a test fit. When satisfied with the fit, clamp the deck in place, on both sides, with no glue. Then remove clamps, a few at a time, from one side. Lift the deck enough to spread glue on the sheer, deck beams, and transom. Then re-clamp, and clean up glue squeeze out. Repeat on the other side.

Gluing suggestions: Using yellow glue is a good choice here. It allows a longer working time and excess squeeze-out can be removed using moist paper towel, stiff brush, or cotton swabs. Whatever glue you use, first apply it at the stem, the forward deck beam, after deck beam, along the sheer, and finally the transom. Glue can be applied with a flat toothpick. It would be a good plan to practice this maneuver several times before commitment.
Once the deck is securely in place the model can be tilted on its side to allow trickling glue into the sheer joint and to place drops of glue on the deck support knees on the underside of the deck to be sure all joints are secure.

Sand off the paper strip reinforcing the center joints.
Sand off excess wood overhanging the sheer and transom edges. (These photos show the toe rail already in position.)

The tips of some deck support knees may need to be trimmed. Wrap sandpaper around a display stand pedestal dowel to sand the round forward edge of the deck. Mark the place where the mast goes through the deck and drill a 3/16" hole there. Start with a smaller diameter drill and use progressively larger bits or a small round file to help keep the center of the hole on the center line of the deck. Finally, trim the outer stem to be flush with the deck. The bowsprit will cover this joint. (Now is a good time to permanently install the centerboard assembly.)

**Step 27: Coaming:** (collar) Application of the 1/32" x 1/16" material is straight forward. Lay the 1/16" dimension against the deck and glue carefully along the edge. Note on the plan that it is square across the deck aft of the mast.
**Step 28: Bow Sprit:** (5/32" x 5/32" x 4") Shape and taper according to the plans drawing and the instructions below. Taper only the top and sides from the outer stem to the tip. The inboard end is square, the outboard end is octagonal. Careful sanding with a 220 grit sanding board can accomplish this. Carry the octagonal shape from the outer stem to the tip of the sprit. Make a light cut around the tip. Cut away slivers to make the tip round and about 3/32" diameter, with a shoulder to accept the bow sprit band.

**Samson Post:** Make the samson post from a short piece of mast strip (3/16" x 3/16"). When the samson post and bowsprit are finished position them in line with the centerline of the boat then glue it in place. Later a cleat will be positioned as shown on plan for the jib downhaul.

![Image A](image1.png) | ![Image B](image2.png)
---|---
**A**-Hold straight edge to bowsprit blank with clamps to mark taper for top and both sides. **B**-Test fit.

![Image C](image3.png) | ![Image D](image4.png)
---|---
**C**-Bowsprit marked to be tapered on both sides and the top. Do not taper the bottom side. **D**-Top has been sanded flat. Top will be re-marked to show the two side tapers.

![Image E](image5.png)
**E**-Sides have been tapered. Corner edges have been sanded flat to form an octagonal cross-section. Final 4" length has been cut and tip has been cut back and rounded for the sprit band.
**Step 29: Bow Sprit Band and Tang:** Both are made from the same styrene strip. Bend the strip around a drill bit, nail, or other metal wire to get the size and shape. Bring the ears down to a nice tight fit with pliers squeeze together and glue with CA. Using an awl or ice pick, indent a spot to drill. Drill a hole to lash the bob stay on. Then fit it to the sprit end. It will be easier to attach the band before installing the bow sprit on to the boat. Clip and file or sand off excess length of the ears and attach the band with glue. (See Step 41 for bobstay assembly details.)

**Step 30: Tang on Stem:** Glue two pieces of styrene strip to form the tang. Position it on the stem. Carefully bend it to a "V" shape, mark and drill holes. Attach it to the stem as shown, a little below the paint line.
Step 31: Toe Rail: (1/16” x 5/64”) Bevel the end to fit against the bow sprit and cut off excess length leaving it about 1/2” long. Glue in place along the deck sheer edge, in short intervals starting at the bow sprit. After doing both sides attach the piece across the transom.

Step 32: Guard: (1/16” half-round) This half-round piece is beveled to fit against the stem. Refer to the plan midship cross-section to see how it is positioned, with its top edge along the deck-toe rail seam. Proceed gluing as with the toe rail. There is no guard across the transom.

Step 33: Hull Paint: Patch up any dents or imperfections with wood filler. When dry, sand flush with 220 grit. See the paint suggestions in Step 57 and Step 58. Put on a first coat of paint. If the surface is too rough wait overnight and sand gently with 220. Additional coats with or without sanding between coats may be needed to get a nice finish. An optional decoration can be a red stripe under the lower edge of the wale. A 1/32” wide piece of red pin-striping tape from an automotive or hobby store can provide this, or a fine red pen held against the underside of the wale will do a nice job.

Step 34: Tiller: Sand the handle end round but leave the rudder end square.

Step 35: Rudder, Pintles, and Gudgeons: Smooth the rudder edges. Make up the two cheek pieces by beveling as shown. Glue one of the cheeks to the rudder head trying not to get glue where the head will be cut away to accommodate the tiller. (See the plans and photos.) When the glue is dry carefully dry-fit the tiller between the dotted lines. Mark and remove that bit of rudder head. Glue on the second cheek. Use a toothpick to remove excess glue from inside the slot. Insert the tiller head into the slot and trim, if needed, for a good fit. Sand the rudder head as needed to even the surfaces. Hold the rudder-tiller against the stern-post so the tiller clears the deck and is under the horse. Tape in place and mark pintle and gudgeon positions as shown on the plans. Use a straight pin to start a hole. Carefully nip the ends of the eyebolts and pintle pins with nail-clippers to leave a sharp point. Grasp with chain-nose pliers and push the eyebolt gudgeons into the stern-post and the pintles into the rudder. Secure each with a tiny drop of glue.
Step 36: Bottom Paint: For color discussion see Step 57. Mark the paint line at the stem and sternpost. Place the model firmly supported on a flat surface. Position the rudder and prevent it from moving with a clamp across the joint. Measure and shim as needed to level the model fore-and-aft. Measure from the table to the sheer at the same point on each side amidships to make it
level side-to-side. Pieces of dense foam are convenient to block the hull in a stable, level position. Put a modest weight (sand in a zip-lock bag works well) inside the model to help stabilize it and prevent it from moving. Adjust the model fore-and-aft and side-to-side by using shims as needed until the boat is leveled all around.

Put a fine point on your pencil and glue it to a block of wood. (Dense foam used here.) Shim the block so the pencil glued to it just touches the pencil marks on stem, and sternpost. To establish the water line drag the block with the pencil on top around the hull, including the rudder. Do this carefully without undue force so as not to dislodge the model. Put thin masking tape around the hull and rudder. After it is applied and rubbed down well, paint a thin coat of acrylic matte medium on the edge. This helps prevent "bleed under" of the next coat of color.

**Step 37: Mast:** (3/16” x 3/16” x 24") Cut the blank to 18” long – the finished mast will be 17” long. The ends are often deformed during the rounding process and will be cut off before installation. Make the mast round. Starting about 5” from the mast bottom, taper the square stock to 1/8” at the top. This is best done by marking the taper on the blank, then laying the mast blank on a table top and using a sanding board. Once a square taper is achieved use a soft pencil to cross-hatch all four surfaces from top to bottom. Then, by sanding down the four corners, make the spar into an octagon. Take care to have the resulting eight flats of uniform width throughout the length. Bend a piece of #150 grit sandpaper around the mast and while holding it reasonably snug, pass the sandpaper up and down the mast while turning the mast between your fingers. The idea is for the rounded sandpaper to take off the high ridges but not the pencil marks on the flats. Keep the mast turning and keep moving it up and down – stop and check your work frequently – pay attention to your pencil marks – renew them as needed. When they finally disappear your mast will be round. Be careful not to have it form an oval cross-section. It may require some judicious corrective sanding here and there for a good looking round taper. When finished making the mast round cut off the top and bottom for a finished length of 17” – round the ends.
Rounded sandpaper takes off high edges

When mast has a nice taper and a round cross-section fit it into the hole in the deck (mast partners). Cut off the head of the small nail, drill a hole in the heel of the mast and insert the nail with a drop of glue.

**Step 38: Stepping the Mast:** Use the mast guide so that one edge rests on the deck and the other leg extends along the mast. Then align the mast in the side-to-side plane. A useful trick is to level the sides of the hull by sighting the sill of a window across the room, then adjust the mast to the vertical window frame. When all looks right push the nail into the mast step. Press it down on the step so that the nail makes a depression for drilling 1/16" hole. Drill the hole.

"T" track assembly:
Hold the mast on a flat surface with a clothes pin clamp at each end after having marked where the track ("T" section) will be. Start by applying glue to one end of the "T" and glue it to the mast. Be sure it is square and straight on the mast. Then work carefully to the other end, dabbing glue every inch or so. A good tool to do this is a toothpick sharpened to a point on one end. Once the track is in place carefully dab glue along the entire length of the track. This is tricky but a good straight job is a boost to morale. Place the mast on the plan and mark the locations of the sail attachment holes. Then carefully drill them.
Gluing the "T" sail track to the mast is tricky. Clamp the "T" gently at each end – carefully stretch it straight from end-to-end. Be sure it remains upright and does not lean over. It can take several tries to get it correct. Using a fine toothpick tip place spots of glue along the track. Now is the time to check alignment and make corrections if needed.

Finally, apply a bead of glue along both sides of the track. When dry trim to the length shown on the plans.

The sail track holes have been marked as shown on the plans. These holes were drilled with a cut straight-pin drill bit. The mast is basswood and soft enough that holes do not need to be drilled into it for the eyebolts. Make a starter hole with a straight pin, cut the tip of the eyebolt at an acute angle to create a sharp point, and push the eyebolt into the wood.

**Step 39: Boom:** (1/8" dia x 13 ½") Gently sand the after end of the 1/8" dowel so it has a pleasing tapered shape and a rounded tip. Cut or sand flats on either side at the mast end for the boom jaws. Glue the jaws in position as shown on the plans. Fine sandpaper held around a small pencil or other round tool can be used to smooth any irregularities in the jaws.
Tape 1/32" thick scrap shims as shown. Sand flat surfaces on each side of the end of the boom. Place the boom in the space between the shims. Hold the boom jaws in position on the flats as shown and place small drops of glue at each end – be careful not to glue to the shims. When tacking glue is dry remove from this jig and run beads of glue down each side of each jaw for final secure fixation. Use fine sandpaper to gently round sharp corners and edges.

Boom jaws glued to flats sanded on the boom sides. Fine sandpaper wrapped around a small drill bit was used to finish the boom jaws end. Holes pre-drilled in the boom for the eyebolts – a drop of glue secures each and the ends are snipped off and sanded smooth.

**Step 40: Jib Club:** (3/32" dia x 4") Round the ends of the club. Use a piece of 1/32" scrap to fashion an eye strap to be placed as shown on top of the club. A good way to do this is to first glue a partially shaped piece to the club – then drill the hole – then sand to shape. It is easier to hold the club than a tiny piece of wood. Make 3 holes in the jib club as shown on plan.

Eye strap scrap in place, hole drilled and marked for final sanding to shape. Excess material can be trimmed away first with nail clippers.

**Step 41: Bob Stay:** Use the very fine wire to lash the chain to the turnbuckle. Then, lash the turnbuckle to the bow sprit band. Tilt the boat to let the chain hang in position next to the tang; use tape to hold it there. Then lash the chain to the stem tang. Snip the twisted wire to leave a short tail and bend it back out of sight. When all is snug place a drop of CA on the fine wires to secure them. Cut off excess chain. The chain can be painted with silver to simulate the galvanized chain used, or white, or black, as these colors were used as well.
Note the fine wire lashings – try to make two loops through the holes. Molding flash has been sanded from half of the turnbuckle.

The blue tape holds the chain in position while the tang lashing is made. Snip twisted wire leaving a short end; bend it back and secure with a drop of CA.

**Step 42: Deck Horse:** Place a block on the split ring (traveler, rider), slip it on the horse and pinch the ring closed. Drill 2 holes in the after deck as shown on the plan. Adjust the legs of the pre-formed wire horse so it clears the tiller. Secure the horse with a drop of glue at the deck.

**Step 43: Belaying Pins and Jam Cleats:** Drill a 1/16" hole, port and starboard, for the belaying pins where shown on plans. Cut two pieces of 1/16" dowel, about 1/2" long; do not paint. Round their ends and set them into the deck with glue. Make a jam cleat to the configuration shown, scratch paint off a spot to glue it, and dab a little white paint on the cleat after it is in place.

**Step 44: Fairleads:** Sharpen the end of the eye bolts to be used as fairleads. Place one on the bow sprit, one on the mast and two on deck, as shown on the plan. In harder wood it may help to make a pilot hole with a straight pin.
**Step 45: Finishing Spurs:** Mast, boom, and club can be painted white, or stained and varnished, or stained and left uncoated. Any of these options would be authentic to the times. (See Step 58, pg 37) An optional touch on the mast track is to paint the flat surface and edges with gold paint to simulate the brass track material. On the track, layout the position of holes to be drilled. These are for lashings to the sails to simulate track slides. (Step 49) Use a straight pin to make a pilot hole on each side of mast to take the brass cleats for the main and jib halyards.

**Step 46: Blocks and Eyebolts:** When holding the blocks care is needed because they tend to come alive and explosively fly off into space. They are not easy to find. A wire "handle" can help prevent loss. The sheaves on the blocks (the hole where the line goes through) need to be opened with a drill slightly larger than the hole. Then place a length of wire through the sheave and kink the ends so the block cannot slip off. This will serve as a handle while you prepare the block for use. Drill out the becket nearest the sheave hole to receive the eyebolt wire. Trim off the unused becket. Remove molding-flash with file or fine sandpaper. (Finger-nail files are an excellent tool for this job.)

Use eye bolts to attach the blocks to boom and mast. Be careful not to break the beackets. It will be necessary to pre-drill the harder wood of the boom. Use clippers to cut a point on the tip of the eyebolt, grasp with chain nose pliers and push into place where shown on the plan.

**Rigging threads:** The kit contains two sizes of rigging thread; thick and thin. Thick is used for main and jib halyards, main and jib sheets, and jib downhaul. Also for the main sail and jib sail luff rope and foot rope. Thin is used for lashings to bend (attach) main sail to mast T-track and boom, and jib to the club. Also to make main sail reef points.
**Step 47: Sails:** As each model will be a bit different some adjustments to the sail size and shape may be needed. Use the plans as patterns to draw the sails and make the layout on the cloth. It might be necessary to iron out wrinkles or fold marks in the cotton before the layout.

"Stitching" has been drawn on both sides. Pins hold cloth in place on foam-core board and hold line in place along sail luff and foot edges. (Brown thread and black foam-core board used for picture purposes.)

**Main sail**
The direction of the cloth thread should lie with the main sail leech (the longest edge). Cut sail about ½” over-size along each edge. Pin each corner to corrugated-cardboard, foam-core board, or cork board over a layer of wax paper to prevent glue adhesion to the board. Draw all of the "stitch" seams with pencil on both sides. See plan for their spacing and locations. Locate the reef points with a pencil point mark. The main luff (edge along the mast) and foot (edge along the boom) should be reinforced by gluing a length of thick thread along them and along the leech edge for about ¾" as shown in the jib example picture.

**Jib sail**
The direction of the cloth thread should lie with the jib sail luff (the longest edge). Cut sail about ½" over-size along each edge. Pin each corner to cardboard, foam-core board, or cork board over a layer of wax paper to prevent adhesion to the board. Draw all of the "stitch" seams with pencil on both sides. The jib luff and foot (shortest edge) should be reinforced by gluing a length of thick thread along them and along the leech edge for about ¾" as shown in the jib example picture.

**Gluing**
Once the threads are satisfactorily positioned and pinned in place they must be glued to the cloth. Acrylic matte medium and thick fabric glues are good choices. (Some fabric glues are thin and do not hold well.) Cyano-acrylic glues are brittle and may crack the cloth. Apply the glue carefully with a small brush or toothpick – be sure to saturate the thread and cloth to create a strong bond. Be sure to saturate the leech edge too, to prevent fraying after it is trimmed. Allow the glue to dry overnight and then trim with sharp scissors.
Step 48: Reef Points: Place two pins about 3" apart into a piece foam-core board or cork board. Wrap thin thread around them carefully about 5 times so the wraps do not touch. Moisten the thread with matte medium or fabric glue at the pins. When dry cut the threads midway between the pins. You now have about ten reef lines. Thread one leg on a needle and pull it through the sail. Gently tape the two ends in position on the sail and place a drop of glue in the needle hole.

(Rigging thread note: From now on a very useful trick when using thread is to harden the end into a kind of needle. Place a small drop of CA on about ½" - ¾" of the thread end and roll it between your fingers. This is a bit messy but the glue is easily removed from your fingers and the thread can now be pushed through the blocks, eyebolts, and sail track holes with relative ease.)

Step 49: Bending Main to Boom: (Paint or stain the boom first.) Stretch the foot of the sail along the boom and lash it to both the tack eye and clew eye. This procedure can be done with the sail lying on a table. An overhand knot with a drop of white-glue will suffice to hold the knots. Select a needle suitable for the thin thread and lace the sail to the boom using a hitch at each place to give it the appearance shown in the plans. This will require about 36" of thread.
Attach the thick thread halyard to the mainsail head using a needle to thread it through. Tie with an overhand knot and a drop of glue. Cut off enough length to go down the mast and make fast to the cleat with a tail long enough to make a coil.

**Step 50: Bending Main to Mast:** Refer to the plans. (Paint the mast and sail-track first.) Step the mast and secure it with glue. Reeve the halyard through the mast-head block and ship the boom-jaws on to the mast. (Use a bit of tape to hold the jaws to the mast until all is secure.) Hoist the sail into position. Make the halyard fast to the starboard mast cleat and secure with a drop of white glue. Leave a long tail to make a coil lying on the deck; trim off excess line. Cut 14 pieces of thin thread, each about 3-5" long, to lash the sail to the track. Pass thread through the hole in the track then through the sail near the luff edge. Tie with an overhand knot secured with a drop of white glue. Trim with nail clipper or fine scissors.

**Step 51: Main Sheet:** Tie the main sheet (thick thread) around the boom, reeve it through the traveler block, through the two blocks on the boom, and finish with a figure-8 around the belaying pin and a half hitch against the coaming. Leave a coil on the floor boards. To simulate coiled lines do the following: put a half dozen or so turns of thread around a finger, and after slipping them off wrap the remainder crosswise like coiled line. Secure with a drop of glue.

**Step 52: Rig the Jib:** (Finish the club first.) Refer to the plans. Lash the jib to its club as shown. Put enough line through the eye strap on the club to tie the down haul to the cleat on the bow sprit. Rig the halyard as shown. Attach the jib sheet to the club. Hoist the sail with the halyard. Adjust with the downhaul and halyard for the position as shown. Secure the halyard to its cleat and the down haul to its cleat. Run the jib sheet through one of the fairleads on deck and aft to the jam cleat. Secure with a slipped half hitch and let a small coil, held with a bit of glue, lie on the floor boards.

**Step 53: Mounting Base:** Sand the board. Be careful not to round the edges of the beading. Finish with #220 grit. Stain, if you like. The surface finish can be paint, shellac, varnish, or wax. Treat the pedestals similarly.

**Step 54: Pedestals and Mounting Model:** Sand the slots in the pedestals to fit the hull shoe. Position the pedestals in the base holes and the boat on the pedestals. Try to mount the model to have the paint line parallel to the base. Adjust the pedestal length if needed. Check for horizontal and vertical, especially athwartships. Secure the pedestals with drops of glue.

**Step 55: Permanent Mounting:** Put glue on the sides of the notches in the pedestals. Set the model firmly in place. Done.

**NOTE:** It is a good idea to protect the model from dust and damage by placing it in a glass or Plexiglas case.

**Step 56: Painting:** Some find it easier to paint as they go along. Some like to wait until construction is finished. It is a little easier to sand and paint the interior before the deck goes on, but not necessary if you wish to do it later. Avoid getting paint on the keelson where the centerboard trunk will be, the
tops of the deck support knees, and sheer, and on other surfaces where glue will be used later. Try to always glue wood-to-wood and not to paint. The floor boards, centerboard structures, rudder, mast, boom and other small parts can be painted at your discretion.

**Step 57: Paints:** Chesapeake Bay work boats were almost always painted white on the sides, decks, and centerboard trunk. Flat white house paint was the least expensive to buy, reduced sun glare and heat, and helped the underlying wood resist the drying effects of the hot summer sun.

Acrylic artist's paints in suitable colors are readily available in many crafts and hobby stores. They also have good quality paint brushes (1/2" and 1/8").

Thinnly apply the paint using several coats. Avoid thick glossy paint effects. Use fine masking tape where needed.

Titanium white is perfect for the sides, deck, trunk, and other white parts.

Unbleached titanium (a light tan) can be used on the deck as an alternative to white.

The bottoms were painted with an anti-fouling paint containing copper to prevent growth of barnacles. Local watermen still refer to this as, "coppering 'er bottom." Burnt sienna (a reddish-brown) matches the copper bottom paint of that time perfectly.

The interior hull planking might be white or light gray, but often was painted with a mixture of pine tar, linseed oil, and turpentine meant to preserve the wood against rot. The pine tar coating is mimicked well by a blotchy pattern of burnt sienna and burnt umber (a dark brown).

Floor boards were often a very light gray. Most gray paints need white added to be light enough.

Spars (mast, boom, jib club). These were finished in a variety of ways – choose yours. Some were left unfinished to weather naturally to a pale gray/brown shade. Some had the ends painted white and the middle varnished – or not. Some were painted white the full length. Whatever you select it will be true to the time.

**Step 58: Knots**

You will need to tie several small knots. The best way to learn how to tie these knots is to visit them on the internet – the tutorials are terrific.

- **Clove hitch** – This is used to tie the main sheet to the outer end of the boom. Be sure to place a small drop of thin fabric glue or white glue on it to hold it in place.
- **Square knot** – Use square knots to tie the clew and tack of the main and jib to their spars. Also to tie the mainsail luff to the sail track. Once all are adjusted and tied use a drop of fabric or white glue to secure them.
**Cleat hitch** – The main halyard, jib halyard, and jib club downhaul are made fast to the small brass cleats. The main sheet is made fast to one of the belaying pins. These all require cleat hitches.

**Slip knot** – The jib sheet is secured with a slip knot made in the sheet and wedged under the jam cleat (thumb cleat).

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We hope you have been able to make a nice model of this classic Chesapeake Bay crabbing skiff. If you have questions or comments please contact the CBMM Model Guild via: http://cbmm.org/learn/model-guild-sailing-club/

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**Glossary**

Many terms are illustrated on the plans sheet and sail pattern sheet. More pictures and definitions can be found, of course, online. Remember that locally some terms are used in ways that are a bit different than you will find in your area or online.

Becket – The eye on a block used as an attachment point.

Bend – Term used to describe attaching a sail to a spar with line. Another term for wale. Also a type of knot.

Chine – The corner edge where the topsides planks of the boat meet the bottom planks. *Lark's* is a "hard chine" as it forms an angle and is not "soft" or "round."

Chunk – Another local term for a log or other large block of lumber. Especially those used in forming the bow fore-foot of a deadrise vessel.

Cleat – 1-A fixture used to secure a line – usually has "arms" or "horns" to wrap the line around. 2-A board used to hold other boards together. In this model cleats (floor beams) hold the floorboards together. Some builders refer to the side frames as cleats.

Deadrise – The deadrise angle is the angle formed between the boat bottom and a horizontal line, thus forming a wide "V" bottom shape. Locally "deadrise" is often used to describe a boat itself built this way.

Fairing batten – Any long flexible piece of wood placed across a series of molds. The batten should form a smooth curve and touch each mold. The curve is then “fair” if it has no high or low spots.

Fore-foot – Space at the bow between chine and shoe. Filled here with chunks; in other boats with "staving" planks.

Gudgeons - Are the part of the rudder hinge mechanism attached to the stern-post. They usually include an eye. See pintle.
Halyards – The lines (ropes) that haul the sail to the top of the mast are called halyards. This term is from the days when they hauled the yards (wood sail-support poles) into position.

Keelson – Keel – The keelson is the main longitudinal structural member inside the vessel. Most Chesapeake Bay wooden boats have a substantial keelson just like Lark. A keel is the longitudinal structural member outside the boat. Lark does not have a keel, but does have a skeg.

Log – As in chine-log, trunk-log. For 200 hundred years work boats on the Chesapeake Bay were hewn from tree logs to build log-canoees and a variety of larger craft. The logs were referred to as "chunks" and "logs." When the boat builders began to build with planks in the mid-1800s they continued to use the same term (log) for a plank serving the same function, in the same location, as a hewn log would have in past construction.

Pintles - By definition are the part of the rudder hinge mechanism attached to the rudder. They usually do include a "pin." See gudgeon.

Sheer – The corner edge of the boat where the deck planks meet the topsides planks.

Sheets – The lines (ropes) that control the sails are called sheets. This skiff has main and jib sheets.

Wale – (Bend) A heavy side plank used at the sheer for reinforcement.

Members of the Model Guild of the Chesapeake Bay Maritime Museum researched and assembled this model of the sailing skiff in the museum's collection.

We are interested in your comments or questions.

We can be reached through the Museum phone: 410-745-2916.

Chesapeake Bay Maritime Museum
Model Guild
St. Michaels, Maryland
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