LOOKING GOOD AGAIN

A Refinishing Story

by Maynard Bray

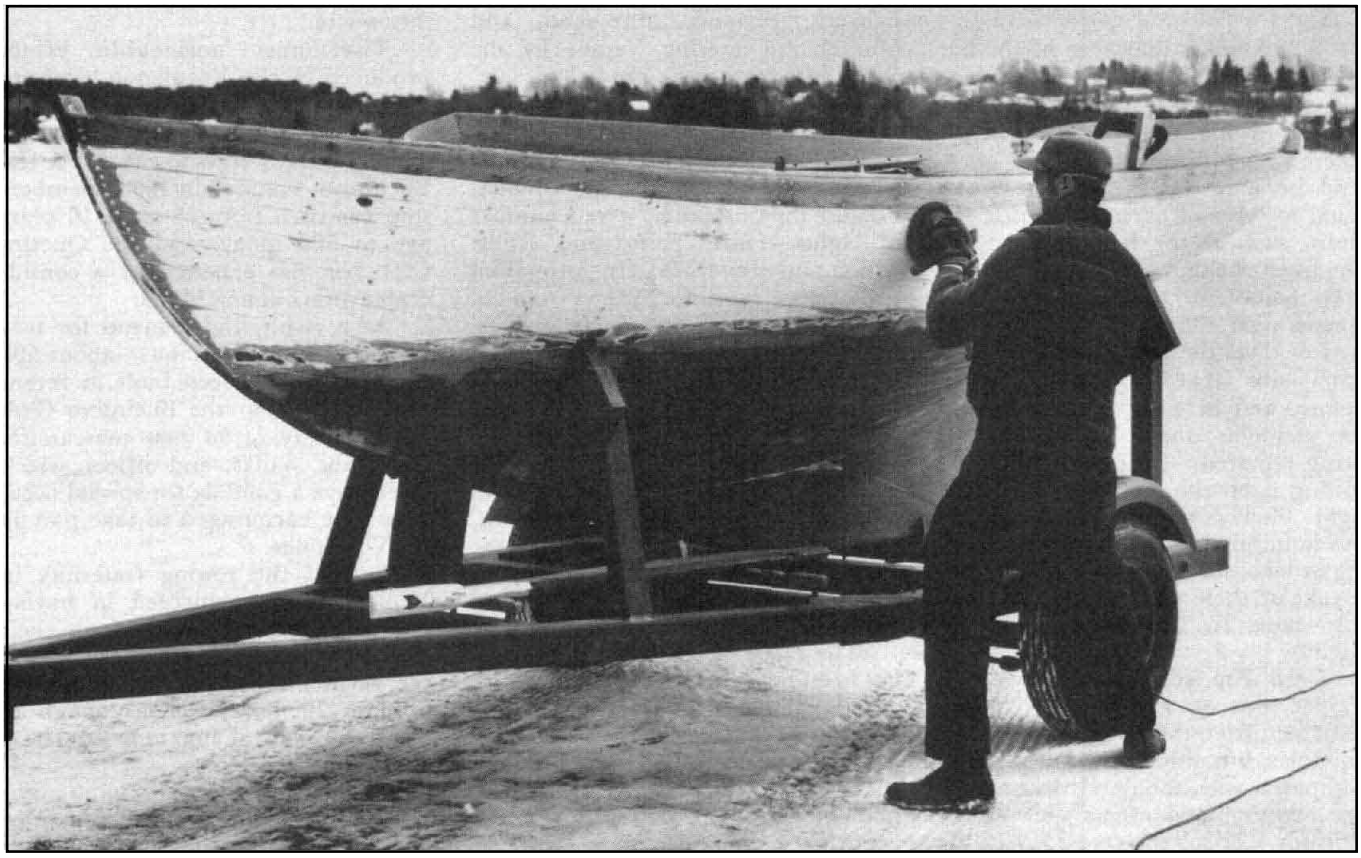
Photographs by Benjamin Mendlowitz

The scene is Riverside Boat Company in Newcastle, Maine; the time is January 12, 1981; the temperature is 12 degrees at 12 noon. Paul Bryant, who runs the yard, is beginning to sand the Herreshoff 12 1/2-footer WHITE CAP, which is scheduled for a thorough refurbishing. He's doing this outdoors where at the end of the working day the temperature will have dropped to 7 degrees.

Working with the weather, and in spite of it when he has to, is something Paul has grown up with. The yard was started by his father, and Paul has worked there since he was in the sixth grade. With only two other men besides Paul, the yard maintains about 70 of the 90-odd boats it stores and does as good a job of it as you're likely to see anywhere. With few exceptions the boats are stored outside under canvas covers during the winter, and the smaller ones are cycled through one of the two heated shops a few at a time until the weather breaks and the others can be worked on outside.

Riverside faces conditions similar to many do-it-yourself owners: outside storage, limited time for each job, a schedule to meet, and the return of the same boat season after season. Understanding how the yard gets all its work done would, we feel, be of great interest to our readers, and for nearly a year now we've been learning from Paul and recording his work all on film. Presented here is only part of that story—the approach to a single refinishing job from beginning to end—in time (we hope) to help you with your spring painting. Later this year we'll cover a variety of other things about Paul Bryant and his effective ways of caring for and repairing wooden boats.

ABOUT THE BOAT: WHITE CAP is one of the so-called 12 1/2-foot (waterline) class built by the Herreshoff Manufacturing Company of Bristol, Rhode Island. She is gaff-rigged and her overall length is about 16'. The class was designed by Nathanael G. Herreshoff, and the first boats, which were for use on Buzzards Bay, were introduced in 1914. WHITE CAP dates from 1929 and carries HMCo hull number 1107. It was with the cooperation of her new owner, Mr. H.W. Detert of Norway, Maine, that these photographs were possible.



Quotations by Paul Bryant

Power Sanding

Note: Brand names are used throughout this article in order to describe accurately the tools and materials Paul Bryant uses. Woodenboat feels that, in most instances, there are equivalent products by other manufacturers.

Heavy-duty disc-type machines, held flat and kept moving, are used whenever possible, because they're the fastest way to fair and smooth a surface.

For fairing and shaping and for stripping off paint and varnish, the coarser grits of a very abrasive heavy paper called "greenbak" (like that used in floor-sanding edgers) on a firm pad in a medium-speed (5,000 rpm) grinder work best. A slower machine can be used, but it takes longer.

The finer sanding for smoothing up painted surfaces and feathering off flaked paint is best done with a low-speed (2,000 rpm) disc-type sander/polisher with a soft foam pad. A higher speed machine heats up the paint, making it so gummy that it clogs up the grit of the finer papers. Neither a vibrator nor a belt sander are used much, since they don't do as good a job and are slower working.

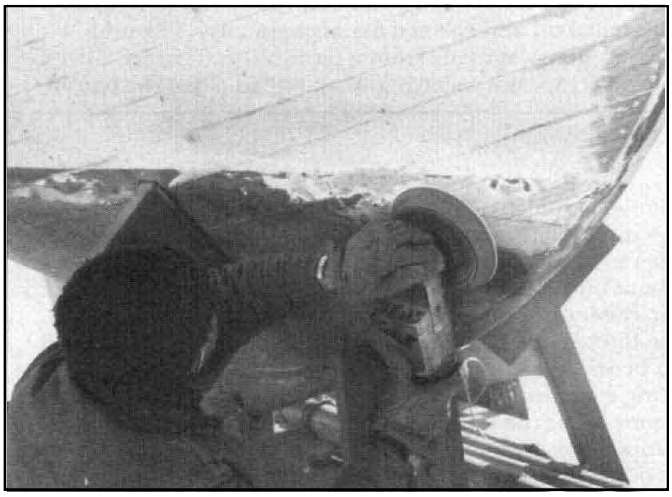
The two machines favored by Paul are the Black & Decker model 4046 grinder (4,800 rpm) with a very firm phenolic pad and 7" Norton "Bear" brand "greenbak" metalite abrasive discs (#16-80), and the Rockwell model 661 (2,000 rpm) with a Norton 8SR-K sanding-pad kit and 8" diameter aluminum-oxide production-paper sanding discs (#36-220). Norton No. 10 disc adhesive, a type of contact cement, holds the discs to the foam pad.

The initial hull sanding and fairing, which included the bottom, took about five hours and consumed about 25 discs from #36 to 120 grit. Generally the topsides were sanded with # 100 and #120, the boot-top (which was taken more or less down to the wood for rescribing) with #80 and #100, and the bottom with #36.

"When stripping paint off a hull, I have found a *#16* disc on a grinder to be much quicker than burning, and if the hull is cedar planked, it is most difficult to burn the paint off without getting slivers. And grinding requires a lot less trowel cementing."

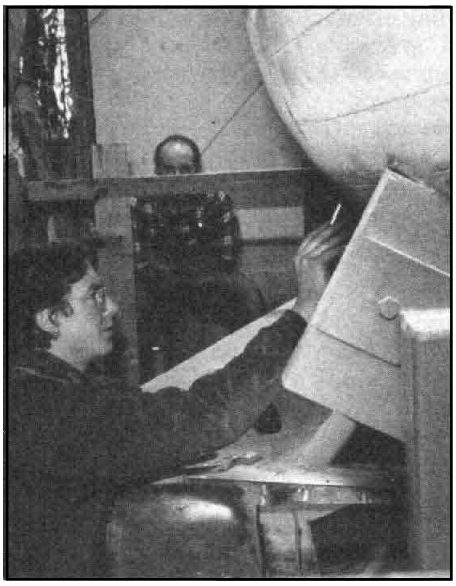
Getting rid of old paint and varnish and fairing off WHITE CAP'S transom is a snap with this grinder. The coarse # S6 disc makes a quick job of it, and the firm pad enables one to build up more pressure for grinding off troublesome spots, aids in fairing the surface, and leaves crisp comers at the plank ends. Some further smoothing with #50, 60, and 80 grits is then done before changing machines. 1

The rest of the transom smoothing is done with a foam pad on the low-speed machine, starting with #80 grit and going to # 100 and 120. Care must be taken at the sharp corners to avoid rounding them over. The entire process of stripping and sanding this transom took only about half an hour, and when it was finished there were absolutely no sanding marks, and the surface was ready for refinishing. A dutchman, however, was later fitted in way of the upper rudder gudgeon where the wood had gone bad. 2



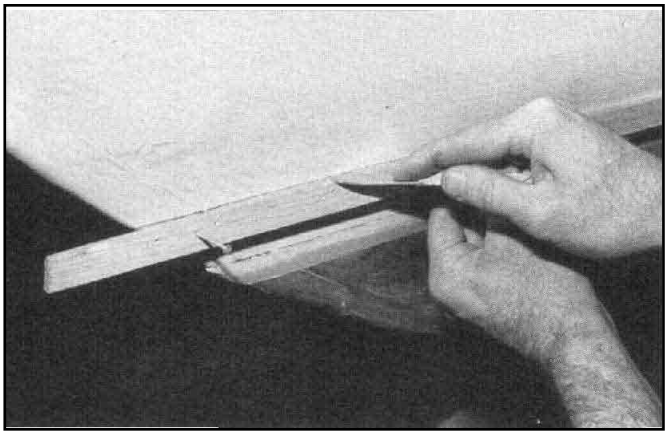
A foam-backed disc is the most effective way to smooth up a hull for painting. Used with #60, 80, or 100 paper, it does a beautiful job of knocking down the high spots and feathering out the transition between painted and unpainted surfaces. Provided the paper is sharp, that is. It's a waste of time to use dull discs; they only polish the surface without fairing or feathering it. When feathering by hand, a coarse grit, say #60, will do the work faster and better—just as with the machine. Final sanding (power or hand) at this stage will be with #120 grit paper. 3

Scribing the Waterline

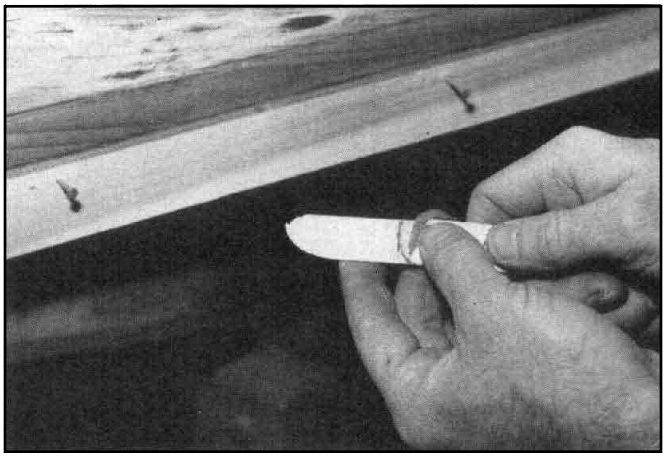


A crisply painted level waterline goes a long way toward making a paint job look right. There are a number of ways to mark it so it's level, but one of the simplest and most direct was employed on WHITE CAP. (Her existing line, like the waterlines on so many older boats, was neither straight nor decisively marked.) First off, the boat is leveled athwartships and two straightedges running in that direction are set up—one forward and one aft as shown in the photograph. These, of course, must also be made level. From there on it's a case of one person "sighting in" on the imaginary plane between the two straightedges while another person adjusts the pencil until it corresponds with that plane. Gordon and Jason are doing that in the photo, making marks on the hull about a foot apart. 1

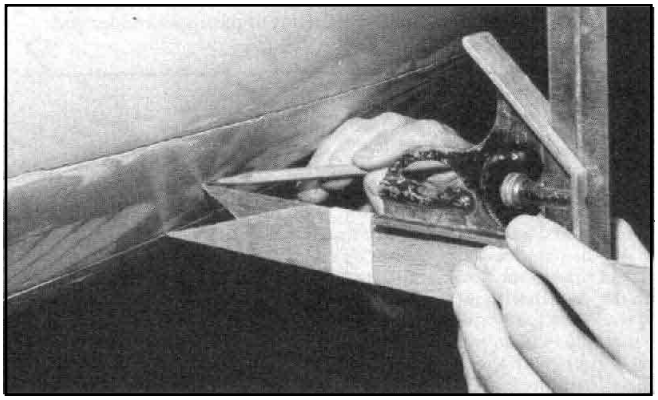
The individual marks are then connected with a continuous pencil line by means of a stiff batten held on edge, that is, held square with the waterplane. This batten is hand held as shown and need not be very long. 2



A full-length batten, flexible enough to conform to the marked line when temporarily nailed against the hull, is placed so its top edge is on that line. 3



Scribing tools can be adapted from worn-out hacksaw blades or files, or whatever else is handy and can be used to cut a good scribe line—one which is sharp enough to look good and deep enough to last for a few years. Scribe lines are a great aid in painting the waterline or boot-top but they all fill up with paint eventually and have to be battened off and cleaned out occasionally. The tool shown here was made from a piece of 1/16" brass, filed so it will scrape out a shaving when pulled along the batten. 4



For each width of boot-top, a set of these sliding wooden pointers has been made up, a 1 1/4" wide pair being used here. The assembly is kept level (by means of the spirit level built into the tri-square) , while the lower pointer is placed in the scribe line representing the waterline, and the top pointer is slid into contact with the hull and marked with a pencil where it touches. From there on the process of getting a scribed line at the top of the boot-top is exactly the same as for the waterline. No seam compound has yet been applied to the topsides, so the open hull seams are much in evidence. 5

Stripping the Brightwork

Using only scrapers, always kept sharp with a file, most of the varnish is stripped off. (A single application of chemical paint remover on the coamings speeded up the work a bit by softening the surface coats.) All the wood is oak and was weathered and stained in places. Careful scraping gets rid of most of the discoloration—bleach has been found ineffective and is not used at all. Almost all the scrapers have at least a slight crown to their blades, so sufficient pressure can be brought to bear on a flat surface and peel off a good shaving. Grinding and filing can shape them to fit about any surface. A fair amount of strength is needed for good control, however; otherwise the tool is inclined to chatter, or the corners, even if filed off a bit, tend to dig in.

It's often easier to remove all the metal fittings than it is to scrape, sand, and varnish around them. WHITE CAP's were all taken off before any scraping began. The entire stripping and scraping job on this boat took about four hours.

If you've never wooded down a round spar by dry scraping, by all means try it. It's the quickest method by far, and you don't need a great deal of strength. Just keep the scraper sharp by frequent filing (use a flat mill file). The small and convenient wooden handle is yard-built—only the hardened steel blade came from the store. It was simply screwed to the handle. 1

A fairly wide and slightly crowned blade is best for flat surfaces. Here, with the varnish all removed, the weathered wood is scraped away to expose the oak's real beauty. The big-handled commercial scraper is OK here where two-handed force is needed. 2

A small scraper, guided by the left hand and drawn along with the right, does a fine job of getting into the corner between the sheer strake and the covering board and cleaning out all the old varnish and discoloration. Some of the other scrapers and the ever-present sharpening file are lying on the deck, along with a putty knife. A chisel or sharpened putty knife is sometimes useful in getting into corners where a scraper won't fit. 3

"When stripping varnish, I have found removers both messy and time-consuming and feel that a good scraper, kept sharp, is the quickest method. I use several sizes and have made up some small ones for tight corners. Keep a file handy and sharpen your scraper frequently."

A convex scraper mates well with the concave shape of the Herreshoff molded sheer strake. A deft touch is needed, but it's not difficult to develop such a "feel" after a bit of practice. 4

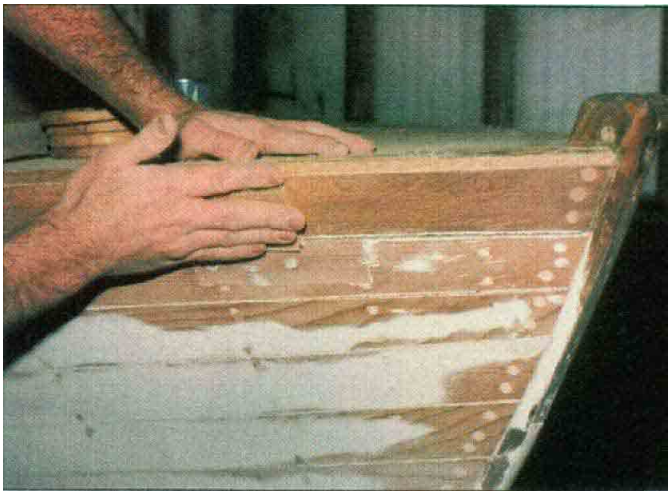
Sanding the Brightwork

Sanding is the most tiring of all jobs, and more than a man-day of hand sanding alone was done on this boat — and that just on brightwork. Coarse #40 and #60 paper makes the work go faster, but it's still a big task to recover from a period of neglect (this is WHITE CAP'S first year at Riverside). Sanding is done with the grain and a backing block is used on uneven surfaces to make them fair. Six sheets of *#40,* a couple of *#50,* one of #60, and two of #80 were used before the brightwork was ready for final sanding with #100 and refinishing. The feathering of peeling brightwork which has not been stripped is best done with coarse (about #60 grit) paper after which the scratches can be sanded out by going "through the numbers" to #120.

The basic sanding technique is back and forth with the grain of the piece being sanded. A sanding block sometimes helps cut down the high places or even cut away the scraper marks, but much of the work is done with the folded piece of paper itself. Gloves keep the skin from being abraded. 1

Torn into small pieces, the sandpaper fits into tight places. 2

The sheer strake is sanded fair with the aid of this drum made from a short length of plastic drain pipe around which a sheet of sandpaper has been taped. 3



The rest of the sheer strake is done barehanded in order to feel any unfairness. 4

A sanding block held like this evens out the edge of the newly installed covering board. Loose or blackened bungs in the sheer strake and coaming were popped out and renewed, and the new ones were glued in with quick-setting epoxy. Great care must be taken during all hand sanding to keep from Founding off any corners which should stay crisp. 5

A strip of sandpaper wrapped around a putty knife gets into tight comers 6

Moisture leaking in behind imbedded woodwork or joints is the greatest cause of lifted and discolored varnishwork. Rebedding is an effective solution, and that's what is being done here with these trim pieces. The opened joint between the top of the stern knee and the transom will be filled with a fitted wedge, since a warped transom plank prevents the joint from being drawn up tightly by refastening.

Filling and Surfacing

WHITE CAP'S hull has dried out and her seams, particularly topside, have opened up. She'll swell again after a time overboard, so a soft, nondrying seam compound that will squeeze out is called for. Paul chose Interlux No. 31 and is planning to resand and repaint the hull again in mid-season once the seams have come together. In the future such excessive drying out will be prevented by a good buildup of paint and by keeping the boat out of the hot sun or heated sheds while ashore (except for a brief annual visit to the marginally heated paint shop) . Trowel cement, Interlux No. 93, is used on nicks and scrapes; in subsequent years it will be used in the topside seams also as long as they haven't opened up.

A wide flexible putty knife assures an even application of seam compound and trowel cement (no sanding is planned afterwards), and masking tape keeps the compound from getting into the grain of the yet-to-be-varnished sheer strake. A good vacuuming and priming is needed before the seams are filled with compound and before the hull planking is faced up with trowel cement; neither substance sticks well over dust or bare wood. 1

Paul uses a combination filler and stain as a base for all brightwork. He used Interlux No. 1643, a natural color, on this oak and thins it out to a brushing consistency with turpentine, brushing liquid (Interlux No. 333), or special thinner (Interlux No. 216), depending on the drying conditions. The excess is rubbed off after a few minutes and the remainder is allowed to dry overnight just as is a fresh coat of paint or varnish. The filler-stain's purpose is two-fold: it fills the open grain and enables a glass-like varnish job, and the protection of the surface that goes with it, with fewer coats, and it gives a more uniform appearance to the wood—some of which is old, some new, and some a bit weather stained. 2

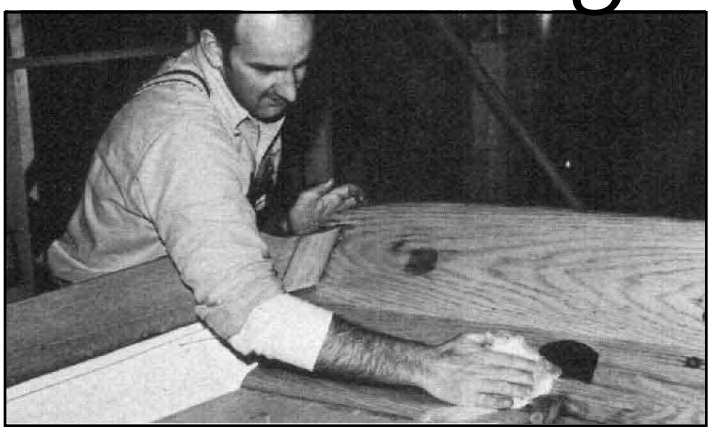
Build-Up

From this point on it's a case of building up enough coats of varnish and topside paint to give good protection and appearance. This amounts to three coats of topside paint over the first thinned-down coat (for best adhesion Paul used Interlux No. 220 semigloss right over the bare wood and for the subsequent coats as well) and five coats of varnish (Interlux No. 90) —the first one cut about 25% with turps. Sanding is needed between all coats; # 120 grit is used with a fairly light touch on both the varnish and the paint. Each sanding is followed by vacuuming and wiping down with a tack rag to eliminate dust, and each new coat of paint is preceded by facing up with either trowel cement or seam compound, as appropriate, in order to have the hull virtually flawless when the buildup is complete. Trowel cement, if used after the buildup (i.e., just before the final painting) will cause flatting out of the gloss by "flashing through" the finish coats.

Final Sanding

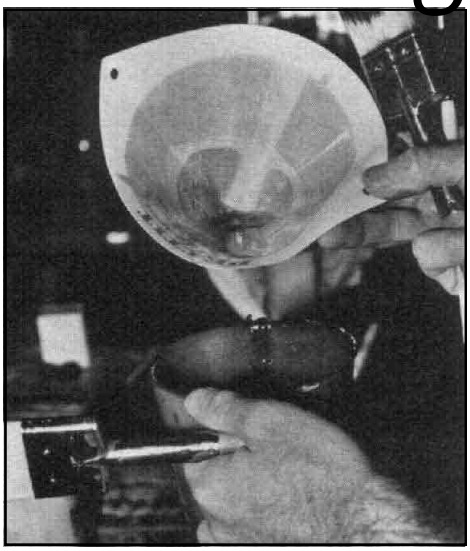
This consists of hand sanding the varnish with #150 grit paper and machine sanding the paint with #220. As always, the varnish should be sanded insofar as possible with the grain of the wood, and care must be taken to go very lightly, if at all, on the sharp corners, as on the toerail, for example. Once the buildup is complete, Paul never sands the sharp corners, feeling that they are vulnerable to wear in service and need all the varnish they can get. Yet inside corners, such as those at the base of the coaming, often don't get enough sanding, so for good adhesion, it's important to be thorough there.

Final Cleaning



Dust and dirt are the enemies of high-gloss finishes, and are most commonly produced by a dirty surface to begin with, dust in the air, which settles on the surface while it is still wet, din in the paint or varnish, and dirt in the brush. A thorough vacuuming—even on parts of the boat that aren't being worked on— and subsequent dusting off with a painter's tack rag (paint stores and auto body shops have them) will take care of any dust on the surface itself. But a clean shop that has been well swept down and vacuumed out beforehand is a must also. (If you're working outside, then get the boat far away from sources of dust, such as busy dirt roads, and do your work on a day when there is little or no wind.) Paul religiously strains all his paint and varnish before use; he is very careful to keep his brushes cleaned out so that paint won't dry on their bristles, and stores them where they won't get dusty. His consistently dust-free jobs make all this extra fussing worthwhile.

Final Varnishing



Since it's easier to cut paint into varnish than the other way around, the final coats of varnish are done before the final painting. Paul has found it best to apply the last two coats of varnish *without any sanding between them.* The resulting thick film holds its shine through the season without the need to "freshen up" in mid-summer.

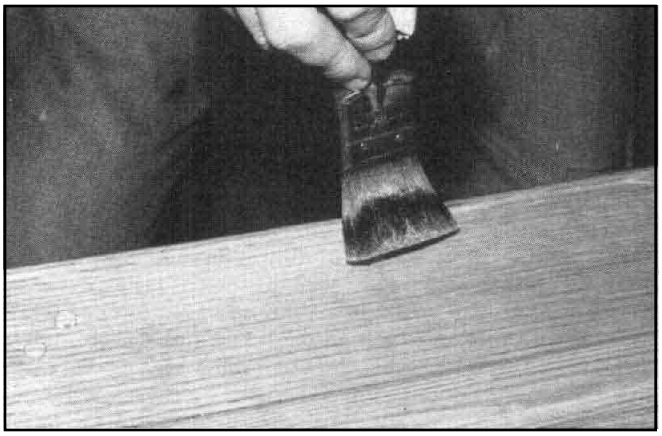
Interlux No. 90 varnish, always strained before use, is what Riverside uses. Rarely are additives used, only a bit of Interlux No. 333 to keep the varnish from setting up too fast in unusually good drying conditions, or some turpentine to thin it in cold weather.

A very thorough vacuuming and wipe down (with a painter's tack rag) precedes all the varnishing, but they're particularly important before the final coats.

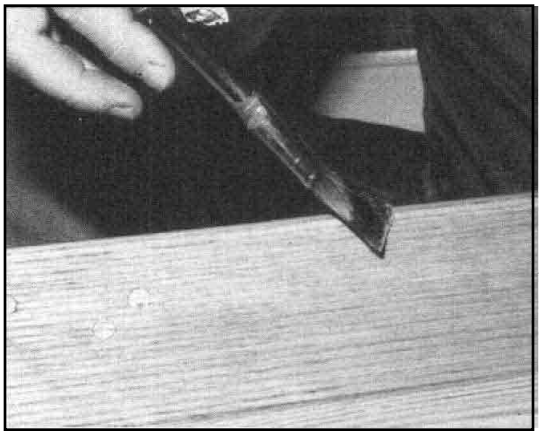
The 1 1/2" brush used by Jason Burns, one of Paul's crew, on this job is of badger hair, and those fine bristles will spread about as uniform a coat as it's possible to get. That's the whole secret to good varnishing: getting a coat that nowhere is thick enough to sag or run yet is sufficiently heavy everywhere to protect the surface and make it shine. Varnish has to be "flowed on," as the books all say, but flowed on evenly. Considerable brushing with the right technique is needed to achieve this end no matter what kind of varnishing brush is used. Paul himself never bothers with fancy badger hair brushes. The success of his varnishing depends more on the application techniques, an important one being speed. Go fast so the stuff is all brushed evenly before it starts to set up and there's no need of an expensive brush, Paul advises.

Vertical or near vertical surfaces are where the runs develop, so the varnish must be brushed out a bit more on them than on horizontal surfaces. Photos 1-4 on the following page show the techniques of applying varnish to the coaming, where inner and outer surfaces must be coated at the same time.

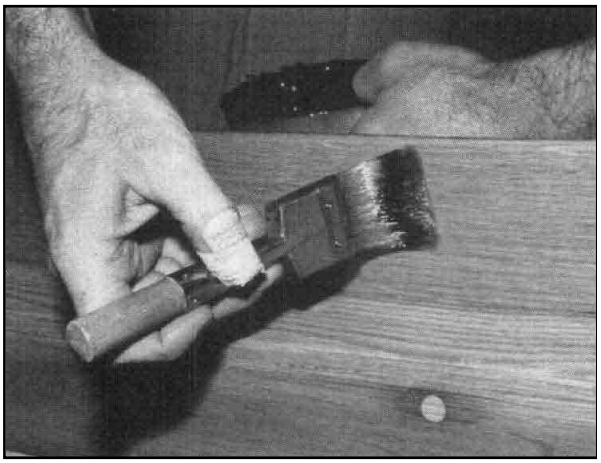
"A good vacuum cleaner and tack rag are a necessity for best results. Four coats of varnish are a minimum on new work, and there should be more if the season is long."



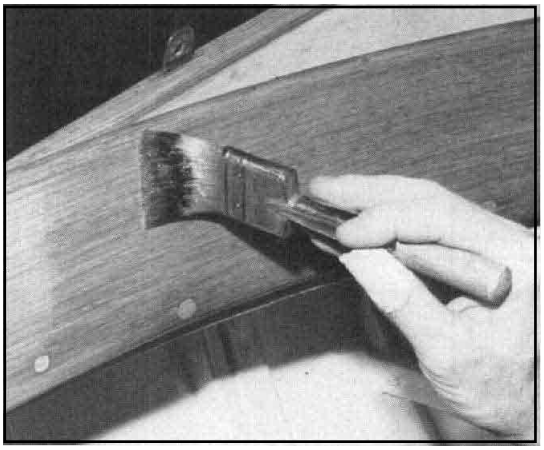
Getting enough varnish on the top of the coaming is assured by applying it in this manner. 1



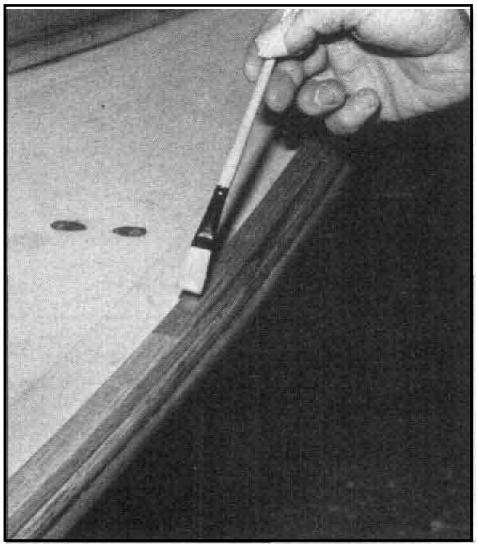
The varnish is then smoothed out with a light stroke along the top edge. 2



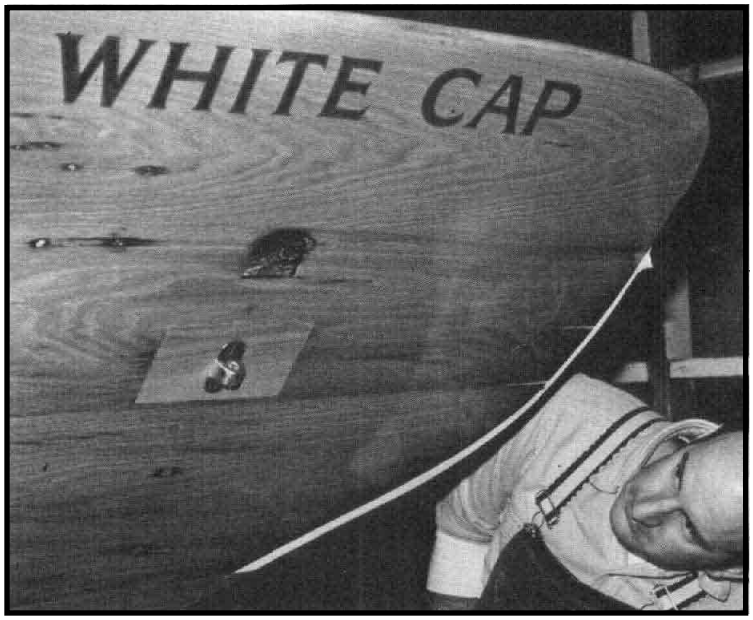
Any runs off the top edges must be picked up and blended into the coating now being applied to the sides as on this outside face, for example. Every brushful of newly laid-on varnish is brushed out until it feels and looks smooth and even. Jason is doing only the vertical side of the coaming, stopping at the covering board, which will be done separately afterwards. 3



Now the same treatment is given to the inside face of the coaming, always stroking back into the already-varnished area with the final smoothing. 4



For better control of the film thickness on top of the toerail, a small brush was used. That brush also comes in handy for varnishing in tight places where the bigger brush won't fit. 5

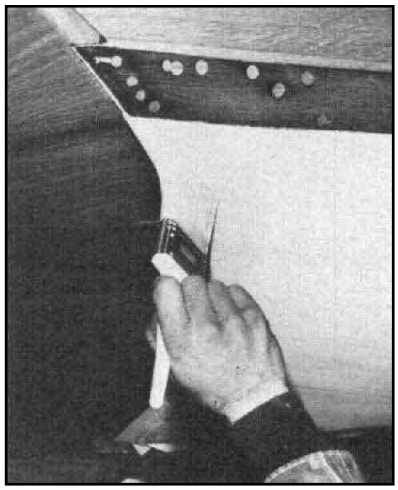


Frequent sighting for runs, sags, and bare spots while the varnish is still wet enough to make corrections is very necessary. These imperfections show up better, of course, in good light. Note the graving piece or dutchman set into the transom in way of the rudder gudgeon, and the newly painted name—applied just before the final coats. 6

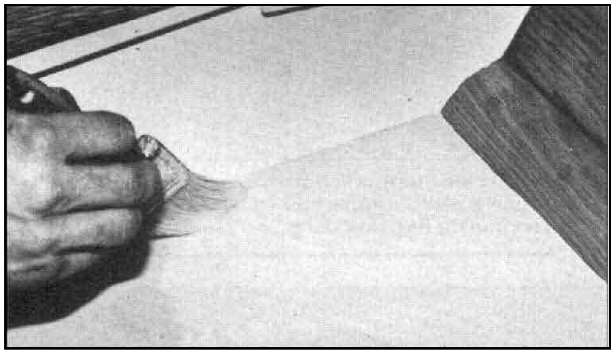
Final Coats of Paint

Getting a good gloss job is more than simply having a good surface to start with. Good paint, with the right additives to make it flow well, a good brush that will lay on a paint film of uniform thickness in a reasonable amount of time, and the correct technique for laying it on are the other things to consider. In regard to additives, Paul has this to say: "Painting is something that requires adjusting to the prevailing conditions. When painting outside in the wind or on a hot day, or in a shed where a hot air furnace is running, there is always a need for adding a retarder (Interlux Brushing Liquid No. 333) to the paint. If the weather is cold, some thinning (with Interlux Special Thinner No. 216) is a must to achieve the right viscosity — and if the wind is blowing it will probably need some retarder also." If drying conditions are really poor, certain solvents such as Japan dryer can speed up drying. Good quality natural bristle brushes are what Paul generally uses for painting, ones that are big enough to spread paint fast and fine enough to spread it evenly. WHITE CAP's topsides, however, were painted with a 2 1/2" synthetic bristle brush, which Paul admits doesn't stay as firm — and therefore is not as good for cutting in — once it has had some use. For painting technique, let's take a look at the photographs.

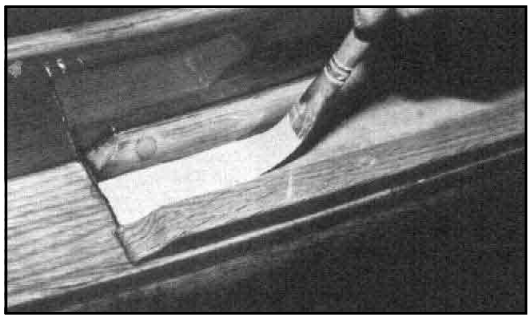
One has to keep moving to avoid lap marks and the runs that sometimes go with them (retarder helps here), and at the same time cut in accurately against other colors (such as the sheer strake on WHITE CAP). Paint put on too thin (brushed out too much) won't flow enough while drying to develop a good shine, and paint that is too thick (not brushed out enough) is almost certain to sag and run. The objective is to get a job that is between these two extremes while still cutting in accurately and leaving no bare spots. Brushing back into, rather than away from, the fresh paint, as Paul is doing here, tends to give a smoother coat. 1



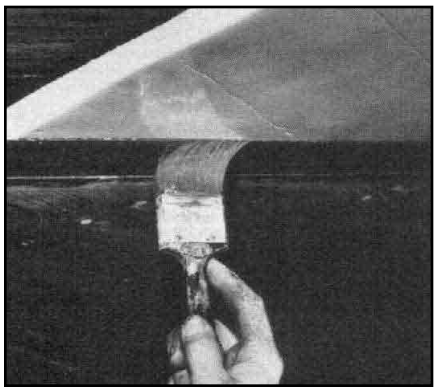
The fastest and easiest way of cutting in is with a bigger brush than you'd imagine, turned on edge. Small brushes are of little use here — they just don't hold enough paint. When cutting in around the transom, Paul not only uses the brush on edge, but also forces the bristles to separate into two groups, only one of which is actually being used for cutting in. Thus, only the needed amount of paint is being applied to the plank ends where any excess would be difficult to get rid of. 2



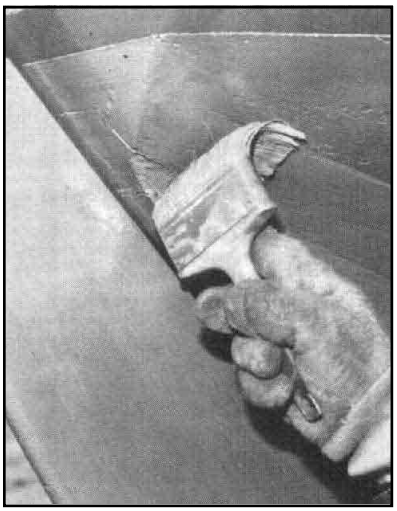
This is the proper way to hold a brush when cutting in against other paintwork or varnish. Cutting in or lining off, as it's sometimes called, is done before the adjacent body of paint is applied, care being taken all the while to keep the brush moving in order to maintain a "wet edge" where the next brushful will be worked out, 3



A small brush is the only type for applying paint with good control in tight places like this one. Paul usually has two or three sizes of brush at hand, for example, when painting a deck, and he uses the one most appropriate for the job. 4



With a good scribe line, painting a boot-top or waterline is quite easy. Again, the way to do it is with a brush that's big enough and turned on edge. Paint up into the scribe line; don't stop at its lower edge or you'll never have a good-looking job. At the lower edge, the masking tape keeps the red paint from getting spread over the green, but the final line there, as at the top, will be done "with only a sure eye and a steady hand. 5



Bottoms are hidden from view once the boat is overboard and needn't be fussed with as much. A big brush is called for here to get this nasty job done quickly. Cutting in can be done with a slightly smaller brush if you want, and it is done just as for the top of the boot-top—that is, the paint is run up into the scribe line, not stopped short of it. Unless the owner requests otherwise. Paul prepares boat bottoms for painting with only a serrated scraper—sandpaper is not used at all. He sticks with oil base paint, which lends itself to scraping, unlike some of the vinyl bottom paints now on the market. 6

Completion

How much time did the refurbishing of WHITE CAP take while at Riverside? The refinishing of the hull and spars, described in this article, consumed about 110 man-hours. Beyond that, about 40 additional man-hours were spent on repair (new toerails, covering boards, seat supports, transom repair, etc.).

Many elements combine to make up Riverside's efficiency, but one of its keys is good organization. As Benjie Mendlowitz, who took all the photographs and who has seen a lot of this type of work go on in other yards, observes, "Each step here is done in its proper order to completion and perfection before and in preparation for the next step. This is probably obvious, but it is the cornerstone of the whole operation. They don't work on 'areas' of the boat; they do *all* the scraping, then *all* the sanding, then *all* the filling, prime everything, varnish everything coat by coat, then paint in the same way." It's doubtful that one who wasn't doing this type of thing every day and was without the experience of Paul Bryant and his crew at Riverside could get the same results in the same amount of time, but by utilizing these techniques we feel certain that your spring outfitting will go faster and look better.

Paint on the hull interior and floorboards, and installation of the newly varnished seats just about completes the job on WHITE CAP, except for reinstallation of the hardware. 1

Bedding compound, along with the good buildup of varnish over the wood, will keep moisture out from behind fittings—like the mast partner bale—for a long time to come. While the metal fittings were off, they were cleaned of old paint and varnish and buffed up a bit, both jobs being made easier because the fittings weren't left on the boat. The Herreshoff nameplate lies on the deck—the next item to be put back in place. 2

Before coming to Riverside, WHITE CAP had been reframed and repaired in a mediocre way, and there was considerable time devoted here to making her look good in spite of this history. She had somehow developed a noticeable hump in the sheerline on both sides forward. New toerails, made higher where they join the stem, and lower in the way of the hump, helped make her sheer look presentable, as did a faired-out and somewhat higher paint line at the bottom of the sheer strake forward. The new gar boards, however, which were apparently installed at the same time, aren't completely fair with the rest of the bottom planking as can be seen in the photo. 3

The Tally for WHITE CAP

Taken directly from Riverside's bill to show the time and materials for each operation.

January

6 *Labor*—remove foam flotation; remove floorboards; scrape bilge area; remove DOT fasteners, plug all holes. 5 hours
48 oak bungs
Epoxy Ten-Set

12 *Labor*—power sand topsides and bottom; strip off old boot-top; strip transom; remove hardware; clean old varnish from hardware; remove rigging from spars for refinishing work. 6 1/2 hours
4 - #36 sanding discs - 8"
4 - #60 ' - 8"
6-#80 ' -8"
6-#100 ' -8"
1 - #80 ' - 7"
1 - #36 ' - 7"

13 *Labor*—remove remaining hardware from boat; strip all brightwork; start sanding brightwork. 7 hours
3 - #40 sandpaper
1 pt. No. 199 Varnish Remover
1 - 2" Throwaway brush

14 *Labor*—sand coamings; refasten and fair out forward sections of sheer strake; glue down canvas under toe rails; remove aft sections of covering boards; sand sheer strake. 6 1/2 hours
3 - #40 sandpaper
1 - #80
6-1 1/4 x 10 bronze screws
6-7/16 oak bungs
2 oz. copper tacks

15 *Labor*—finish sanding sheer strake; replace bungs on sheer strake, port side; sand transom; start stripping mast hoops; cut out and install pieces around center lift-out section of floorboards. 6 hours
1 - #100 sandpaper
4-#80
1 piece oak
6 - 7/16 bungs
1/2 pint No. 214 bedding compound

16 *Labor*—plot and scribe waterline. 2 men, total 3 hours

19 *Labor*—inlet gudgeon in transom and fasten on; strip seats, smooth and apply stain; clean and prime topsides. 5 hours
2 - 7" sanding discs
6 - sheets sandpaper
1/3 pint wood filler stain
1 - 1/4" x 2 bronze bolt, n/w
1 - 1 3/4" x 14 bronze screw
2/3 pint No. 220 white

19 *Labor*—finish all sanding of brightwork; vacuum and stain brightwork. 6 hours
3 - sandpaper
Masking tape
1/2 pint wood filler stain
1/4 pint No. 216 special thinner

20 *Labor*—plot and scribe boot-top; vacuum entire boat; varnish all brightwork first coat. 6 hours
1 pint No. 90 varnish
Masking tape
Turpentine

Labor—sand all spars; strip gaff and sand smooth; strip boom crutch; prime gaff. 4 hours
6 - sandpaper
2 - sandpaper
1/4 pint No. 90 varnish

Labor—sand transom and gaff; vacuum and varnish transom, gaff, molding forward side of coaming, misc. parts. 3 hours
2 - sandpaper
2/3 pint No. 90 varnish

22 *Labor*—putty topsides: sand brightwork, including seats and boom crutch; clean up stem fitting. 5 1/2 hours
5 - sandpaper
1/2 pint No. 93 trowel cement
1/2 pint No. 31 seam compound

23 *Labor*—sand knees for seats, gaff, tiller, cockpit floor, bulkhead; strip and sand bracket for cleats; install stem fitting; vacuum entire boat; varnish brightwork. 5 hours
5 - 1 V" bronze screws
3 - sandpaper
1 - sandpaper
1 pint No. 90 varnish

23 Name lettered on transom in gold leaf

26 *Labor*—sand all brightwork; sand topsides; clean all surfaces and paint topsides, seat brackets, ceiling and bilge area. 6 1/2 hours
6 - sandpaper
8 - sanding discs - 8"
1 1/2 pints No. 220 white
1 pint red lead

27 Labor—paint bilge area second coat; paint floorboards first coat; paint boot-top first coat; strip rudder, smooth and stain. 5 1/2 hours
1 pint red lead
1/3 pint No. 235 vermilion
1/2 pint buff (special mix)
1/3 pint wood filler stain
2 - sandpaper

27 Labor—varnish brightwork third coat. 2 1/2 hours
1 pint No. 90 varnish

28 *Labor*— paint inside of hull, ceiling, etc.; fasten down cockpit floor and putty all holes; paint topsides and boot-top. 4 1/2 hours
1 1/2 pints No. 220 white
1/3 pint No. 235 vermilion
26 - 1" x 8 bronze screws
Wood dough

29 *Labor*—sand topsides final time; sand brightwork final time on boat, seats, gaff, boom crutch, etc.; vacuum all surfaces and varnish brightwork fourth coat. 7 hours
6 - sanding discs - 8"
8 - sandpaper
1 - tack rag
1 pint No. 90 varnish

30 *Labor*— paint cockpit floor, varnish miscellaneous parts; paint topsides final coat. 3 1/2 hours
1/2 pint buff (special mix)
1/4 pint No. 90 varnish
1 1/4 pints No. 220 white

February

2 *Labor*—varnish all brightwork final coat (including all spars, seats, crutch, etc.) 3 hours
1 pint No. 90 varnish
1/4 pint No. 333 Brushing liquid
1/4 pint turpentine

3. Labor—paint foredeck, bridge deck and floorboards. 2 1/4 hours
1 pint buff (special mix)
1/4 pint turpentine

5 Labor—paint boot-top final coat; attach hardware; prime bottom. 5 hours
16 - 7/8" x 8 bronze screws
6 - 2" x 10/24 brass machine screws, n/w
2 - 1 1/2" x 14 bronze screws
8 -1/4" x 3/4 brass machine screws, n/w
2 - 1" x 9 bronze screws
1/3 pint No. 235 vermilion
1 1/2 pints No. 59 Bottomkote green

TABLE OF ABRASIVE GRITS USED BY RIVERSIDE BOAT COMPANY

Intended Use	Aluminum Oxide Paper Sheets (used for hand sanding)	Aluminum Oxide Paper Discs (used with 2,000 rpm sander and foam pad)	Greenbak Discs (used with 5,000 rpm grinder with firm pad)
Removing paint			#16 or #36
Sanding topsides (good condition)	#120 or #150	#120, #150, #180, or #220	
Sanding topsides (flaking)	#50, #60, #80, #100	#60, #80, #100*	
Sanding bottoms (when done)	#50, #60	#40, #50, #60	
Sanding brightwork	#120, #150, #220"	#120, #150, #180,	
Fairing the hull		#80, #100	#36
Canvas deck	#80, #100	#60, #80	

Notes:
* This is in preparation for the first of two or three coats of finish paint. Primers or undercoaters are not used since the adhesion to them isn't as good.
** #220 grit is used for one subsequent coat. Two coats, without sanding between them, is the normal way at Riverside with the surface prepared beforehand by #150.
*** Power sanding of brightwork is usually limited to large, flat surfaces, a transom, for example.