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THE MAGAZINE FOR WOODEN BOAT OWNERS, BUILDERS, AND DESIGNERS


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HERITAGE
Trailboards
Turkish Museum
Lawrence Skiff
Peter Chase

A California Cruiser Restored
Charley Morgan's HERITAGE
MADNESS: A Plywood Proa

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**GETTING STARTED IN BOATS**
**Getting Started Stories**—How Six People Got Their Starts in Boats *Maria Simpson*

**Cover:** MAKOTO, a 1929, 34′ cruiser built by Stephens Bros., was recently rejuvenated for elegant outings on California's Petaluma River. **Page 54**

*Photograph by Abner Kingman*

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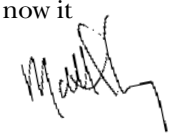
## What Would Mr. Andrews Do?

We first learned of MAKOTO, the 1929, 34′ Stephens Bros.-built power cruiser that appears on the cover of this issue, when owner-restorer Scott Andrews began posting photographs and details of her ongoing rejuvenation. As I write this, Scott's WoodenBoat Forum thread on MAKOTO has nearly 500 posts and responses. In his initial offering, Scott showed a photo of the boat cruising along on California's San Joachin River on a blustery day. That image grabbed me immediately, and it's been fun watching the boat's restoration progress in Scott's numerous subsequent posts. Especially interesting were the interior and deck-furniture joinery details and the design decisions made along the way.

When MAKOTO appeared to be nearing completion (as complete as any wooden boat ever is), we contacted Scott and asked him if he'd like to write an article on the boat's restoration. He would indeed, came the answer, and so we discussed an appropriate angle. We were especially interested in how he organized the work. So we asked Scott to tell us about the boat's as-found condition and to then describe how he'd ordered his priorities. As I've found all too often in my own projects, it's so tempting to jump in and try to do everything at once—to juggle multiple aspects of the project at once, and to submit to spontaneous temptations that widen the scope of work. Judging from his Forum posts, Scott had restrained himself from such impulses. His photographs show a boat whose design elements are cohesive and whose progress has been methodical. I asked him to describe the "logical sequence" of tasks, a request that I now realize would have borne a far more prosaic article—a "boat-work documentary," as Scott called it—than the lively narrative he delivered.

Scott writes of a surprising and creative approach to the problem of decision-making. As he recalls in the piece (page 54), he and his wife, Susan, imagined a muse—a well-traveled gentleman ancestor named Mr. Andrews who lived during the Roaring Twenties and brought a variety of influences to bear on his considerable tastes. This muse—this sounding board—became a filter through which Scott and Susan passed their aesthetic decisions. "Once you have a list of things to do," Scott told me, "the doing of them is pretty much just a matter of time and money. The really difficult part is coming to terms with what to do.

"Using the artifice of our fictional Mr. Andrews and his travels and sensibilities," Scott said, "we were able to shift the decisions away from what might be our fancy today, and ask, 'What would Mr. Andrews have done?' That shift brought a level of objectivity and design purity that might have otherwise been overwhelmed by convenience, or our own momentary vanities. The project is as much about restoring a boat as it is about maintaining a way of life that has largely passed. And now it continues quietly along the bucolic Petaluma River."



### Glued-Edge Planking

Hello Matthew,
The March/April 2013 issue has an article on glued-edge carvel planking. Yes, yes, yes! I'm glad I finally saw it done, and successfully, at that. I've thought of this for some time. It incorporates the best of both worlds and it's not stitch-and-glue! (Nothing against stitch-and-glue; I like it.) I wondered why I had never seen it done, and now I have. True tradition and beauty, but no caulking and painting, sanding, etc. each year.

An excellent article. I love this magazine. It is always great. Y'all really have a nice thing going.

Corey Paré
Rome, Maine

### Woodstoves

To the Editor,
Thanks to Mr. Riordan for a fine article on shipboard stoves [WB No. 230]; both the photographs and the accompanying discussion of "practical considerations" were enlightening. I was surprised, however, that in the course of a very long piece, there was no mention whatever of what is surely the most significant practical consideration of all when dealing with shipboard stoves: the very real danger of carbon monoxide poisoning. This potentially deadly gas can be highly toxic even in low concentrations. It accumulates quickly in tissues, and has a long half-life in the body. Though it can be tempting to close the boat up tight and stoke the fire in a chilly anchorage, a flow of fresh air must always be arranged when a stove is in use. Carbon monoxide alarms for boats, either portable or hard-wired, are quite affordable and offer great peace of mind.

One further topic, also unmentioned by Mr. Riordan, deserves a few words as well: how and where to stow the wood supply for the stove, such that it remains dry and readily accessible. During the off season, we save all hardwood scraps from the shop and cut them into small chunks on the bandsaw, then pack them into doubled ziplock bags. On our Concordia 39, we can store at least 30 of these packets in the bilge. One bag's worth of wood suffices for an evening fire, and we might use three or more for an all-day layover in bad weather. A small stash of softwood for kindling completes the kit.

Jay Panetta
Manchester, Massachusetts

### Carbon Monoxide Warning

Dear *WoodenBoat*,
On the "Letters" page for the March/April issue [WB No. 231], Daniel MacNaughton states that one should not "be freaked out by the warnings of death on the charcoal bag" and incorrectly states that "they are talking about oxygen depletion." Speaking from 30+ years' experience as a forensic pathologist, I can state that burning charcoal generates significant quantities of carbon monoxide and burning charcoal briquettes in enclosed spaces results in numerous deaths from carbon monoxide poisoning in the United States yearly; in fact, it is sometimes used as a means of suicide. If it is safe to use charcoal in stoves/heaters intended for boats, it is because the devices are designed to ensure that the fumes generated are exhausted from the compartments that they are heating, not because burning it only results in oxygen depletion.

John Butts
via email

***Dan MacNaughton responds:***
While my dismissal of the charcoal warning label was excessively flippant, charcoal has been used in vented boat heaters for generations and is safe for that purpose as long as the heater is adequately vented and there is an adequate supply of fresh air. If those conditions are not met, charcoal, like any other fuel, will deplete the oxygen until the combustion byproduct changes from carbon dioxide to lethal carbon monoxide. All fuels require the same precautions, which include adequate ventilation and a carbon monoxide detector.

### Make a Bow Saw

To the Editor,
Peace and greetings to you, and the staff of *WoodenBoat*. I just received the March/April 2013 issue. The article "Western Hand Saws" by Jim Tolpin was of particular interest to me. Allow me to share a bit of information that the other readers of *WoodenBoat* might find of interest. One episode of the PBS program *The Woodwright Shop,* hosted by Roy Underhill, was on how to make a bow saw, similar in size to the one shown in Photos 1 and 15 of Mr. Tolpin's article. During the program Mr. Underhill and his guest demonstrated not just how to make the individual pieces, they also explained why the pieces were in that particular shape and form. I regret that I do not remember the show episode number, but a search of Mr. Underhill's website should locate it.

When I eventually get around to making my own bow saw, I think that rather than cutting out the rough shape of the arms with a saw and using a spokeshave for the finish work, I would first steam-bend the wood to the approximate shape required, to avoid cutting across the grain at a critical point.

Thank you once again for an informative and entertaining publication of the highest quality.

Mark R. Harris
Waupun, Wisconsin

*There is a link to this episode in the Bonus Content section of our website, www.woodenboat.com/bonus-content.*
*—Eds.*

### PAT PENDING

The article showing how PAT PENDING was remodeled was interesting, but if readers want to see a sistership that was built according to Geary's original plans and has never been remodeled, visit this website: http://threesheetsnw.com/blog/2011/03/my-boat-mv-emmeline/. Two drawings of this design by Geary were discovered in 2006 in the Federal Archives in

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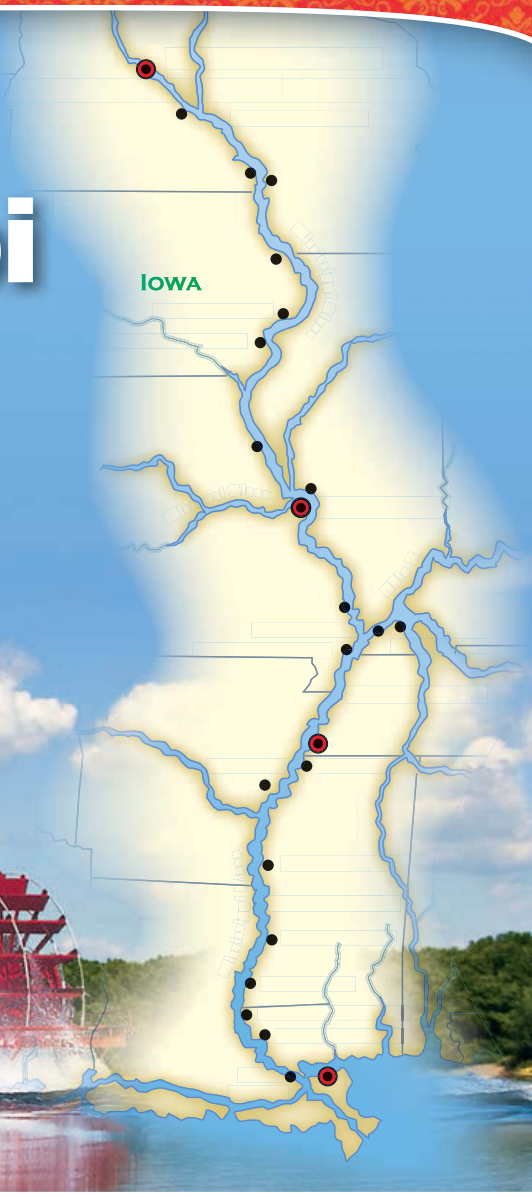


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Seattle by Paul Marlow of The Center for Wooden Boats, which confirmed the original layout.

There's nothing wrong with remodeling a boat, but I think there's something special about maintaining the original historic design of vessels from the late 1920s like this.

Jack Becker
via email

### Bring Back the Calendar!

Dear *WoodenBoat*,

The printed calendar of events in previous issues of *WoodenBoat* was much more complete and was one of the first things I turned to! I have gone to many of the events according to your announcements in *WoodenBoat*—which were great trips! I see very little in the calendar about the West Coast or Europe. Please put the calendar back in the magazine! Thank you.

Michael Cappetti
S/V STARLITER
Monterey, California

*The Calendar of Events is now posted online in the Community Section of our website. We moved it out of the magazine for a number of reasons. Previously, each event could appear in only one issue per year, often just before the event took place. Now event sponsors can post their events far in advance of the actual date, and it will be visible to everyone on the Internet at any time up to the date of the event itself. Second, the calendar was limited to a set number of pages in each issue. As the number of events has grown over the years, the descriptions have gotten smaller. Often, we had room only for the name of an event and its contact information. On the website, each event sponsor can put in a lengthy description, add a picture or two, and include multiple phone numbers, emails, and contact information. Third, the Internet is flexible. If the dates for an event change, it's an easy fix to make that change in your event notice. Anyone sponsoring an event can sign up for an account on www.woodenboat.com, and then can create announcements for all of their events.* —*Eds*

### Poetic License

Dear *WoodenBoat*,

In your otherwise excellent article "The Last of the Trading Ketches" (WB No. 231) I'm afraid that you misquoted one of my favorite Emily Dickinson poems. In addition, by leaving out the second stanza you eliminated the most emotional part of the poem. I don't know if that was the fault of the author or someone else who laid out the page, but I feel compelled to provide the correct text:

*EXULTATION is the going*
*Of an inland soul to sea,--*
*Past the houses, past the headlands,*
*Into deep eternity!*

*Bred as we, among the mountains,*
*Can the sailor understand*
*The divine intoxication*
*Of the first league out from land?*

(From *The Complete Poems of Emily Dickinson,* Little, Brown & Company, 1924)

Don Robertson
Manlius, New York

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# The Heel of the Loaf

by David Kasanof

Ignorance is a valuable commodity and should not be wasted. Most of us, for example, think we are good at judging boat speed. How many of us have said, "We're making 5½ knots" after a quick look over the side? How many have then checked their guess with the knotmeter? I once owned a "patent log" that provided a readout of my speed. At first I checked my judgment of speed against what the log said. I didn't like the results, so I did the logical thing: I stopped checking the log.

Indeed, ignorance may not be bliss, but it sure can be a comfort. Are you sure you want to know how fast your old boat can go? There's a well-known mathematical formula for finding a boat's "hull speed," which tends to provide a value far below what one's ego-driven guesstimate might provide. I dimly recall the formula is this:

$$1.34 \times \sqrt{WL}$$

In plain English, that's 1.34 times the square root of the waterline length. If you think your Tahiti ketch can make 12 knots under ideal conditions, then you should just keep on believing that. Never mind that the math yields a potential speed of just over half that. Too much science can ruin your day.

Ignore the math. That's what I did when I got an answer I didn't like: I tweaked the numbers to achieve a satisfactory answer. I know that engineers and other technical folks would not have approved of my approach, but I don't want to be confused by things like facts. My old boat could do 12 knots, and that's that.

Which brings us to the point of this essay: baking at sea. We used to bake bread on our old gaffer. (Now, follow me on this because the math gets tricky.) We often baked more bread than we could eat before some loaves became stale or moldy. So, we would give away the extras.

PETE GORSKI

Despite my expert seaman's eye for the weather, we were sometimes caught in mid-bake by bad weather and lumpy seas. In such cases we were often forced to sail close-hauled, or to run before the wind. If this happened before the loaves had fully risen, they would come out lopsided—skewed according to the tack we had been on when the dough was still soft. We had, in other words, port-tack bread and starboard-tack bread. Worst of all was running-before-the-wind bread, which was generally lumpy and deformed and not fully risen because of our rolling dance through the waves.

When we gave our surplus bread to our neighbors in the boatyard, we playfully labeled the loaves according to the sailing conditions under which they had been baked. That is how we came to discover that some folks believed they could tell the difference between the tastes of bread baked on port tack and bread baked on starboard tack. (Incidentally, no one liked bread baked while we were running—the only preference that made sense to me.)

Now, if you've been paying attention, you will notice that a loaf that is lopsided toward, say, the left side can be reversed end-for-end and thereby be converted to a loaf that is lopsided to the right. Presto, a starboard- or port-tack loaf can be instantly changed into the inexplicably more desirable type of the other tack. Even after realizing this transformation was possible, we thought converting by switching a loaf end-for-end was cheating. So we established a rule: Proper nomenclature had to be determined only by the lopsided form of a loaf *as it came out of the oven*.

Which brings me to a business proposition: It has occurred to me that if there are people who are convinced that they can taste the difference between starboard-tack bread and port-tack bread, then there may be people who believe that they can taste the difference among loaves baked in boats going at different speeds. You've heard of knot rolls—those bread rolls tied in a decorative twist before baking? Well, here's a foolproof plan for you: Get your boat rolling before a fresh breeze, fire up the oven, and get to work baking. We'll call the result 5-knot rolls. (On my boat, of course, they'd be 12-knot rolls.)

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| ALUMNI WORK WEEK | Fundamentals of Boatbuilding with Greg Rössel | | Fundamentals of Boatbuilding with Wade Smith | | Fundamentals of Boatbuilding with Greg Rössel | | Fundamentals of Boatbuilding with Warren Barker | |
| ALUMNI WORK WEEK | Making Friends with Your Marine Diesel Engine with Jon Bardo | Glued-Lapstrake Plywood Construction with John Brooks | Finishing Out Small Boats with John Brooks | Build Your Own Greenland-Style Kayak with Mark Kaufman | Traditional Wood-and-Canvas Canoe Construction with Rollin Thurlow | Stitch-and-Glue Boatbuilding with John Harris | Build Your Own Shearwater Sport Kayak with Eric Schade | Build Your Own Shellback Dinghy or Nutshell Pram with Jeremy Gage |
| | Carving Waterfowl with Jerry Cumbo | Boatbuilder's Hand Tools with Harry Bryan | Introduction to Boatbuilding with Bill Thomas | Marine Painting & Varnishing with Gary Lowell | Making Wood Tools with John Wilson | Fine Strip-Planked Boat Construction with Nick Schade | Building Half Models with Mark Sutherland | The Art of Woodcuts with Gene Shaw |
| | What Shape Is She In with David Wyman | Inspecting Fiberglass Boats with Sue Canfield | Bronze Casting for Boatbuilders with Sam Johnson | Lofting with Greg Rössel | Elements of Seamanship with Jane Ahlfeld & Annie Nixon | The Marlinespike Sailor with Tim Whitten | Metal Working for the Boatbuilder & Woodworker with Erica Moody | Painting the Downeast Coast in Oils with Jerry Rose |
| | | | Blacksmithing for Boatbuilders with Doug Wilson | Elements of Seamanship with Jane Ahlfeld & Annie Nixon | | Elements of Seamanship with Martin Gardner & Sue LaVoie | Elements of Seamanship with Martin Gardner & Sue LaVoie | Elements of Seamanship II with Martin Gardner & Robin Lincoln |
| | | | Coastwise Navigation with Jane Ahlfeld | | | Craft of Sail on TAMMY NORIE with Joel Roland | Craft of Sail on TAMMY NORIE with Joel Roland | Island Exploration & Seamanship with Andy Oldman |
| | | | | | | | Coastal Cruising Seamanship on ABIGAIL with Hans Veirthaler | Craft of Sail on ABIGAIL with Hans Vierthaler |
| | | | | | | | Elements of Coastal Kayaking with Bill Thomas | |

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| Build Your Own Bronze Salute Cannon with Duke McGuiggan & Michael Caldwell | Building the Penobscot 13 with Arch Davis | | Build Your Own Sassafras Canoe with John Harris | Small Boat Repairs with Eric Blake | | Build Your Own Willow/ Quickbeam Sea Kayak with Bill Thomas | Build Your Own Annapolis Wherry with Geoff Kerr | Making Friends with Your Marine Diesel Engine with Jon Bardo |
| Building the Arctic Tern with Geoff Kerr | | Essentials of Fine Woodworking with Janet Collins | Introduction to Boatbuilding with John Karbott | Fine Strip-Planked Boat Construction with Nick Schade | Build Your Own Plank Constructed Pond Yachts with Thom McLaughlin | Building a Dory with Walt Ansel | Boatbuilding & Woodworking Jigs with John Brooks | Building Half Models with Eric Dow |
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**Brought to you by WoodenBoat**

**The storage sheds of Robbe & Berking Classics in Flensburg, Germany, house a Who's Who of vintage 12-Meters, 6-Meters, and 8-Meters—and one 30-Square, the legendary TRE SANG (not shown).**

MATTHEW P. MURPHY

## A German sojourn

**by Matthew P. Murphy**

Imagine a club called "The Circle of Friends Dedicated to Classic Yachts." That, I'm told, is the literal, if somewhat cumbersome, translation of the more lyrical German *Freundeskreis Klassische Yachten*. The Freundeskreis, as it's known to its 1,800 worldwide members, is headquartered in Kiel. Its simple mission statement is to "address the growing interest in promoting old boats, and bring together all those friendly individuals who strive for joy, passion or even sometimes a little philosophy to preserve classic yachts and our maritime heritage." They do this by holding events, publishing a newsletter, exchanging information, and holding an annual midwinter meeting that draws a crowd of between 500 and 700 people.

When the club's vice chairman, Sven Holtorf, sent an e-mail last November asking if photographer Benjamin Mendlowitz and I would like to fly to Hamburg in February to speak at this year's meeting, it didn't take long to say yes. The meeting, and the four-day whirlwind tour of northern Germany we made afterward, was illuminating. Here's a brief summary of it:

On Saturday before our speaking gig, Benjamin and I went for a walk around Hamburg, trying to find ELBE No. 5. Readers of this magazine will know this pilot schooner better as WANDER BIRD, for she was berthed for many years in Sausalito, California, in the capable hands of Harold Sommer. Several years ago, she was repatriated to Hamburg and given back her original name. We didn't find her, though, as she wasn't in her usual berth during our visit. But we did find the nearby Hamburg Maritime Museum, a vast collection of merchant and naval shipping artifacts housed in a sprawling converted multi-story warehouse (www.internationales-maritimes-museum.de).

The midwinter meeting was held at Hamburg's Museum of Ethnology, and it commenced at 7 p.m. There was, indeed, a crowd of over 500; it filled the century-old wood-paneled auditorium and spilled out into the foyer where a video projector relayed the proceedings to the standing-room-only set. Various speakers recounted the events of the past summer in lively narratives and colorful images, and they promoted upcoming classic yachting events. Benjamin and I took the stage at around 9 p.m. and left it at 10:30; we discussed a range of recent restoration efforts in the United States. The proceedings were over at around midnight, and were followed by a three-hour dinner and then a drive to Kiel, where we spent what was left of the night.

After a hearty breakfast overlooking the Kiel canal, we drove to Flensburg. I've heard of this traditional maritime city for years, as a great portion of its harbor, in a sort of living history display, is reserved for traditional vessels. The organziation that runs the museum portion of the harbor for traditional ex-working vessels is called the *Museumshafen*, and it sponsors an annual event called the Rum Regatta (www.rumregatta.de). Flensburg was practically built on rum, and was once home to 150 rum houses—a number that's since been distilled down to one or two.

The Museumshafen is directed by one Martin Schulz, whom I've gotten to know over the years online. Martin is a

WoodenBoat Forum stalwart (www.woodenboat.com); a quick search of the forum will turn up his photographic reports of previous years' Rum Regattas, and a visit to his organization's website (www.museumshafen-flensburg.de) will reveal details of the 18 boats—fishing smacks, ferries, and cargo carriers—that are berthed there.

Adjacent to the Museumshafen's slips is a separate organization operating a museum shipyard—the Museumswerft Flensburg (www.museumswerft.de). I wouldn't have known it was a separate organization unless Martin had told me it was, as the aesthetics and objectives of the two operations—and of the nearby Maritime Museum—are so seamlessly joined.

Across the harbor is another wooden boat operation with an entirely different bent: Robbe & Berking Classics. This yard is the four-year-old brainchild of Oliver Berking, fourth-generation proprietor of the sterling-silver flatware company Robbe & Berking. Oliver has a thing for International Rule Meter boats—Six-Meters, Eight-Meters, and Twelves—and his storage and construction building is something of a museum itself. The Gustav Estandler–designed 30-Square-Meter TRE SANG is stored there. She's the boat in which Blondie Hasler introduced the concept of light-displacement ocean racing in the late 1940s. The Australian Cup contender GRETEL lies outside on the lawn, awaiting restoration.

SPHINX is also there. She, says Oliver, is "the 12-Meter that started it all" for him. The boat was built in 1939 by Abeking & Rasmussen. When she came up for auction in 2005 (then named OSTWIND and owned by the German naval academy), Berking and partners bought her and conducted a thorough restoration. The infrastructure built to accomplish that job became the foundation for Robbe & Berking Classics (www.classics.robbeberking.de). In its short existence, the yard has built several Six-Meters, a 9-meter-long, bright-finished mahogany commuter boat, and a 50′ fast cruising sloop designed by George Nissen. And under construction and being planked during our visit was a Johan Anker–designed 12-Meter. Robbe & Berking Classics also publishes a beautiful magazine devoted to the classic yachting lifestyle. Edited by Detlef Jens, it's called *GOOSE*, in dual deference to the protagonist of a German fairy tale and to the eponymous Six-Meter designed by Sparkman & Stephens.

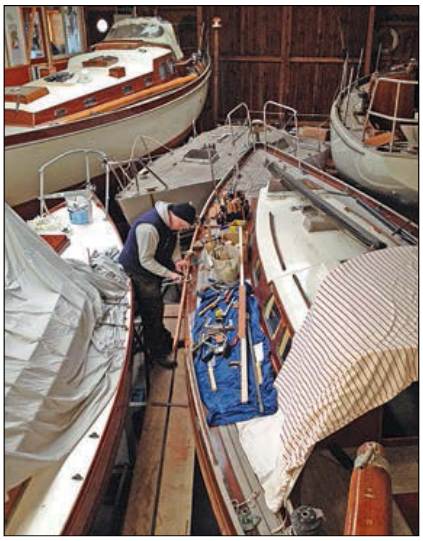
On the road back to Kiel, we stopped in the town of Grödersby to visit Bootswerft Grödersby, a yard owned by Stephan Ernst Schneider (see www.yacht-restaurierung.de, in German only). The yard, which currently has 32 wooden boats in its care, has a very interesting business model in which the owners are actively involved in their boats' care. For major projects, the owners do the tearout and finishwork, while for aspects that require skill beyond their abilities they can consult the yard for technical expertise, or hire a shipwright or mechanic. The supply room is open to all in an honor system; if you need a sleeve of 220-grit sandpaper, you write it down on your tab and it shows up on your bill.

On our final day in Germany we made a pilgrimage to Abeking & Rasmussen, builder of 99 of the 103 Concordia yawls—among many other famous yachts. The yard has expanded well beyond the scope of this magazine, as today it builds superyachts of steel and aluminum and has 450 employees. But it's still a family operation, run by co-founder Henry Rasmussen's grandson, Hans Schaedla, who gave us a tour.

The 140′ Bruce King–designed ketch HETAIROS, launched 20 years ago this year, was Abeking & Rasmussen's last wooden boat. Today, there's hardly a bandsaw to be seen there; all of the joinery is subcontracted to an 80-employee state-of-the-art shop a few doors away. We toured that sophisticated operation, too, and I came away from it with these two memories: (1) There's a hospital-clean joinery room with eight or twelve hand-joiners working at furniture-quality benches; and (2) there's a robotically controlled varnishing machine. What I would do for a robotically controlled varnishing machine….

On the road back to the airport, we stopped at Toplicht. Erdmann Braschos reviews this amazing chandlery on page 114 of this issue, so I'll relay just one quote from Toplicht executive Kai Bruhn, who said of the company's hardware offerings: "Everything but stainless." There are 14,000 items in their catalog. I've never been surrounded by so much high-quality bronze hardware in one place, ever (www.toplicht.de).

*Matthew P. Murphy is editor of* WoodenBoat.



MATTHEW P. MURPHY (2)

BENJAMIN MENDLOWITZ

***Left*—This so-called shark cutter, a fishing vessel endemic to the Flensburg region, is berthed at the city's Museumshafen, or Museum Harbor. *Above left*—A boatbuilder at Bootswerft Grödersby scarfs in a new section of toerail. The yard is run as a cooperative in which owners may work on their own boats and hire experts as needed. *Above*—This pretty and traditional double-ender was built by shipwrights at the Museumswerft Flensburg.**

## Around the yards

■ "One of the most gripping images of **Hurricane Sandy's** devastation," Russ Manheimer writes from New Jersey, "was the inlet that formed at **Mantoloking,**

# Getting Started in Boats

*from the Editors of* WoodenBoat *Magazine*

Volume 40

## *Getting Started Stories*

***How Six People Got Their Starts in Boats***

# — GETTING STARTED STORIES —

## How Six People Got Their Starts in Boats

by Maria Simpson

I first sailed as a baby with my grandparents, hanging from the overhead in a bouncy chair in the saloon of their John Alden–designed Coastwise cruiser. When I was a toddler, my grandfather made me a boat-shaped block of wood out of 2×4 stock that I would drag from a long piece of string behind the boat while we sailed on Rhode Island's Narragansett Bay. I don't know if it was the piece of wood dancing merrily in the waves, or my early days in BIG CHUM with my family, but neural pathways fired, joy seized my three-year-old heart, and I was hooked. Later in life my grandfather would claim that I got my interest in wooden boats from him.

On the following pages are the stories of how a diverse group of six people got their starts in boats. One of them, Kaj Huld, cut his teeth as an offshore sailor on a six-year trip to the Caribbean; he said you don't necessarily have to have a lot of money, "but you need to be really into it." Seven-year-old Henry LePage cheerfully recounts his first adventure in boatbuilding and its trials and successes. Veteran cruiser Doug Serrill discusses how taking care of his own boat helps relieve the pressure of his everyday life.

All of these people seem to be forward thinkers. They were excited not just to tell me about what they had done, but also what they were going to do next. Henry is already planning his next woodworking project, Kaj dreams of sailing north, and Doug is looking for a bigger boat to take to Alaska. They all keep raising the bar higher for themselves.

The final thing these people have in common is that they each have had strong mentors. Jamie Enos talks about coming into her own as a now-27-year-old yacht captain and racer; in her journey she took great risks, but also had great mentors to help her along the way. Mahogany runabout aficionado Mark Mason describes how the legendary designer Olin Stephens helped him at a critical time in his life. If there is a lesson from these stories, this may be it: Loving wooden boats is most pleasurable when we share it with others.

LEPAGE FAMILY

Seven-year old Henry LePage got the boatbuilding bug from his grandfather, who helped him build this 11′6″ skiff (see page 7) from scratch.

*Maria Simpson is a freelance writer and marketing consultant who lives and sails in midcoast Maine*

COVER PHOTO: LePAGE FAMILY

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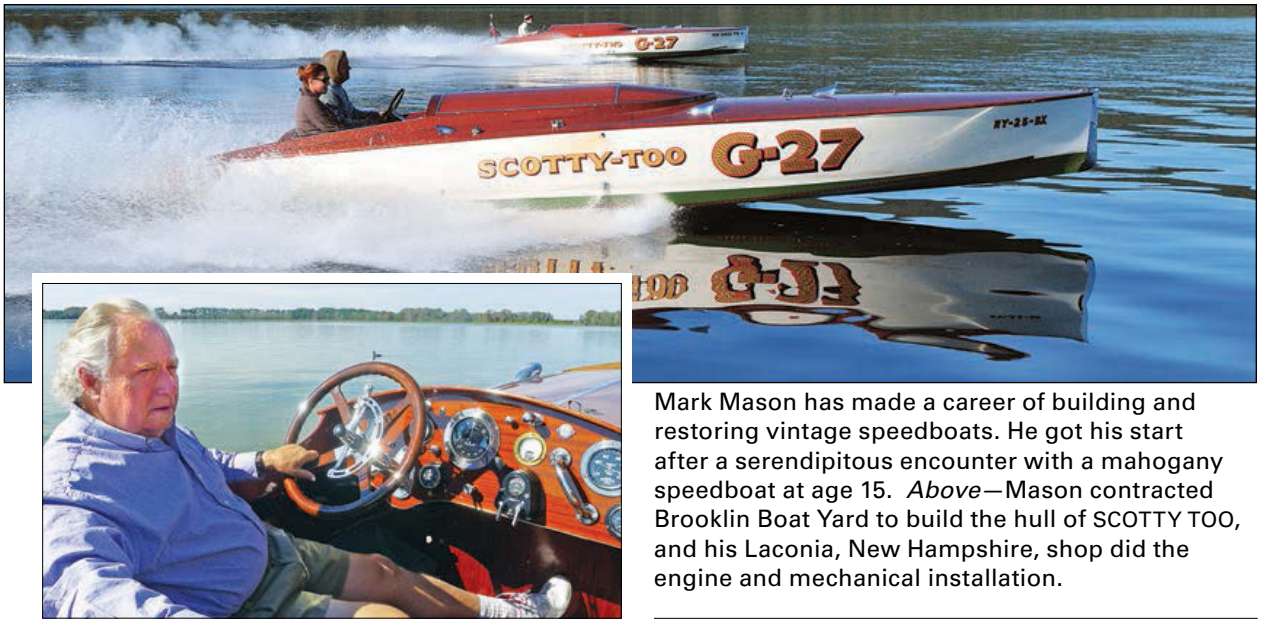
# Mark Mason: The Speedster




NEW ENGLAND BOAT & MOTOR



Mark Mason has made a career of building and restoring vintage speedboats. He got his start after a serendipitous encounter with a mahogany speedboat at age 15. *Above*—Mason contracted Brooklin Boat Yard to build the hull of SCOTTY TOO, and his Laconia, New Hampshire, shop did the engine and mechanical installation.

As a teen in 1963, Mark Mason first laid his eyes on SEA DUCER, a 16′ 1940s-vintage mahogany Chris-Craft racer. That encounter changed the course of his life.

Mason is owner of New England Boat & Motor Co., a business that restores and builds classic wooden runabouts; Mason's role is to connect people to projects, and to make sure every detail is exactly right. He attended boarding school in Northern Michigan where he ran track, and one day while practice-running around a local lake he stopped at a marina for a quick rest. Poking around the sheds, he spied SEA DUCER, a 16′ barrelback runabout. As her name might suggest, he found the boat intoxicating. "She was a seductive boat for a 15-year-old boy whose body was pumping with hormones."

As a young person, Mark had always been enamored of classic automobiles, the hobby of some close friends of the family. "When I saw SEA DUCER, something clicked in my brain," he said. "I realized that an antique boat was nothing but an antique car, floating on the water, with all the same great engines, leather upholstery, and beautiful instruments that I loved about old autos."

Mason could also see the promise of fun times on the lake boating and water skiing. To his surprise, SEA DUCER was for sale, for $600. He sold his Indian Head penny collection, pooled his money with his brother, Tom, and bought the boat. Undaunted by care and maintenance needed for such a craft, the brothers "went straight to the library and checked out *Your Boat: Its Selection and Care,* by Howard Barnes, and got to work."

The Mason brothers spent many hours restoring the boat, and used it on the lake until their early 20s. Mark became a tournament water-skier, and SEA DUCER could pull a skier at 34 mph. On several occasions, she pulled six skiers in a pyramid formation.

While at university, Mark continued to follow his obsession with classic runabouts, particularly the gentlemans' racers designed for the famous Gold Cup races that captured the imaginations (and pocketbooks) of men of means in the Roaring Twenties. He began seeking out these classic designs for restoration, interrupted only by a stint with the U.S. Army in Korea. He ferreted out some important racers, including the iconic BABY BOOTLEGGER (see WB Nos. 60 and 150), still a personal favorite of Mark's.

He also became fascinated with the designs of George Crouch, the house naval architect at Henry B. Nevins, Inc., in City Island, New York. In an effort to track down Crouch's original plans, Mason called the Sparkman & Stephens design office, and got to talk with the legendary designer Olin Stephens himself, who helped him locate the plans. Mason still marvels at this simple act of kindness. Many years later, when Mason heard a rumor that Stephens wished to visit him at Lake Winnipesaukee, Mason was incredulous. He thought, "Yeah, right. Doesn't God have more important things to do than to visit me?"

In his retirement, Stephens visited Mason several times and they went boating in several vintage mahogany speedboats. When Mason talks about his days with Stephens, he describes them as if he can't believe they happened. Stephens's generosity had helped Mason find the George Crouch plans and thus launched his career.

# Kaj Huld: The Adventurer

After college, Kaj Huld lived aboard a Cape Dory 25. Dreams of a bigger boat and wider ranging adventures brought him to APSARA, a 31′ Geiger ketch in which he spent six years voyaging.

COURTESY OF KAJ HULD (BOTH)

"I had no intention of going on a big trip when I bought APSARA," said Kaj Huld of his 31′ Frederick Geiger–designed ketch. Huld, 44, was working in Boston as a mechanical engineer before setting off for six years of sailing in the Caribbean aboard his boat—a decision that transformed him from weekend warrior to full-time adventurer.

Huld has owned boats since he was a kid. His first boat was "a jalopy of a thing," a dinghy that weighed close to 200 lbs that he bought with his paper-route money, that was unfortunately too heavy to heave onto a car roof. He sold it at a profit and bought another boat, and soon traded that boat for a bigger one, starting a pattern that has lasted until now. After college, Huld lived aboard a Cape Dory 25 in Rochester, New York. "I was always dreaming about bigger boats, and bigger waters," he said.

While looking at larger and more comfortable sailboats, he saw APSARA at a nearby yard. The boat required cosmetic upgrading, but was in good structural condition and stoutly built for offshore sailing. He fell for her, spent a year saving money, and bought her.

After a time, Huld began to think about longer trips than the coastal cruising he did on his vacations. He and his partner often talked about quitting their jobs and taking off for the Caribbean, and finally they decided to take the leap. They saved their money, and took off for a yearlong trip to the Caribbean. After nine months, they were in the Dominican Republic and decided they weren't going back home. The cruise became a six-year journey that took them to 17 countries, as far south as Venezuela.

When he reflected on his experiences in the Caribbean, Huld admitted that at the beginning he had no idea what he was doing. "I was completely green," he said. He'd sailed across the Gulf of Maine a number of times, but recalls that he "had no idea what I was getting into."

Huld quickly learned the ropes of the boat and sailing in the Caribbean, but there were other challenges to face. At the Antigua Classics Regatta, a 50′ schooner misjudged APSARA's position at a rounding and plowed into her, destroying the mainmast, mizzenmast, bowsprit, and caprail. Luckily, no one was hurt in the accident, and APSARA sustained no hull damage. However, a protest hearing and legal action were needed in order to receive compensation for the damages.

After the accident, Huld worked with Woodstock Boatbuilders to build new spars for the boat. It took a full year to get APSARA ready to sail again, with Huld logging 840 hours of his own time on the project.

After six years of sailing, Huld decided to return to the United States. He moved to Portland, Maine, and set up business as an energy engineer, helping clients reduce their energy use and utilities cost. APSARA has been out of the water for the past four years, and Huld has been spending his spare time refurbishing her—including some planking work, interior upgrades, and a new, teak-veneer deck.

Huld looks back at his time in the Caribbean as a huge learning experience. "I thought my life as a career person in Boston was stressful, but making safety decisions aboard APSARA was even more stressful. Dodging weather, anchoring in dicey areas, and the piracy of South America, these were bigger challenges than I had ever faced before."

# Jamie Enos: The Captain

COURTESY OF JAMIE ENOS


TIM WRIGHT

Jamie Enos received her captain's license during her final year of college, and soon after graduating became the captain of the 51′ Aage Nielsen-designed ketch SAPHAEDRA. Strong mentors and a determined attitude helped her grow into the job.

In the 2012 Antigua Classics Regatta, many racers took note of SAPHAEDRA, a 51′ Aage Nielsen ketch. Not only did she perform well on the race course, but her young, diverse crew was obviously having a blast. They also noticed 27-year-old Capt. Jamie Enos at the helm, a refreshing sight in a sport that is largely dominated by men.

Enos has never been content to rest on her laurels, and is always seeking out new challenges. She started sailing dinghies as a kid, and instructed youth sailing starting when she was 12 years old at a local sailng club in Kennebunkport, Maine. She learned to race Optimist dinghies, Lasers, and 420s, and occasionally got to sail on other people's larger boats. When she graduated from Colby College as a math and biology major, she wasn't quite sure what to do for work, but wasn't interested in the kinds of jobs her peers were looking for.

One of her bosses at the sailing program, Eric Unterborn, suggested she might want to look into working on boats. Jamie had never really thought about sailing as a career, nor known anyone else who had followed that path, but upon reflection she said, "It ended up being some pretty great advice." She got a captain's license in her final year of college.

Jamie landed the job on SAPHAEDRA just a month after she graduated. She'd had never run a boat of that size and said, "When I first started…I didn't know what the hell I was doing." Through trial and error, strong mentors, and pure pluck, she quickly got the hang of handling and maintaining the boat, and tending the day-to-day schedule of boat operations. Soon she was looking for new challenges, and by her second season with SAPHAEDRA, she suggested a winter season in the Caribbean to SAPHAEDRA's owner. The owner thought that was a fine idea.

Again, Enos relied on friends and mentors to give her guidance on how to prepare. "I didn't really know what I was getting myself into," she said. In particular, a fellow captain named Robert Zelinski from Northeast Harbor, Maine, gave her advice on how to prepare the boat and her crew.

After a few months in the Caribbean, Enos decided to check another item off her bucket list and entered the boat in the Antigua Classics Regatta for the first time in 2010. Being her first time at the event, she didn't have an established racing crew, so she picked people up along the way. "We ended up with a really great group," she said. "A lot of them are still great friends today. Everyone on the docks is like, what are those kids doing, they are having so much fun!"

Enos loves to race SAPHAEDRA, which is, in some ways, a totally different skill set from coastal cruising. And luckily, she has a boss who supports her desire to learn more about classic boat racing by taking SAPHAEDRA out on the course. "When I first started doing it I tried to be as unaggressive as possible and stay out of everybody's way and just stay safe," she said. Jamie also thinks that racing makes a better sailor. "I think that you learn more about the boat in one weeklong regatta than a whole year sailing the boat," she said.

Jamie sees sailing as a career for the foreseeable future, although maybe not forever. For now, she loves the traveling, and getting paid to do it, and of course, the sailing. She said, "I filled up my passport this year, something I never thought I would do. I've gotten to go to some amazing places and met some amazing people."

# Doug Serrill: The Cruiser

DOUG SERRILL

Doug and Debbie Serrill have cruised TOMARA, a 36′ Ed Monk-designed bridge-deck cruiser, in the Pacific Northwest for the past 11 years. Today, they aspire to a larger boat and a trip to Alaska.

A few people make boats their vocation. Many more turn to boats as an escape from their vocation, and not in the way watching bad television or a trip to a resort might be an escape. Instead, taking care of a boat can be an all-involving hobby that relaxes the body by intensely focusing the mind.

Doug Serrill is such a person. He has owned boats most of his adult life, and finds the maintenance a soothing antidote to life's many stresses. An engineer and project manager for Boeing, now retired, Doug finds that doing the many types of work necessary to keep his boat, TOMARA, a 36′ Ed Monk–designed bridge-deck cruiser, in top shape is almost as enjoyable as the cruises he and wife, Debbie, take every summer.

"My way of relaxing is to work on something like a boat. It demands a lot of skills, such as finishing, plumbing, hydraulics, to name a few," he said. "As you use the boat, you discover refinements that are needed." Since the boat has been in Serrill's care she has gotten new wiring, electronics, and frame repairs, and had some electrolysis damage repaired. Serrill also installed a new autopilot, and integrated it with his chartplotter. Debbie is instrumental in many of the interior upgrades, as well as generating ideas.

Serrill keeps the boat in excellent shape, repairing and upgrading as needed, because he feels it is his responsibility to steward the boat's great heritage. TOMARA has spent her entire life in theNorthwest, and has had only six owners since built in 1941. Monk, known for his designs of power and sailboats conceived specifically for the tumultuous waters between Washington and Alaska, designed this boat to be built by students at the Edison School of Wooden Boat Building in Seattle.

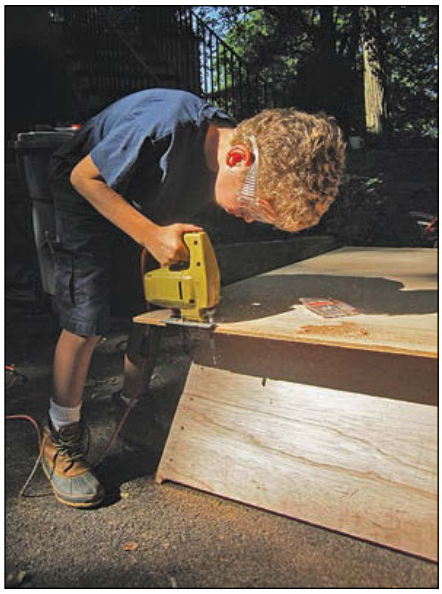
Monk designed many different types of boats between the 1920s and 1960s, but he is known mostly for his classic cruising powerboats. For many years he worked out of his own powerboat, NAN, which gave him a special understanding of what liveaboards and cruisers would want. As a result, TOMARA is a comfortable cruiser, capable of long treks in rough waters, despite her relatively small size.

The Serrills have owned the boat for 11 years. Before they found TOMARA, they were regulars on the boat show circuit, examining available boats. "We saw TOMARA, but at the time we didn't feel that we could afford her," said Serrill. "Later, when we had raised the funds to purchase her, we found that not only was the boat still on the market, but the previous owners had taken her off the market and saved her for us."

The Serrills have gotten as far north as the Broughton Archipelago, a group of rugged islands off of the northeast tip of Vancouver Island. British Columbia has made the area a provincial park, and it is remote, undeveloped, and unspoiled. "It was exciting to go that far north with only ourselves and our toolbox to rely on," said Doug.

Doug and Debbie have dreams of making even longer trips, as far north as Alaska, in a larger boat.

# Henry LePage: The Early Bloomer



LEPAGE FAMILY

While seven-year-old Henry LePage's father and grandfather have helped to guide the boy's early education in boats and boatbuilding, Henry brings much self-motivation and passion to his pursuit.

All Henry LePage wanted for his seventh birthday was a boat. He'd gotten the bug from his grandfather Pata, who, as Henry said, "loves everything fast." Together they would tear up and down the St. Lawrence River in a 30′ powerboat near Pata's summer home. It was fun, but Henry had begun to yearn for his own boat, one he could handle himself without grownups or siblings.

On his birthday, Henry's mom and dad presented him with a small box. Suspicious, Henry unwrapped his present and found a copy of Gavin Atkins's how-to-build guide called *Ultra Simple Boatbuilding*. At first he was disappointed, but then he realized the opportunity the book presented. "I thought, 'Yay! I get to build a boat!'" Henry said.

After mulling over various plans in the book, Henry selected the 11′6″ Poor Boy Skiff, a boat he could row and operate himself. The boat was not the simplest plan in the book, but his father, Mark, was committed to helping Henry build the boat he wanted. And so, a week before their annual vacation at Grandfather Pata's house, Henry and his dad got started.

Henry was no stranger to tools and building things when he began this project. He has been collecting tools practically since birth—two toolboxes full—and has his own workbench set up in the family's garage. He already knew his way around many hand tools, and Mark saw his role as keeping Henry safe with the power tools, helping him lift heavy things, and providing guidance along the way. After a week, the two of them had finished the hull, even after discovering that they were reading two different sets of plans for the same boat, with different dimensions.

After that week, the family put the unfinished boat on top of the car and headed for their annual vacation at Henry's grandparents' house in the Thousand Islands section of the St. Lawrence River. On arrival, Pata helped Henry finish his boat. Henry obviously admires Pata, a retired auto mechanic, who also loves fixing things and doing DIY projects. Pata helped Henry install hardware, fiberglass the bottom, and paint the boat.

When asked what he learned from the project, Henry said, "I learned that there are lots of hard parts and lots of easy parts, and lots of fun parts and lots of boring parts." But he said that the best part of the process was launch day. Henry christened his boat with river water, and launched it to the cheers, horns, and whistles of the neighborhood in Fishers Landing, New York. He christened her MISS ARCADIA II, a nod to MISS CANADA, his favorite Gold Cup racer—and to Arcadia Park, where his grandparents live. She is the second boat so-named, because Henry already has an inflatable raft called MISS ARCADIA I.

Henry, who dreams of being in the Coast Guard one day "so he can be on the water all the time," is already working on his next project: restoring an antique outboard engine given to him by Pata. When asked what he likes to do besides woodworking, Henry answered, "go boating."

# Jane Ahlfeld: The Teacher

WOODENBOAT SCHOOL

Jane Ahlfeld was a 31-year-old elementary school teacher when she learned to sail. She's been a sailing instructor now for over two decades, teaching both adults and children the elements of seamanship.

Jane Ahlfeld was a 31-year-old elementary school teacher when she first she took a windjamming vacation aboard the schooner J & E RIGGIN out of Rockland, Maine. At that point in her life, she had very little experience with boats but she felt enlivened by sailing and being on the water. She decided to take a leave of absence from her job and try something new. She said, "My goal was to learn to sail and spend a winter crewing on a boat in the Caribbean."

The following summer, Jane arrived at WoodenBoat School and remembers, "I thought I had found nirvana." She had a job in the kitchen cooking breakfast, lunch, and dinner for the students who came to take weeklong classes throughout the summer. In the afternoons, she and a fellow chef would head down to the waterfront and mess around in the Nutshell prams and other boats the school uses to teach sailing and seamanship. Neither of them really knew what they were doing, but various people took them out and showed them how to sail.

At the school, Jane met the captain of the schooner MARY HARRIGAN, who took her on as a mate and teaching assistant to go to the Caribbean for the winter to help teach Cruising Boat Seamanship. Teaching students that winter was also a crash course in sailing for Jane. She remembers that the first night they anchored, the captain told her, back in the cockpit, "Okay, so this is how we anchor," and explained the process to her. Then she went up on the foredeck and said to the students, "Okay, so this is how we anchor." Jane laughed, "That's teaching, right? Always just two steps ahead."

She remembers a moment on night watch when it all clicked into place: "I was thinking about the wind and the set of the sail, and I said, 'I think I've got it.'" She had also always loved maps, and so navigation and reading charts was a natural draw for her. She returned from the Caribbean still unclear as to whether she would return to her classroom job, but it slowly became apparent that her life had taken a new path.

Jane has taught Elements of Seamanship at WoodenBoat School since 1990, over the years becoming the primary instructor. Jane said, "At heart I am a teacher, and want to share what I enjoy." In the winters she has her own business as a computer consultant. In 2004, she started teaching seamanship aboard the schooner MARY DAY for a few weeklong trips through WoodenBoat School, as well as several school trips. In 1993 and 1994 she arranged an Elements of Seamanship class through WoodenBoat in Bequia, sailing with local people on local boats.

Jane loves what she does, because she loves teaching people how to handle their situations better. Her courses help people gain confidence on the water, learning to navigate, steer, trim sail, anchor, and come in to the dock. But beyond the hard skills of sailing, there are many other lessons to learn, such as respect for the weather, your fellow crew members, and your equipment. Jane summed up, "Sailing is full of little life lessons."

# THE BOATBUILDING AND ROWING CHALLENGE

Presented by *WoodenBoat* magazine

***WoodenBoat***'s Boatbuilding & Rowing Challenge (BARC) is a grassroots effort to involve communities and, in our specific case, high school programs, in the team-building aspects of boatbuilding and then competitively rowing one specific boat: Iain Oughtred's 22', 330 pound St. Ayles Skiff, with a crew of four rowers and one helmsperson (coxswain).

## NORTH AMERICAN CHAMPIONSHIP JUNE 28–30, 2013

**at the WoodenBoat Show, Mystic , CT**

**For further information, please see our website: www.woodenboat.com/BARC**

CHRIS PERKINS

PETER NISBET

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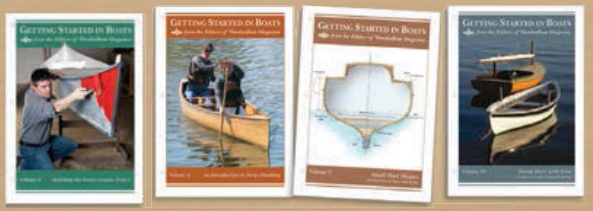
# The Solution —

**GETTING STARTED IN BOATS**, a removable supplement included in every issue of *WoodenBoat*.

This publication is produced for the absolute beginner; for your family, friends, and neighbors, members of local community groups, colleagues at work—the people you know who should be *inspired* into boats and boating.

Share your passion!


**To download previous issues of *Getting Started* that you might have missed, please visit www.woodenboatstore.com.**



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RUSS MANHEIMER

**The Danish double-ended SJOGIN was among the boats that sank when New Jersey took the brunt of Hurricane Sandy. The boat is undergoing repairs at Beaton & Sons Boat Yard, which itself had storm damage to repair.**

**New Jersey,** after the storm made landfall in late October 2012. In a *New York Times* photo published the day after Sandy hit, the **David Beaton & Sons Boat Yard** was visible in the upper left corner, just beyond the new inlet, among many destroyed homes. This simple boatyard, a well-loved fixture on Barnegat Bay that has been building, maintaining, and restoring wooden boats for over 80 years, is home to much of what's left of a wooden boat culture on the upper bay. The buildings, some dating from the 1930s, surprisingly withstood the battering from the storm debris. There was over 5′ of water in the wood shop, ruining the motors on very old woodworking machines and scrambling everything else. Many stored boats were lifted off stands and scattered about; some ended up in the tree line behind the salt marsh that almost surrounds Beaton's. Most have been recovered and are now back where they started. The A-Cats stored in the south shed floated around but sustained only minor damage. **About ten boats sank,** and five of these were damaged beyond reasonable repair. **SJOGIN**, my 22′ koster boat, sank near her slip after being holed during the surge, but as of early March she was in the yard for new planks forward along with some deck work and new rails." The boat has been a popular subject on the WoodenBoat Forum, and boat designers François Vivier and Paul Gartside have both drawn boats based on her lines.

"After weeks of toil and volunteer help and dealing with floods from smaller storms after Sandy, **Beaton's is now back at work**," Manheimer reports. "A replica of the 19th-century catboat MYTH, which had a new deck installed last year, has been faired and painted as of this writing, and the yard has built a new storage and shop facility just up the road." *For more information, see www.sjogin.com. Beaton and Sons, 732–477–0259 or mail@beaton'sboats.net.*

■ **C.J. Vallett** of Nantucket, Massachusetts, came up with an innovative shop design for working at home in his spare time to restore **DEFIANCE**, hull **No. 146** of the **Wianno Senior** class. He set out to find a boat of the type, and with the help of his friends at Pease Boat Works in Chatham, he found one in 1996. "With the search phase of this odyssey over, the rescue phase has turned into an ongoing event to this day," he writes. At first, he covered the boat with a backyard tent, and over a dozen years he rebuilt the transom and rudder, sistered frames, installed a new centerboard built by Crosby Boat Yard, and replaced batteries, pumps, lights, and storage bulkheads, along with many coats of paint and varnish. Still, the boat was out of the water more seasons than in. When deck leaks appeared, he realized he had more work ahead. "I set about convincing my wife and daughter that the Valletts needed a **new state-of-the-art, climate-controlled boathouse**, which of course would mean a new kitchen and bath for Melinda and larger bedroom and hot tub for Natasha. DEFIANCE is now safely underground adjacent to my carpentry shop." Lowering the hull into a dry well that has a damp, sandy subfloor keeps the hull from drying out, but it also puts the boat's deck at a convenient working height just a step up from the shop's concrete floor. "Hosing down the floor creates a dust-free environment

C.J. VALLETT

**The Wianno Senior DEFIANCE is undergoing restoration in a purpose-built basement shop that keeps the deck just above floor level and the keel in a dirt-floored well to avoid drying her out too much.**

for painting and varnishing," Vallett reports. "The temperature never goes below 55 degrees or above 72, and I can now control the oh-so-critical humidity. I am now getting done in a week, with better results, what would have taken a month or more in the old tent." Since September 2011, he has rebuilt the trunk cabin; stripped the deck down to the original plywood substrate, which he refastened and then sheathed in 6-oz 'glass cloth set in epoxy; replaced the mast partner; refastened the centerboard trunk; reinstalled deck hardware; and installed new toerails. He expects to have the **refit done in time for the 2013 sailing season**. "With DEFIANCE never experiencing freezing temperatures again, and with a controlled-humidity environment, I am hoping for no more than the yearly varnish and paint maintenance for years to come."

COURTESY HACKER BOAT CO.

**The "Tommy Bahama Edition" Hacker-Craft is among the models shown at a new Hacker Boat Company showroom in Dania Beach, Florida.**

■ The **Hacker Boat Company, Inc.**, of Silver Bay on Lake George, New York, has opened a **showroom** for its line of varnished mahogany runabouts in **Dania Beach, Florida**. The new facility has water access, allowing boats to be test-driven. Among the models to be shown in Florida are a "Tommy Bahama Edition" and a "Neiman Marcus Edition" Hacker-Crafts, both of which are luxuriously fitted out 27-footers. The company builds 20′ to 42′ runabouts in a wide array of semi-custom and custom layouts, often with custom appointments. The designs are those of John L. Hacker, a preeminent designer from the golden age of wooden racing powerboats, whose original drafting board went on exhibit at the Silver Bay headquarters showroom in fall 2012. *The new Florida showroom is at 313 N. Bryan Rd., Dania Beach, FL 33004; 954–646–6070. See also www.hackerboat.com.*

■ **Crocker's Boat Yard** in **Manchester, Massachusetts**, is **restoring a 1983, 29′ Riva Aquarama Super**, Skip Crocker reports. The boat sank after striking a

***Above*—Sam Crocker drew the lines for VAGRANT in 1929, and in late 2012 Crocker's Boat Yard, now in its third generation of family ownership, acquired the 47'9" yacht (above right) much in need of repair. Over the next few years, she'll be brought back to her former glory and put on the market. *Below left*—Restoration began in February on a Crocker 20, one of a fleet of racing daysailers from the 1950s. *Below middle*—Yard owner Skip Crocker's 19'6" powerboat LONGSHORE of 1978 will be at the WoodenBoat Show this year. *Below right*—A Riva Aquarama Super, which struck bottom and sank last season, had her bottom replaced, topsides repaired and refinished, and extensive interior and system repairs.**

COURTESY CROCKER'S BOAT YARD

submerged object in Lake Winnipesaukee last year and was taken to Crocker's for extensive repairs, including having its bottom replaced, which also involved frames and floor timber replacements. Some of the boat's triple-layer mahogany topside planking and her transom needed repair, along with a delaminated stem. "Just about everything was removed" to make the repairs, Crocker said. The project also involves replacing all of the boat's wiring and rebuilding its engines, transmission, and gauges. She was expected to have all-new canvas and upholstery, and the hull will be fully stripped and refinished.

In addition to the Riva project, several Sam Crocker–designed boats are in the yard for restoration. Skip Crocker is the grandson of Sturgis Crocker, who with his wife, Eileen, started the yard in 1946 to build yachts designed by his father, Sam Crocker.

The yard purchased VAGRANT, design No. 122, a 47′9″ sloop of 1929, which was moved to the yard late last year for a thorough restoration over the coming few years.

Meanwhile, LONGSHORE, a 19′6″ powerboat built at the yard in 1978 to Crocker's design No. 283, will be refinished in time for exhibit at The WoodenBoat Show at Mystic Seaport in late June. Skip Crocker bought the boat in 2005. "We had to replace a deckbeam and the plywood house top—not much else, mostly paint and varnish. I use her now on the Essex River to get back and forth to Cranes Beach on weekends in the summer. She is perfect for that. I put a Honda 40 on her, which pushes her along just fine. We made four or five trips to the beach, a round trip of an hour or an hour and a half, and I think we used 2.5 gallons of gas."

A Crocker 20, a smaller version of the 40′ sloop FIVE PLY, which was yard founder Sturgis Crocker's personal boat, is also being restored, with a summer relaunching expected. "In the '50s," Crocker said, "my grandfather built a handful of them, and they were raced by members of the Manchester Yacht Club and the Manchester Harbor Boat Club. We are doing a complete restoration to this one: new decks, rigging, sails, fairing the keel, putting her back together the way she was designed with a few additions. One of the guys that sailed against my grandfather says they were the most fun he's had on the water, and they used to race two or three times a week." *Crocker's Boat Yard, 15 Ashland Ave., Manchester, MA 01944; 978–526–1971; www.crockersboatyard.com.*

■ And, in the words of Monty Python, now for something completely different. **"Wood"** and **"megayacht"** are not often uttered in the same sentence, but an Italian company has made a specialty of three-layer hull laminations for large yachts, sometimes reinforced by carbon fiber. **Castagnola**, with shipyard facilities in Lavagna, Italy, is setting out to build a 146-metric-ton, **38-meter (125′) LOA cold-molded yacht** with a beam of 8.1 meters (26′6″) that the company says will not only be its largest model but will be the **largest wooden hull ever built for water-jet propulsion**, using three 1,920-hp MTU diesel engines coupled to

COURTESY CASTAGNOLA

**A 125′ megayacht with water-jet propulsion—all in a cold-molded wooden hull—is under construction in Lavagna, Italy.**

# If You'd Like to Build Your First Boat...

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**See Us at the WoodenBoat Show**

COURTESY PETE BUXTON

**Buxton Boats in Stonington, Maine, has a 38′ lobsterboat under construction (far left) and is doing an extensive refit on the 34′, 1927 English sloop KATARINA (left), including a complete interior rebuild.**

Rolls Royce Kamewa jets. The builders estimate the boat will be capable of reaching a 28-knot cruising speed. *Costruzioni Navali Tigullio–Castagnola Giovanni, Via dei Devoto 223, 16033, Lavagna, Italy; www.castgnola.biz.*

■ At **Buxton Boats** in **Stonington, Maine**, a new **lobsterboat** to proprietor Peter Nash Buxton's design is nearing completion. The boat, a "semi-built-down" 38-footer with a beam of 13′, is the second of the type that Buxton has built for local lobsterman (and musician) Frank Gotwals, a friend of the builder. The boat will have V-berths, an enclosed head, and a small galley. Buxton expects to launch the boat in June. At the same time, Buxton is **also refurbishing a 1927 English-built gaff-headed sloop** with a reeving bowsprit. The boat belongs to Bruce and Kasey Elfstrom, summer residents of Deer Isle. (Elfstrom is the proprietor of the Woodenboat Rescue Foundation, www.woodenboatrescue.org, and designer of the Deer Isle Koster Boat written up in *Small Boats 2011*.) Buxton replaced floor timbers, frames, the stem, and the sternpost. He also knocked out old keelbolts and replaced them with new 1¼″ ones. He replanked the hull, too. "The entire interior has been rebuilt as well as the deck and house," Buxton said. An August relaunching is anticipated. *Buxton Boats, 139 Burnt Cove Rd., Stonington, ME 04681; 207–367–6318.*

## Offcuts

In **Astoria, Oregon**, a brick railroad depot built in 1925 and donated to the **Columbia River Maritime Museum** in 1987 has a new lease on life as of this year.

Most notably, up to now, the building was used for the 1989 construction of a replica of a Columbia River sailing gillnetter, a distinctive salmon-fishing boat of the late 19th century in an area with a rich historical legacy. Other than that, the old depot for years had been largely vacant and deteriorating, a monument to unrealized potential. But when **Sam Johnson** became the executive director of the museum in 2009, the old depot got his attention. "As a boatbuilder, I look at 6,500 sq ft of empty space and think, 'What do you do with big empty workshops?' Particularly in a maritime museum, you do something that's related to our mission." Johnson has taught boatbuilding, and especially bronze casting for small-boat builders, in a number of places, including WoodenBoat School in Maine.

This spring, Johnson's vision for the building began to be realized. The depot is known for its west wing's enormous

arch-topped windows and its east wing's industrial scale roll-away doors and open spaces that seemed to have been made for boatbuilding. First, though, the old, tired, and earthquake-damaged structure needed about $2.6 million worth of work, including architectural restoration and systems upgrades. Reconstituted as the **Barbey Maritime Center for Research and Industry**, the building will house **short-course boatbuilding programs** and historic **boat documentation projects**, plus temporary activities. "The real issue here is that as a museum we've done a really good job of preserving the maritime artifacts, but what we don't do well is preserve the process," Johnson said. The list of courses is a long one. Local tradesmen will pass on such techniques as making salmon gillnets, perhaps even setting them by boat for demonstration purposes. Chinook tribal members will share Native American maritime crafts, and boatbuilders from around the Northwest are lined up for traditional and contemporary boatbuilding courses. The programs start in May.

The museum will also use the space to document historic boats. In concert with students from a local community college architectural restoration program, almost a dozen historic boats from Columbia River communities have already been documented, and more are envisioned, in the east wing when possible, in the field when necessary. Johnson also hopes to see a day when another sailing gillnetter is built to serve as an on-the-water representative of a once prolific type—and someday, perhaps a fleet of them echoing the sailing regattas fishermen had on the lower Columbia in the old days.

COURTESY COLUMBIA RIVER MARITIME MUSEUM

**Newly refurbished, including restoring the grand style of its west wing waiting room (left), the 1925 Burlington Northern brick railroad depot (right) in Astoria, Oregon, is envisioned to become an active center of boatbuilding and related skills for the Columbia River Maritime Museum starting in May 2013.**

The restored depot's west wing will also house a **chandlery**, marketing items made by volunteers and staff, most notably **copper rivets and roves** made on vintage equipment donated years ago by **Skookum Fastenings** of Anacortes, Washington. Belaying pins, mast hoops, wooden-shelled blocks, and small boats will eventually also be sold there as well, to support the programming. *Columbia River Maritime Museum, 1792 Marine Dr., Astoria, OR 97103; 503–325–2323; www.crmm.org.*

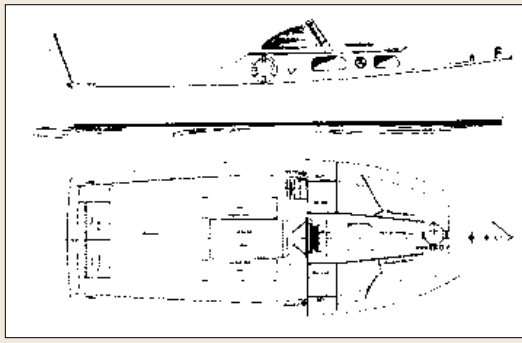
Elsewhere in this issue (page 80), I have written about the schooner ADVENTURESS and the volunteers who help keep her fit in Port Townsend, Washington. Writing about Sam Johnson above gives me another opportunity to reflect on **volunteer boatbuilding**. I first met Johnson by volunteering on a boatbuilding project that he conceived and ran while he was the development director at the Oregon Historical Society. I lived in Astoria at the time, and every Saturday for almost two years I drove the four-hour round trip to Portland to work on three replica **ship's boats**—the idea being to do one Spanish, one English, and one American to honor the coastal explorations of the late 1700s. Especially by working alongside Johnson and Canadian boatbuilder Greg Foster, I learned a great deal about boatbuilding.

Volunteering on boatbuilding projects can be richly rewarding, and the opportunities are increasingly accessible. Although most of our crew went on to other things, I still run into a few of them at the Port Townsend Wooden Boat Festival, and a few of the fast friendships I made have lasted almost 25 years. I already had good hand skills and tools enough when I went to work there, but I went on to my own boatbuilding projects with elevated confidence and no hesitation. If the project has good people, and if the chemistry is right, then the learning happens naturally. I remember working alongside native Danish builder Bent Thygesen, a much older man than me, and one day as he and I worked on planking we communicated mostly in gestures—we had reached a point where we hardly needed to say a thing, and we both wanted to get stuff done. At the end of the day, he said, heavily accented, "Well, Tom, it has been very good working with you!" We had a tight-knit group for those weekends, and I didn't want to miss a thing. There was no better antidote for the desk work I was doing at the time.

A couple of times now I have been highly impressed by the volunteers, young and old, that I have encountered, whether on a Viking ship voyage to Denmark or on ADVENTURESS's annual maintenance. I've come to know young people who have their heads screwed on right, who meet respect with respect, who take joy in working alongside someone else, who have ambitions to make a contribution and to take their own craftsmanship to a higher level. It's exciting to see them spread their wings, and I remember myself just how that felt. I just want to tell them to go on, fly, fly as high and as far as you can.



Speaking of **Portland, Oregon**, correspondent Bruce Halabisky writes with news: "**Kayak builder and historian Harvey Golden** (see WB No. 170) has opened a new museum in Portland called the **Lincoln Street Kayak and Canoe Museum**. 'I've surveyed kayaks in museums all over the world, and only about 20 percent of those have been on exhibit,' Golden says. The one-room museum in what was once a neighborhood corner store houses over 40 kayaks and canoes. Most of the collection consists of full-sized functional replicas that Golden has built during the past 20 years. 'I deliberately set out to build one of each type of traditional Arctic kayak,' he says. 'This is now the most diverse collection of Arctic kayaks in the world.' The collection includes a replica of a 28′2″-long Caribou Inuit kayak, the longest known traditional kayak in the world, an Algonquin birchbark canoe,



COURTESY SAM LAWRENCE

**The Crosby Striper is a much-loved bass fishing boat for Nantucket Sound, and Sam Lawrence of Massachusetts hopes to document every one of the type ever built.**

and more than 30 scale models. The museum is open by appointment or during the hours listed its website. *The Lincoln Street Kayak and Canoe Museum, 5340 S.E. Lincoln St., Portland, OR 97215; www.traditionalkayaks.com/museum.*

Our friend **Greg Rössel** writes to remind us that it's time for a tip of the hat and a raise of the pint to the **radio station WERU**, based in Orland, Maine. The station marks its **25th anniversary** this May. Rössel, well known to *WoodenBoat*'s readers as a contributing editor and also as a regular, longtime teacher at WoodenBoat School, has himself been a regular host on the station, bringing world music to listeners every Sunday for many years. The school's director, Rich Hilsinger, is also one of the station's 300 volunteers. Peter Neill, a frequent contributor to *WoodenBoat*, airs his World Ocean Radio program on the station, and Boat Talk (www.boattalk.org), which lives up to its name, is aired monthly. WERU is at 89.9 on the FM dial in Maine, and streams through www.weru.org.

A moment of silence is in order for the 204′ LOA **steamship WAPAMA** of 1915, which the San Francisco Maritime National Historical Park (www.nps.gov/safr) long ago decided was too far gone for restoration. She's been stored on a barge in Richmond, at the north end of San Francisco Bay, for years. She has been fully documented, and this spring her **deconstruction has begun**. She is the last of her kind.

## Readers looking for boats...

■ Sam Lawrence of Massachusetts is undertaking an effort to **document** "every wooden **Crosby Striper** ever built." The 24′, hard-chined, V-bottomed boats were built in mahogany by the Crosby Yacht Building and Storage Co. Inc., in Osterville, Massachusetts, for Nantucket Sound bass fishing. "The first boat was built in 1947, and production continued up until 1968, when the last wooden boat, hull No. 88, was built," Lawrence writes, noting that the company still builds the fiberglass version that made its debut in 1984. The hulls were the same, but a variety of deck and cabin layouts were used, based on the client's preferences. "I am trying to create a record of every wooden boat built, including hull number, build year, boat name, current owner, location, and a photo if possible, even for boats that

have been destroyed." *Contact Lawrence at crosbystriper@gmail.com or 508–737–7075; see also sites.google.com/site/crosbystriperassn.*

■ "I am looking for information on the **ketch SEVEN BELLS**, built in Halifax, Nova Scotia, at **Shelbourne Shipbuilders Co.** and launched in July 1926," Lou Cook writes. "She was designed by William J. Roué in concert with sketches and ideas from my great-uncles Thomas F. and Carleton S. Cooke. She was a Bermuda-rigged ketch, 56′ LOA, and according to listings in *Lloyd's Registry*, her official number is 226028, call letters WG3601. She was in my family until 1954, then she was owned by a Harter family of Pittsburgh, Pennsylvania, until at least 1972, registered in Massachusetts, first in Nantucket and later in New Bedford. She was owned by John Mahoney, Jr., of Plymouth, Massachusetts, until at least 1981. *Time* magazine on January 19, 1931 reported about my great-uncle Tom's award of the Cruising Club of America's Blue Water Medal for 1928. He and five others sailed to England and cruised over there for two years without mishap." Contact Mr. Cook at lou1529@att.net.



## Across the bar

■ **Gregory C. Carroll**, 61, February 1, 2013, Blue Hill, Maine. A man of many passions, Mr. Carroll had a career as a stockbroker in San Francisco, California, but returned to his native Maine to buy and rejuvenate a lobster pound business, and later he purchased Rumery's Boat Yard in his hometown of Biddeford. A graduate of Bowdoin College, he went back to school at age 40, this time to study osteopathic medicine at the University of New England. After completing his residency at Eastern Maine Medical Center in Bangor, his commitment to fine wooden yachts soon resurfaced, and he voyaged the Atlantic Ocean extensively in his Philip Rhodes–designed sloop THUNDERHEAD. Later, he circumnavigated in a Swan 51. He belonged to the Cruising Club of America, New York Yacht Club, Biddeford Pool Yacht Club, and Blue Hill's Kollegewidgwok Yacht Club. His philanthropy extended to an orphanage in India, music education in Costa Rica, and the Kneisel Hall Chamber Music School and Festival in Blue Hill.

■ **Frank Pedersen**, 80, February 15, 2013, Chestertown, Maryland. A research psychologist for the United States Department of Public Health Services, Mr. Pedersen was an avid racer of International 14s in the 1960s and Wayfarer dinghies in the 1970s, notably competing in the 1978 Wayfarer Worlds in Denmark. In his retirement, he spent summers in Brooklin, Maine. Always a proponent of small craft, he started a national championship for Shellback dinghies, held first in Brooklin in 2009. He raced his Wayfarer in two WOOD Regattas in Maryland. To qualify for the Eggemoggin Reach Regatta's 25′ limit, he designed and built his own WindSprite 26 (see *Small Boats 2007*), a multichined plywood-hulled sloop with inexpensive performance in mind. He raced in a string of ERRs and also Retired Skippers Races in Castine, taking delight in finishing well—and sometimes in the hardware—against yachts of much grander pedigree. He was a highly competitive racer but never lost the joy of it.

# A Holdfast for the Workbench

## *Ten bucks and two hours yield a versatile clamping device*

by Harry Bryan
Photographs by Bryan Gagner

While a vise or clamp works well for holding work along the edges of a bench, a holdfast is needed when it's necessary to secure a project toward the center of the work surface. I have one satisfactory tool for this work that I forged from a ¾″ round bar of mild steel. It is set with a hammer blow to its top and released with a sideways tap to the shank. Its only drawback is that its construction requires a forge and anvil—tools not often found in the average shop. On the other hand, my favorite tool catalog, Lee Valley, offers a holdfast for about $80. It looks like a good tool, and if you place a high monetary value on your spare time, that is a fair price.

However, for about $10 and two hours of creative effort, you can have the rugged holdfast whose construction I'll detail on the following pages. And you'll have the satisfaction of having built it yourself.

***Above*—By adapting an off-the-shelf C-clamp, the author built this handy holdfast for securing work in the middle of his bench. *Inset*—To make this forged holdfast requires blacksmithing equipment and skills. The shop-built, C-clamp-inspired holdfast lying on the bench does not.**

### MATERIALS

3″ C-clamp

9″ length of ¾″-diameter mild-steel round bar

4″ (20-penny) nail

### TOOLS

High-tension hacksaw frame equipped with a top-quality, 18-teeth-per-inch hacksaw blade

Mill file, 8″ or 10″ long; maximum thickness 3⁄16″

Either an angle grinder or a belt sander

A drill bit that's the same diameter as the 4″ nail

## CONSTRUCTION

### 1. CUT THE CLAMP

Saw through the clamp, leaving 2½″ of its back attached to the end with the screw. This 2½″ section is enough length to make a strong connection with the steel bar, yet it assures that the 3″ screw will be able to reach the bench surface to clamp thin material.

### 2. GRIND THE CLAMP

Using an abrasive disc on an angle grinder (or the front drum of a belt sander), grind away the outer ridge along the back of the clamp. Also grind away any embossed lettering, until the metal is of a consistent thickness (probably about 3⁄16″).

### 3. CUT A SLOT IN THE BAR

After painting the ¾″ round bar with pigmented shellac (such as BIN primer-sealer) or white paint, use a pencil to draw the slot that will receive the back of the clamp.

Drill a 3⁄16″ hole through the bar to create the bottom of the slot and then carefully make two hacksaw cuts to remove the material between the lines. This is a total of 5″ of sawing through nearly ¾″ of steel, the thought of which will be enough to turn many people away from this project. With this in mind, I timed this process, finding that it took only 20 minutes including short breaks. Here are a few tips for using a hacksaw accurately: Use a new, good-quality, 18-teeth-per-inch blade. While you must keep enough pressure on the blade to make it cut, the common mistake is to use too much pressure, which distorts the blade and makes the direction of the cut difficult to control. Saw only five strokes at a time, then stop and check the accuracy of your work on both the front and back sides of the cut. If you are drifting into or away from the line, twist the saw to take corrective action for the next five strokes. If things are going well after an inch of progress, then take as many as 10 strokes before making a close inspection. I have used a hacksaw for many years and still follow this procedure faithfully.

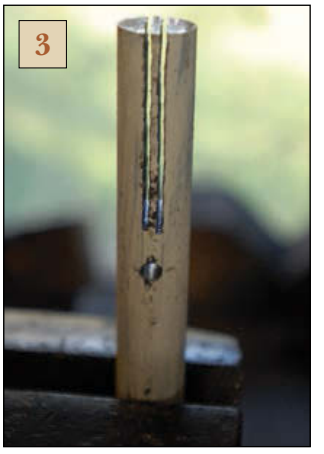
### 4. A BIT OF FILE WORK

Use a mill file that is 3⁄16″ or less in thickness to smooth out the saw cuts in the bar's slot, and to reduce the thickness of any high spots on the back of the clamp. When the clamp fits into the slot for its full length, you are ready to drill holes for the rivets (short sections of nail) that will hold the two pieces together.

### 5. DRILL THE RIVET HOLES

With the bar fitted to the clamp, center-punch for the two rivet holes 3⁄8″ from either end of the bar's slot. These holes should be a close fit with the 4″ (20-penny) nail. Unfortunately, it seldom works out that the correct-size drill can be found in the 1⁄16″–¼″ drill sets most of us own. If test holes in a scrap of steel or hardwood show that one size drill is too small and the next in the set is too large, choose the smaller one and drill through the bar and clamp for both rivets. Slightly countersink the ends of each hole so that the rivets can be filed flush with the surface and still hold.








## 6. TURN THE NAIL

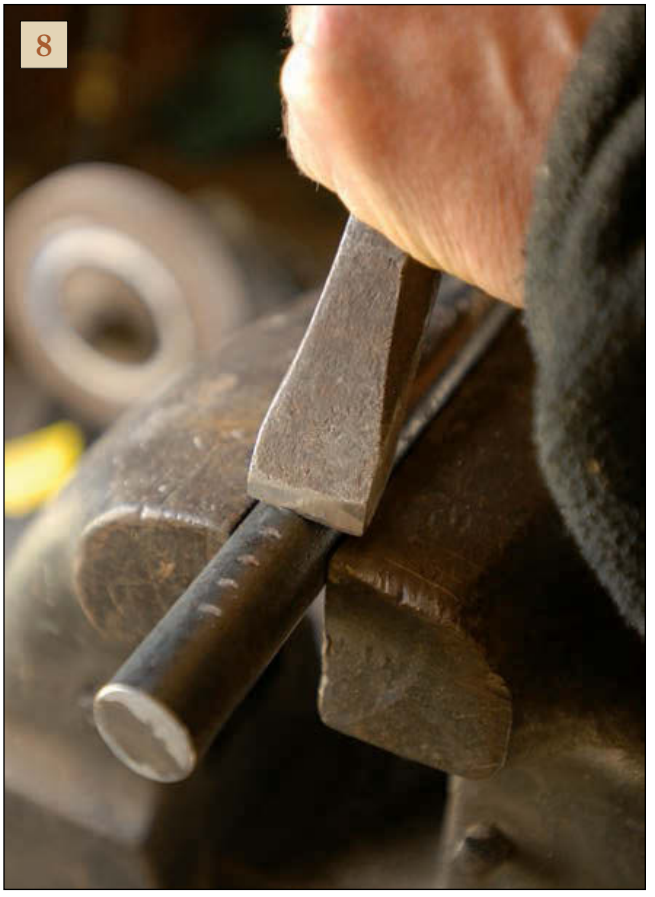
Cut the head off of the nail and chuck it in an electric drill. Adjust the jaws of your bench vise so that the distance between them is a bit less than the nail's diameter, and cradle the nail in the resulting slot. Spin the nail so that its top surface is rotating toward you while you take file strokes to reduce its diameter. If you are patient and test often with a caliper or the hole already drilled, this work can be very accurate. When enough of the nail has been reduced in diameter to serve as the rivets, cut them to a length that allows a strong 1/16″ to project past the surface of the bar on each side.


## 7. PEEN THE RIVET HEADS

With the rivets in place, lay the assembled tool on an anvil; then, using a ball-peen hammer, flare out the ends of the rivets until they fill the countersinks. Work back and forth, peening a bit on one side, then the other, to keep the ends even. File any extra material flush with the surface.

## 8. SERRATE THE SHANK

This holdfast depends on friction between the shank and the wood of the bench top to oppose the upward pull of the clamp. A row of slight nicks created with a sharp, cold chisel on the front and back of the shank will give it a grip on the wood.





## 9. PAINT

Finish the tool with a coat of paint, but leave the shank bare where it will penetrate the bench top.

Holes of ¾″ diameter, which give a sliding fit for the shank of the holdfast, will be needed in the bench top. If your bench is not at least 1¾″ thick, you may need to fasten a block of wood to its underside before boring the holes.

*Harry Bryan is a contributing editor for* WoodenBoat.

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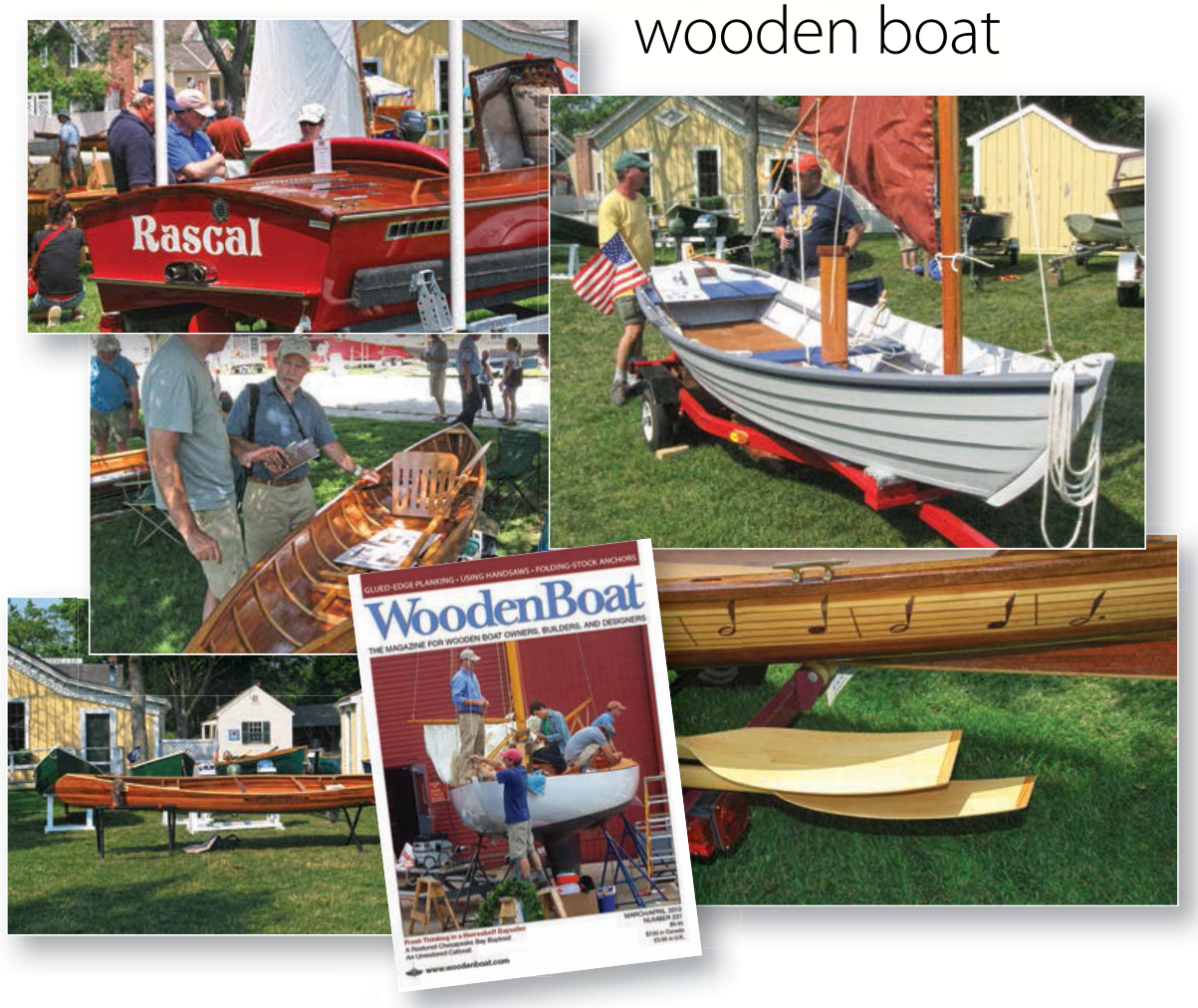


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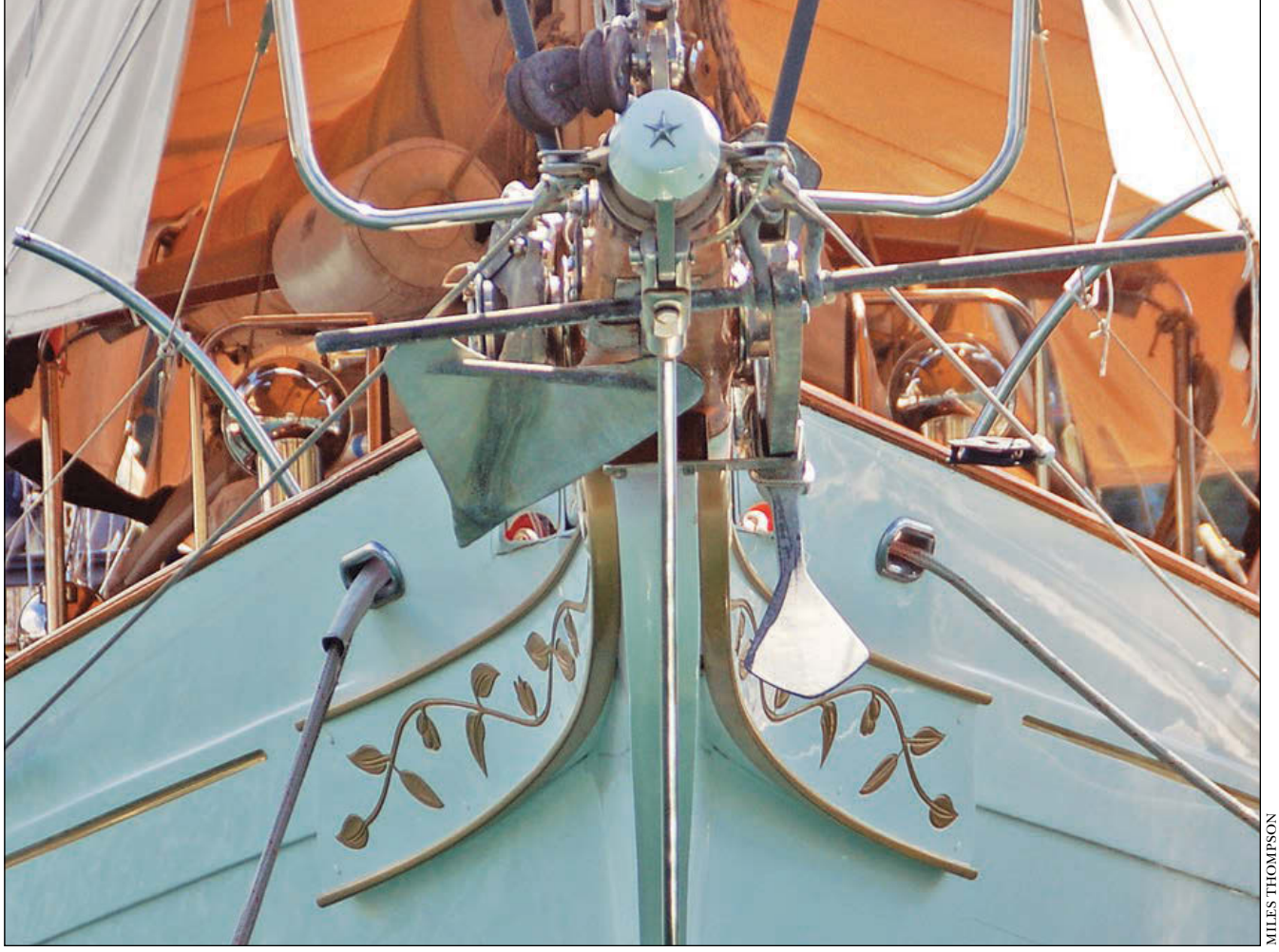


MILES THOMPSON

# Fitting Trailboards

## *Making a laminated mirror-image carving blank*

by Bart Chapin

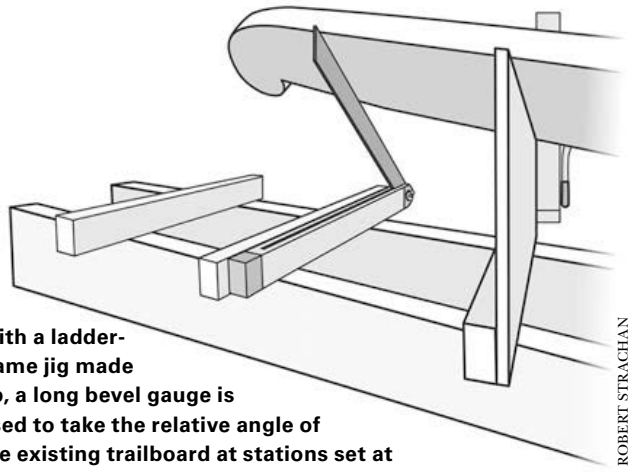
When I received the news last year that the starboard decorative trailboard had parted company with the ketch LONE STAR, the problem had a familiar ring to it. I had a long history with the boat, both working and sailing her, and the lost trailboard was one I had made many years earlier to replace one lost during a circumnavigation. The surviving port trailboard had provided a pattern, in mirror image, for the starboard side replacement. Years later, when the other original trailboard was lost from the port side, I became the logical choice to make another new one, this time making a mirror image of the one I had earlier made in mirror image. Now, I had yet another to make, this time back on the starboard side.

The Jay Paris–designed ketch, 61′6″ LOA, was built in 1982 at the Mashford Bros. Ltd. yard in Cremyll, Cornwall, England. I built her original rudder at my shop in Maine and shipped it to England during her construction, and subsequently my wife, Lucy, and I traveled to Cremyll to help get the yacht ready for launching. The boat, still extensively voyaging, is now owned by the original owner's son, who relies on Capt. Miles Thompson for most ongoing maintenance. When Thompson called from Argentina to ask if I would make a replacement trailboard, I was a bit hesitant. Most of my work these days involves computer-aided machine design, not woodworking. The captain and I talked a bit about better ways to attach the boards to the bow, and somehow I soon found myself back in the shop working with my neglected woodworking tools to match the port-side trailboard that Thompson shipped to me.

I set about making a mirror-image bending jig so that I could match the existing trailboard's twist and sheer. First, I made a judgment that nine station lines, one every 10″, would provide a suitable number of references for the trailboard's twist and would extend a bit beyond its length at each end.

Next I built a ladder-frame strongback consisting of two straight 2×8s spaced about 1′ apart. At the bottom of the strongback, I screwed ½″ plywood cross spalls

***Above*—Well-fitting trailboards are the basis of the elegant carvings that adorn the bow of the yacht LONE STAR. To make a replacement for a lost piece, the author developed a mirror-image laminating jig by measuring the surviving trailboard.**



ROBERT STRACHAN

**With a ladder-frame jig made up, a long bevel gauge is used to take the relative angle of the existing trailboard at stations set at 10" intervals. Molds made of ½" plywood are set up at each station. As shown in this sketch, one station is established beyond the end of the piece, to be faired in as shown in the photo below right.**

to hold the 2×8s in position. With the strongback set up on a bench, I marked station lines square across the top edges of the 2×8s, corresponding to the established intervals. Then I ripped out some reasonably straight 1½"-square pieces 16" long and fastened them across the building jig with one face matching each station mark. All of them were set on the same side of the marks and their ends all extended an equal distance beyond the 2×8s on each side. I checked once more to be sure that the 2×8s were parallel and straight and that the jig was not twisted or skewed.

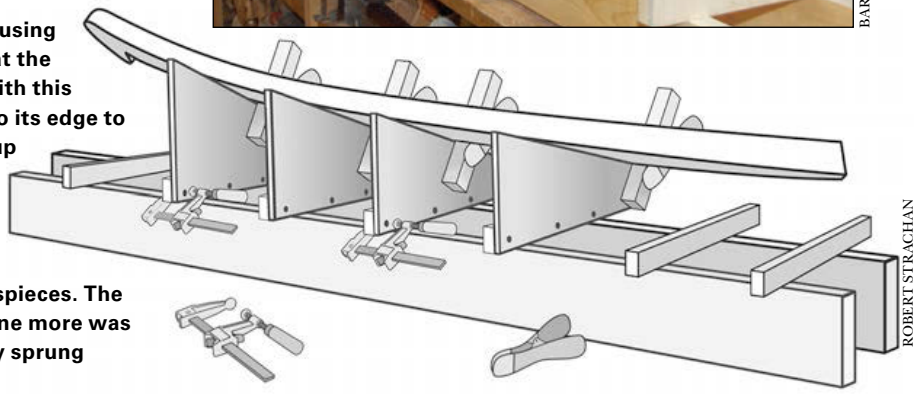
To establish the angle for the first mold, which would be used as a baseline from which the others would be measured, I next cut a piece of ½" plywood 16" long and about 10" high and cut off the top edge at a somewhat arbitrary angle. The objective was to give me a starting point from which I could set up the trailboard in such a way that the rest of the upright supports would be of reasonable height. I fastened the initial angled piece to a station near the middle of the piece—station No. 4—and labeled it. With the trailboard placed on the angled plywood edge, I marked the top edge of the plywood and the underside of the trailboard so that I could reposition it whenever I had to remove it from the jig. A block temporarily clamped on the "downhill" end of the plywood's top edge prevented the trailboard from slipping. With the trailboard balanced on top of the station mold, I propped it up toward the far end—again, at a somewhat arbitrary height. Satisfied with its position, I secured the props and then used my large bevel square to record the angle between the station No. 5 crosspiece and the underside of the trailboard. After cutting another piece of ½" plywood that matched this angle and then fastening it into place, the trailboard could now balance on two station molds.

My goal was to create station molds this way for each of the remaining stations, then remove the trailboard and turn all the molds 180 degrees to provide a building jig for the mirror image of the piece. I used sheetrock screws to fasten the molds to the cross pieces so that they could be easily removed and refastened later. I proceeded until all the stations had plywood molds attached to them, fitting to the underside of the trailboard. It was very important that the width of all of these station molds matched the 16" length of the cross pieces. At each mold, I marked the top edge of the plywood to record where the edges of the trailboard crossed it, using a red magic marker and extending the lines down the sides of the molds a bit so that they would not be confused with any other marks.

Once I had the twist and the profile of the port trailboard transferred to the bending jig's molds, I removed the trailboard from the jig. Then I used battens to line off the marks and extend them farther forward and aft by one station to ensure that the bend would be fair beyond the ends of the new trailboard itself.

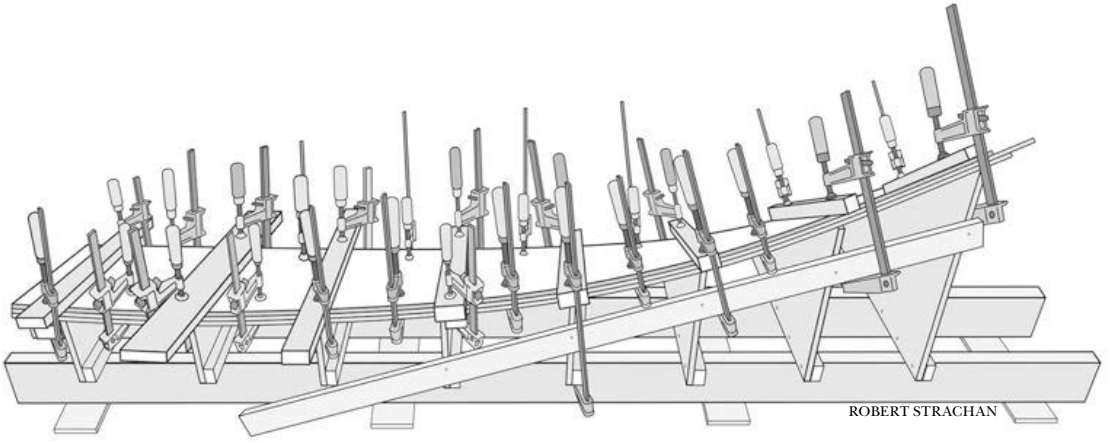
I then marked all the plywood jig pieces with their respective station numbers and removed them from the jig, leaving the cross pieces fastened to the strongback. Laminating wood layers would make the new trailboard as dimensionally stable as possible, much more so than

BART CHAPIN



ROBERT STRACHAN

**A first mold is made at an amidship station, using an angle chosen somewhat arbitrarily so that the molds don't end up too high or too steep. With this mold in position and with a block clamped to its edge to prevent slippage, the trailboard is propped up at its far end while a second mold is made and fitted. Then, the piece can be clamped in place while the remaining molds are measured, made, and installed. The width of the molds matches the length of the crosspieces. The drawing depicts seven molds; in actuality, one more was added at each end to fair curves indicated by sprung battens, as shown in the photograph.**




**The station molds are taken off the ladder frame, turned 180 degrees, and refastened. This way, the profile lines marked on the top edges of the molds show the profile of the new trailboard for the opposite side. Covering these marks to assure adequate width and extending to the end molds for fairness, the three-layer lamination is clamped up and left for the epoxy to set. (This illustration shows eight molds, though nine were actually used, as shown in the photo on the opposite page; also, the lower plywood crosspieces shown in this drawing are omitted in the other drawings.)**

steam-bending a solid piece. But even lamination springs back a little after the glue has set and the piece is freed from the building jig. Based on experience, I estimated the amount of springback in both twist and bend and altered the bevels and heights of the plywood molds accordingly. I checked to be certain the jig was still fair by laying battens along it. The alteration amounted to an exaggerated twist and also about 2″ of exaggerated bend for the length of the trailboard. As it happened, this was not quite enough—but it was close.

Each plywood mold was then removed and reinstalled on the same station used to record the port trailboard, but flipped to create a mirror-image jig. Because all the molds and cross pieces were cut to the same width, this was quite easy to do. The molds were simply lined up with the ends of the cross pieces that were fastened to the strongback.

The jig was now almost ready for use, but there was as yet nothing to clamp to. I screwed small scrap pieces of wood along the angled edge of each mold, making certain these pieces were beveled or placed low enough to allow the laminates to lie flat along the jig. Packing tape along all the top edges of the molds kept the glue from adhering to them.

Before purchasing wood, I needed to know what dimension to look for. I laid the trailboard down on a piece of poster board and carefully traced its outline with a pencil. Checking the stock against this profile would confirm that that pieces would be long enough to reach the two end molds. Given the boat's experience with lost trailboards, I was concerned that the attachment bolts would pull through the wood. I decided to use two inner layers of poplar and one outer layer of Honduras mahogany, all planed to ⅜″ thick. Poplar is a bit tougher than mahogany and is also readily available in wide widths. Given the experience with lost trailboards, I was concerned that the attachment bolts might pull through the wood, and I thought poplar's strength would help. Poplar also glues well, and because it has straight grain it also bends fair. I was not too worried about its lack of rot resistance because the trailboards would be well sealed and painted. The top mahogany layer would carve very well.

With the jig fastened to the floor of the shop to prevent it from twisting during the glue-up, placing the first poplar layer on the jig confirmed the fit and position for the lamination. A friend helped me spread epoxy, after which we wrestled the layers into place and clamped them all down using just about every clamp I owned. Pieces of straight stock set crosswise at each station helped distribute the clamp pressure. We cleaned up the mess as best we could and left the epoxy to set for several days in the hope of minimizing springback.

The next task was to cut out the profile. Because the trailboard is twisted and the top edge is level when fastened to the boat, the bevel on the top edge changes. I took the poster-board pattern of the trailboard and laid out the profile on the laminated piece. I used a sabersaw to cut out the top-edge profile, about ¼″ wide of the mark. Bevels recorded at the station marks on the existing port trailboard were easily transferred to the new starboard piece. The profile and beveled top edge could be faired together; the bottom edge faired more easily since it required no bevel.


BART CHAPIN

**With trim pieces glued into place and the carving completed to a pattern transferred in mirror image from the existing piece, the new trailboard is ready for paint and gold leaf.**

MILES THOMPSON

**A complex shape is required to achieve the simple elegance of trailboards for a clipper-bowed boat. The author over the years has replaced the port trailboard once and the starboard twice.**

This trailboard has raised trim pieces, ½″ wide, along its top and bottom edges, culminating at a round piece at the forward end where a raised star would be carved. Using ⅜″-thick Honduras mahogany, I cut out the top and bottom trim and the round in three separate pieces. The inside edges of the top and bottom pieces needed to be faired before installation, and leaving a little extra material on the outside of the top piece allowed it to be faired into the bevel. Masking tape laid down along the glue line aided in positioning these pieces and made it easier to clean up excess epoxy. Once the epoxy had cured, I cut the forward ends of the top and bottom trim pieces to fit the round and glued that piece in place as well. With the trim pieces rounded and beveled by hand and the flat surfaces cleaned up, the trailboard was ready for carving.

To prepare for carving, I traced all the carved leaf-and-stem details from the port trailboard onto a sheet of Mylar and used scissors and a utility knife to cut out the areas that would be carved. The long stem details almost severed the Mylar, but taping across those cuts held the sheet held together and correctly aligned. With the tracing correctly positioned on the new trailboard, the outlines could be transferred directly and the details of the leaves and pecans filled in with a pencil. A compass and ruler were the only tools needed to lay out the star, and once that was completed I proceeded to carve the designs.

Once the new trailboard was finished, I packaged both and sent them to Thompson in Houston for painting and gold-leafing. He took them on to Argentina and installed them—this time adding deflector pieces below each trailboard to divert water as the bow plunges into waves. This, we hope, will aid in keeping the boards attached.

*Bart Chapin is the proprietor of Chapin Design, Inc., 426 Bald Head Rd., Arrowsic, ME 04530; 207–443–4116 or bart@nnei.net.*

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# RACK OF EYE

## *Boatbuilding in the St. Mary's County tradition*

CALVERT MARINE MUSEUM

DAVID LAWRENCE/CALVERT MARINE MUSEUM

by Richard Dodds

River Springs, an area of farmland and woods intersected by a network of creeks that empty into the Potomac River, is at the heart of the Seventh District of St. Mary's County, Maryland. In the 20th century, this remote and tight-knit community was home to the largest concentration of wooden boat builders in the southern part of the state. Apart from the occasional skiff, however, commercial wooden boat building here is now a thing of the past.

A handful of retired craftsmen represent the last generation of wooden boat builders in the region, and one of these is Charles David Lawrence—who goes by his middle name and is "Davey" to his friends. Lawrence began building boats at the age of 10 or 11. His first boat was a skiff he constructed using boards pried off the side of his father's tobacco barn. Looking back, Lawrence recalled that his father never said a word about the missing boards. Even better, the young builder later sold the boat for $1, launching his career.

Born in 1928 at River Springs, not too far away from

***Above*—David Lawrence (inset) had his first boatyard alongside his house at Abell, Maryland, shown in this photo from about 1952. He built large and small boats right-side up and without plans, following the hard-chine traditions of his area.**

his current home on the shores of Canoe Neck Creek, Lawrence found no appeal in following in his father's footsteps as a tobacco farmer. His interests lay on the water. There was good money to be made in oystering in those days, which meant there was a strong demand for workboats. After he was discharged from the military in 1946, Lawrence struck out on his own, building boats and oystering during the winter months. Like most of his contemporaries, he was self-taught and never used plans.

He built by "rack of eye," knowing in his mind exactly what a boat would look like before he started building it. His formal education never progressed beyond the eighth grade, but he does credit the nuns at the Catholic school he attended with giving him a thorough grounding in mathematics, which proved useful in his chosen career.

Lawrence was deeply imbued with traditional boatbuilding techniques as practiced in the Seventh District. As a youth, he would hang around local boatshops and observe the men at work, "learning from their mistakes." The builders in this part of Maryland constructed large V-bottomed, or "deadrise" boats, with fore-and-aft bottom planking, as opposed to the cross-planking popular elsewhere on Chesapeake Bay. This type of construction reached its ultimate development in the ubiquitous Potomac River dory, the boat of choice for oyster dredgers and tongers on the Maryland side of the Potomac and its tributaries (see WB No. 128).

The V-bottomed dory (also loosely known locally as a "nancy") had its origins in the 1870s and was built, with various modifications, into the early 1980s. Like other builders in the Seventh District, Lawrence constructed all his large boats with bottom planking running fore-and-aft, in the belief that this made for a stronger hull. Regarding cross-planked craft, he shared a perception, common among area builders, that the "only people who drown on the Bay, drown in boats built like that." The largest boat Lawrence built using this dory-fashion construction was the 45′ ANTONIA, completed in 1975, with sides of 1¼″ yellow pine fastened with Monel nails. Like others of this type that Lawrence built, ANTONIA's chines swept upward markedly at the bow, and she had a graceful sheer. Hhe used a pronounced V shape at the bow that transitioned to a flat bottom about 4′ forward of the transom. Like most local builders of fore-and-aft planked boats of this size, he dispensed with the use of chine logs, relying instead on the joinery of the side and bottom planking to provide strength. Lawrence considered chine logs a source of rot. He also kept the use of caulking to a minimum, mainly at plank butts and the garboard seams, reflecting the prevailing view that caulking only trapped moisture.

For skiffs, however, builders in this area usually reverted to the cross-planked style of construction, and Lawrence was no exception. He was a prolific builder of skiffs, which constituted a large proportion of the approximately 1,700 boats he built over a 40-year career. With a helper, he could turn out 125 to 140 skiffs a year in the 1950s. They sold for $125 apiece. His favorite type was an 18-footer, which he turned out in large numbers. One year he even built 69 of them for a rental fleet in Atlantic City, New Jersey, delivering them all by truck.

The 18′ skiff was also a favorite with many local watermen. Oyster dredging on the Potomac River was illegal, but that did not stop some watermen from trying their luck by dredging in the dark of night. A so-called "mosquito fleet" emerged, consisting of skiffs that were equipped with large outboards. These boats were small enough to operate in shallow water and fast enough to outrun the marine police, yet with enough capacity to carry 25 bushels of oysters. In the summer months, these same skiffs were often entered in local workboat races, a popular pastime in the years after World War II.

Boatbuilders in the region were highly individualistic, and where Lawrence differed from local practice was by constructing his skiffs "right-way-up," or "on their feet," just like his larger boats. It only seemed natural to him. For planking, he preferred white cedar when he could get it, but he often used local yellow pine. He used fir for bottom planking. His frames were of local white oak, and at first he used gum for keel stock, later changing to poplar. The stem was of one-piece construction. He gave his hulls ample tumblehome aft, curving around a 2″-thick oak transom. Planking was dressed to a thickness of ⅞″ and the chine logs—which he did use in boats of this size because the plank stock is comparatively thin—were usually 2½″ × ⅞″. The preferred width of the bottom boards was 12″. A small foredeck, a thwart located about amidships, and a 16″-wide seat at the stern completed the upper part of the skiff, which would then be turned over so the bottom could be finished. For fastenings, Lawrence used only nails, typically galvanized in the earlier years, although he

DAVID LAWRENCE/CALVERT MARINE MUSEUM

**Many of the 1,700 boats David Lawrence built during his career were fast, shoal-draft skiffs—like the 18-footer shown in this photo with the young builder at the helm. Such boats were popular for oystering in the waters around St. Mary's County.**

preferred Monel. Later, he switched to stainless steel.

Before the bottom was attached, the faying surfaces at the chines were coated with a mixture of copper paint and pine tar, with a strand of cotton caulking laid in while the paint was still wet. (The same mixture was used to coat the end-grain of topside planks wherever they butted together.) Lawrence coated frames with Cuprinol before planking, and sprayed the inside of the skiff with Cuprinol after the boat was finished.

In addition to building boats, Lawrence built a marina, which he operated from 1958 to 1967. He also built several houses and installed basement bulkheads. However, every year from September through Christmas he put most everything on hold to go oystering—that's where the money was, all in cash. His last boatshop was alongside his house on Canoe Neck Creek, where he installed a marine railway, and where he completed his final boat around 1983, using "finishing-up" lumber. The shop was then converted into part of the living quarters, and he removed the railway.

Although his tremendous energy and self-taught talent served him well during his working career, Lawrence has been slowed down in retirement by age and medical issues. But get him talking about boats and tools and all the oysters he has seen in his lifetime, and his eyes light up and the stories begin.

*Richard Dodds has been the curator of maritime history at the Calvert Marine Museum since 1991 and earlier served as the curator at the Chesapeake Bay Maritime Museum.*

# A NEW LAWRENCE SKIFF

BUTCH GARREN

## by Edward Kobrinski

In the boatshop at the Calvert Marine Museum in Solomons, Maryland, volunteers in 2012 built what they have called "the Lawrence skiff," using the same right-side-up and rack-of-eye construction techniques that David Lawrence himself used in his career. They also had the benefit of working under Lawrence's supervision.

Recognizing the rare opportunity of building a skiff to learn the traditional techniques that a retired local builder had perfected, Richard Dodds brought the idea to George Surgent, the Calvert Marine Museum's boatwright. Surgent, in turn, approached the Patuxent Small Craft Guild, a group of volunteers who work on the museum grounds.

Surgent and many of the members of the guild are skilled and avid wooden boat enthusiasts, and they leaped at the chance to not only resurrect a distinctive boat type from the area but also to document and preserve an important legacy of Chesapeake Bay.

The group made a commitment to follow not only Lawrence's design but also his construction techniques. Most skiff builders built their boats upside-down, assembling the sides and bottom and then turning the hull over to add frames, deck, thwarts, and seats. Lawrence typically started building with the hull right-side

**Volunteer boatbuilders, under the guidance of George Surgent of the Calvert Marine Museum, used David Lawrence's original "right-way-up" and "rack-of-eye" construction methods to build a new 16' skiff. In this method, the bottom is planked last.**

BUTCH GARREN

***Right*—In this type of construction, topside planking is bent around two temporary molds and attached to the stem and transom, after which frames and structural pieces are installed. In this photo, Alan Suydam (left) and George Surgent are installing the aft seat risers.**

up, planking the boat's sides around molds, installing the thwarts and deck, and only then turning the hull over to complete the bottom. "Why wouldn't you build a skiff right way up, on her feet?" he would ask. "How else can you tell how she'll look when she's done?"

In addition to all of the historical reasons to embrace the opportunity, the new skiff's builders took on Lawrence's method as a challenge. None of them had ever entertained the notion of building a 16′ skiff "right-way up." Small craft were just not built that way, in their experience. They were unanimous, however, in their intent to give it their best.

The builders quickly learned that there was more to the challenge than keeping the hull symmetrical and fair while the construction proceeded. Although Lawrence built hundreds of these skiffs in his day, he never used measured drawings, so they had no references at hand. Furthermore, no surviving 16′ skiffs could be found to copy. They only guidance they had was a photograph of Lawrence himself on the water in a similar skiff, and Lawrence's own guidance.

Boatbuilders throughout the Chesapeake Bay were "rack of eye" craftsmen, relying on their experience and judgment to determine how to shape the pieces of their boats at every step of construction. Determining the length and beam of the hull established how the rest of the boat would be proportioned. Fortunately, Lawrence himself had the patience to spend hours with Dodds and Surgent to explain his building methods.

Surgent took copious notes. Then, he conferred with Al Suydam, one of the guild members, who is retired from a career as a design engineer at Ford Motor Company. Suydam, who also teaches pond-yacht construction at WoodenBoat School, made a scale-model mockup of the skiff's hull. With additional input from Lawrence, he and the crew went to work. First, another guild member, naval architect Ed Richard, calculated the critical angles of the stem and transom and the sweep of the chine and sheer.

BUTCH GARREN (BOTH)

***Left*—After the structure is built, including the deck, the boat is turned over to install the keelson, cross-plank the bottom, and install the keel, then it is returned to the upright position. In this photo, excess bedding compound is being removed. *Above*—Coamings, thwarts, and aft seats finish out the construction.**

BUTCH GARREN

**During her construction, the skiff was rolled over twice. The first time came after the topsides and deck were completed and she was ready for bottom planking. The second time, shown in this photo, the boat was rolled right-side up once more so the interior fitout could be completed.**

Next, the crew used Richard's calculations to make the stem, the permanent transom, and two temporary molds, over which the white cedar planking would be bent to give the boat its distinctive flare forward and tumblehome aft. Using raw white cedar stock donated by a local lumber dealer, they planed the side planks to the final thickness of 1″ and shaped them. The stem and false stem, transom, frames, knees, thwarts, chine logs, rubrails, and coaming were made of white oak.

Each day, the crew tackled phases of the construction under Surgent's leadership, often collectively analyzing alternative ideas. When they went to work, it was like poetry in motion. Lawrence himself came to the shop when the sides were being bent into position, playfully chiding the builders for "being too bashful about giving her hull more flare," and urging them to torque the Spanish windlass to give the sides more tumblehome.

After the sides were in place, and with the hull still right-side up, the builders turned their attention to fitting the side frames, which were notched to receive the chine logs later. Then the side-deck knees, breasthook, beams to support the after seat, and thwart could be installed, solidifying the structure enough to keep its shape and symmetry. With those pieces in place and the molds removed, the short forward deck and narrow side decks could also be installed.

With the deck further securing the hull's shape, the boat was rolled over so work could proceed on the bottom, which in this small boat is cross-planked and has no deadrise. First, white oak chine logs were shaped

MARLA SURGENT

**Flat-bottomed skiffs have always been well suited to the shallow waters of the creeks of Chesapeake Bay, where this boat's new owners use her.**

and installed to fit into the notches made earlier in the frame heels. Next, a white oak keelson was installed on the centerline, sprung to match the bottom rocker, and shaped so that its bottom surface would be flush with the chines, transom, and stem. Then, the cross-planking was screw-fastened to the keelson and chine logs, bedded at the faying surfaces and seams. Last, the white oak keel was fitted on the bottom on the centerline and screwed into place.

Then, the hull was rolled right-way up once more. First, excess bedding compound was cleaned away. Then, the transom knee, false stem, seats, and coamings were installed. Coats of waterproof sealer were applied to the interior to show off the cedar planking and white oak framing. Primer, finish paint, and hardware were added to complete the project. The color choices and hardware selections were specified by David and Clare Unkle, who decided to purchase the boat after seeing it under construction and hearing about the type's history.

In late 2012, the skiff was successfully launched and given sea trials with Surgent and the new owners aboard. Surgent described the skiff's performance as strong, stable, and responsive. She will be used for recreation and occasional crabbing on the creek off Chesapeake Bay where her new owners live.

*In addition to his passion for small boats, Ed Kobrinski is currently a consultant on preparedness programs involving ocean ecology and the effect of climate change. He lives in Solomons, Maryland.*

The Patuxent Small Craft Guild works in the Calvert Marine Museum small-boat shop, which is open 9 a.m to 3 p.m. Tuesdays through Saturdays. For more information, contact George Surgent, 410–586–2700 or gsurgent@comcast.net.

# A Singular 12

## *Charley Morgan's HERITAGE was the last wooden 12-Meter built in the U.S.*

CORY SILKEN

**Charley Morgan (inset, at the helm during a 2005 reunion sail on Narragansett Bay) designed, built, and skippered HERITAGE for the 1970 AMERICA's Cup defender trials. He also made some of her sails.**

by Dan Spurr

Newport, Rhode Island, really can lay claim to being the sailing capital of the United States. As a longtime (now former) resident and fan who readily admits his bias, I can cite several good reasons why this is so. There's the Museum of Yachting, the International Yacht Restoration School, and a vibrant harbor with more than 1,000 moorings and slips for every type of boat from S-class sloops to superyachts. There are active yacht clubs that host national and international competitions as well as the terminus of many ocean races. And, far from least, there's an active fleet of 12-Meter sloops, each with a story of its glory days campaigning for the AMERICA's Cup between 1958 and 1983. This is the story of one of them, HERITAGE, the last wooden 12 built in the United States. Charley Morgan designed the boat for a brazen homespun tilt at the Cup—a style of campaign that no one had ever done before. No one has done it since, either, and probably never will.

Morgan was born in Chicago in 1929, and grew up in Tampa, Florida, where Tampa Bay and the Gulf of Mexico became his playground. His first love was airplanes. During World War II, his father, a sales manager for Firestone Tire & Rubber, took in military personnel to their five-bedroom house; Charley slept on the sun porch. He loved to build model airplanes, and obtained high-octane fuel for them from the nearby air base where he worked in the officer's mess. "I was," he says, "neurotically, compulsively obsessive about planes." He learned to fly small planes, and planned on becoming an aeronautical engineer.

During the war he recalls seeing only eight boats on Tampa Bay. And a couple of those belonged to Charley and his friends. "At the end of the war," he recalls, "we'd take our seabags to school on Fridays and afterwards jump on our boats and sail to the pier over at St. Petersburg saying, 'We're going to the pier for a beer,'

but we didn't drink beer. We were hoping to find chicks and go sailing."

During high school he worked summers and holidays at Clint Johnson Sailmakers where he learned to sew the cotton duck fabric both by machine and by hand. "I was good at all of the handwork and did wire splicing too," he says. "Because I was an accomplished draftsman I often did the layouts, cost estimating and pricing. I had a Remington Rand portable typewriter and did a good bit of the correspondence and quoting for the clients. And I often measured the various boats when time was available."

Still fascinated with aeronautics, he enrolled at the University of Tampa, majoring in pre-engineering and economics. But under the surface, the hold of water, boats, and sails grew stronger and stronger, ultimately redirecting the course of his life and career. In 1953, before graduation, he made the momentous decision to move to St. Petersburg and open Charles Morgan Sailmakers in a hangar on the same Albert Whitted Airport grounds where he'd learned to fly.

By then, obsessed with sailing as well as flying, he immersed himself in all aspects of the sport: sailing, sailmaking, yacht design, and construction. He and his lifelong friend Charlie Hunt decided they wanted to compete in the St. Petersburg–Havana Race, and so designed a 31′6″ yawl that they built in plywood and ballasted with a Star-class keel. For the rig they borrowed a Thistle mainsail and a Penguin dinghy sail for the mizzen. In the 1957 race to Havana, BRISOTE, as the boat was named, finished third overall and second in class.

And so began an illustrious career that soon saw Charley venture deeper into yacht design, where he found application of the principles he'd learned in aeronautics. Perhaps his most famous project was the 40′ PAPER TIGER, which, in an unprecedented feat, won the prestigious SORC (Southern Ocean Racing Circuit) twice: 1961 and 1962. The feat served notice to the yachting establishment that Charley Morgan was a talent to be reckoned with. Soon after he was getting commissions from wealthy yachtsmen who wanted to win, like the space-race technology company Radiation, Inc. chairman Homer Denius for whom Charley designed the 60′ yawl MARADEA, and drugstore magnate Jack Eckerd, who commissioned the 54′ yawl PANACEA.

Indeed, he'd caught the attention of none other than designer Olin Stephens, who along with yachtsman Cornelius Shields invited him to join the crew of COLUMBIA, the 1958 AMERICA's Cup winner, and to build some of her sails for the 1962 Cup trials.

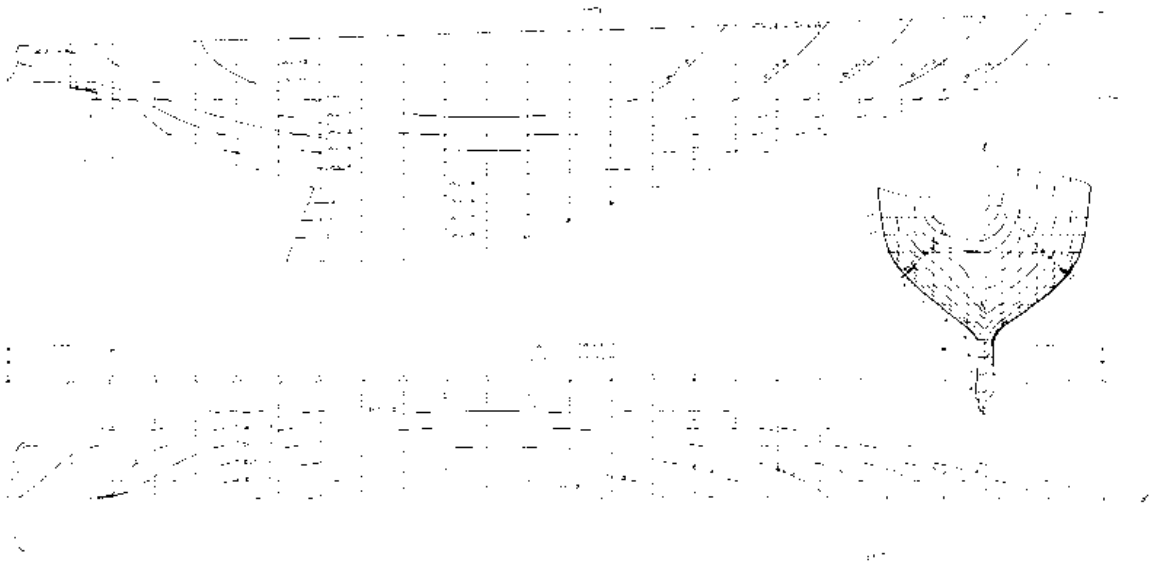
"I tended mainsheet and assisted Olin with the backstays," Charley says. "Corny Shields's son Glit was steering, of course. We often would be making decisions before sailing started. With Olin Stephens, Bob Derecktor, and the others it was very democratic. It wasn't the kind of tactical operation you see these days with a tactician calling the shots of what to do when; it was the considered opinion of those in the cockpit

**With little time and opportunity to optimize HERITAGE for the Cup trials, she and the other competing 12-Meters lost to eventual defender INTREPID. Morgan, however, fondly remembers outpacing INTREPID during several informal clashes on the bay.**

CORY SILKEN

| HERITAGE Particulars | |
|---|---|
| LOA | 63′ |
| LWL | 50′ |
| Beam | 12′6″ |
| Draft | 10′8″ |
| Displacement | 70,000 lbs |
| Sail area | 1,785 sq ft |

**Morgan had never designed a 12-Meter before HERITAGE, and had little to guide him other than the rule itself, his experience crewing on COLUMBIA eight years earlier, and model testing at Stevens Institute. The prevailing wisdom at the time was to maximize waterline length, though Morgan had misgivings that 13 years later were proven true when the smallest 12-Meter, AUSTRALIA II, defeated Dennis Conner's LIBERTY.**



FRANCOIS CHEVALIER

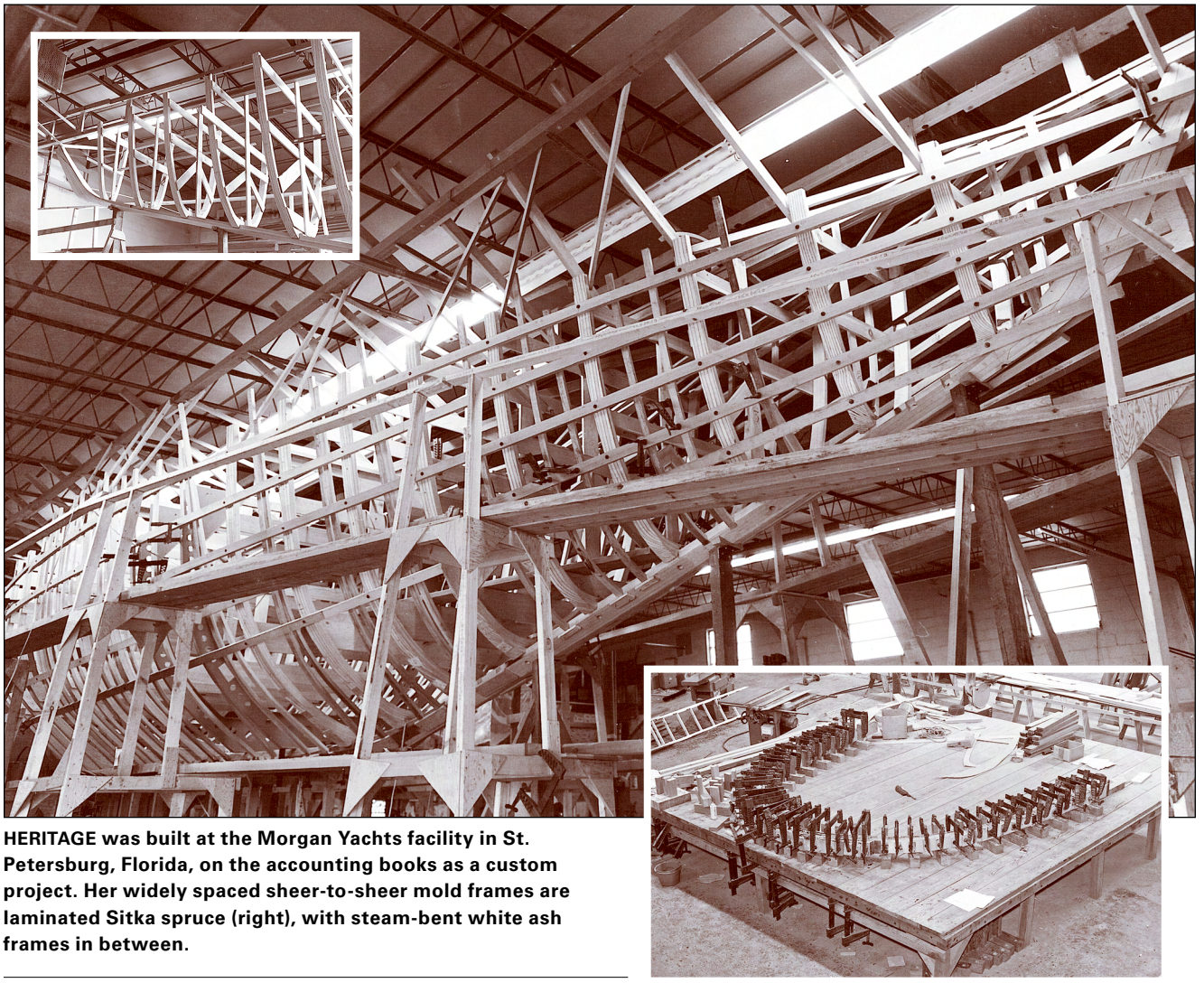
what we'd do. The best thing we had were digital instruments and a plotting board that Olin was managing, which was always amazing to me how he'd handle that thing. We'd tack and crank down the backstays, and he'd have that thing instantly correcting our position and doing other things. Mind you, this is still in the days of bronze genoa jib hanks and rubber-band stops. We'd often begin starting maneuvers with the genoa in stops and break it out at the last minute."

COLUMBIA did not earn the privilege of defending the Cup in '62; that honor went to the Phil Rhodes–designed WEATHERLY. But Charley had so much fun hobnobbing with the biggest names in yacht racing; fascinated by the challenges of optimizing a 12-Meter, he committed himself to one day challenge for the Cup in his own boat. After merging Morgan Yacht Corp. into Beatrice Foods in 1968, his first choice was to buy COLUMBIA and "get a feel for everything." That would have been the prudent approach, but when he learned a deal wasn't possible, he charged ahead with an unprecedented plan of his own: to challenge for the Cup by designing, building, financing, and skippering his own yacht. Oh, and also making some of the sails (to augment others by Ted Hood).

In the 1960s the only allowable building material for Cup challengers was wood. And although Morgan Yachts was laying up hundreds of fiberglass boats every year, Charley and his team were comfortable with wood, and as with everything else he pursued in life, he did his homework.

The new design, to be named HERITAGE, would have laminated Sitka-spruce "mold" frames, widely spaced and reaching from sheer to sheer. In between are steam-bent frames of American white ash, which are less dense than the more commonly used white oak. The problem with oak was that Morgan's team couldn't find any available that was as light as the minimum allowed 54 lbs/cu ft. "You had to get permission to use white ash," Charley says.

"She was of a different construction method from VALIANT," Charley says of his employing the laminated frames, "and the redo of INTREPID. Based on our studies analyzing the weight of various hull structures, we chose the method of construction that Bill Luders used for AMERICAN EAGLE. Ted Brewer, who had assisted Luders with the engineering of AMERICAN EAGLE's construction, was brought in as a consultant. It seemed clear we could make it very strong; I wanted



CHARLEY MORGAN COLLECTION (3)

**HERITAGE was built at the Morgan Yachts facility in St. Petersburg, Florida, on the accounting books as a custom project. Her widely spaced sheer-to-sheer mold frames are laminated Sitka spruce (right), with steam-bent white ash frames in between.**

to ocean-race the boat later." The boat would be lighter than AMERICAN EAGLE, too, he hoped. The hull without the lead ballast and hardware came in just under 10,000 lbs. To help resist torsional stresses, Lloyd's scantling rules required full-length, rectangular bilge and sheer clamps fastened to the frames.

The hull below the waterline would be double-planked in western red cedar, and for the topsides Morgan chose double-planked Sitka spruce. Strikingly, she would be the only 1970 12-Meter with a bright-finished hull. "I wanted a natural-finish boat," he says, "so the Sitka spruce was going to be honey-colored, golden above the waterline, and then I think it was either African or Mexican mahogany that we chose for the sheerstrake. That was the aesthetic we wanted to maintain for the boat." The deck also was western red cedar, tongue-and-groove planks laid diagonally and set in epoxy. It was dead-flat to make moving hardware such as winches easy. Charley says they sometimes pulled a bolt from, say, a fairlead or cleat and rotated it 180 degrees to see if the lead improved.

Building HERITAGE with Morgan Yachts' custom yacht team turned out to be the easy part, even considering the painstaking measures necessary to comply with the 12-Meter Rule. Far more difficult was arriving at a design that not only met the rule requirements, but would be competitive racing.

The in-house design team at Morgan Yachts worked on the project, which was handled the same as any custom project would be in terms of internal accounting. Tom Young from Connecticut joined the group to assist with project management. Lines of other 12-Meters were not available as a starting point, which Charley readily acknowledges was a "big drawback." And since he'd never designed a 12-Meter before, he and his team were starting from scratch.

"The design of the hull shape [for the several test models]," Charley says, "was all my work." And he labored over it. The entire design team worked on the construction, rig, and other details. The question he, Olin Stephens, Britton Chance, and the other designers wrestled with was whether to go big or small, and the prevailing wisdom at the time advocated the longest waterline practical. Charley went along with the crowd, but not without trepidation.

"I had a talk with Halsey Herreshoff when he was down at the SORC [Southern Ocean Racing Circuit]," Charley says, "the year we were finishing up our design.

# You, Too, Can Sail a 12-Meter

DAN SPURR

**Today, HERITAGE and a fleet of other 12-Meters earn their keep as day charter boats in Newport, Rhode Island, taking tourists, special parties, and corporate managers on spirited sails up and down Narragansett Bay.**

Although history and the AMERICA's Cup have turned the page on the 12-Meter class, there are several dozen still sailing, and many are available for public charter. In the U.S., the port most call home is Newport, Rhode Island, the longtime home of Cup racing (local officials have been unceasing in their efforts to lure the event back to Narragansett Bay, steadfast in their belief that one day it will happen).

There are three prominent charter groups in Newport. One, 12 Meter Charters, manages HERITAGE and COLUMBIA, the latter being winner of the 1958 Cup and designed by Olin Stephens. The company also operates three 12-Meters out of St. Maarten in the West Indies: STARS & STRIPES 86, the third of four hulls built for Dennis Conner's 1987 campaign to win back the Cup from Australia; and the two Canadian 12s, TRUE NORTH and CANADA II.

Seascope Yacht Charters manages what is known as the Tiedemann Collection, named after the late Bob Tiedemann, who devoted his career to restoring classic wooden yachts. Tiedemann is thought to have placed the first 12-Meter into charter service, that being the gorgeous GLEAM, designed by Clinton Crane for his personal use and built in 1937 by the Henry B. Nevins Yacht Yard in City Island, New York. She was a trial horse for VIM in 1958, and unlike many of the other 12s, she has a complete interior, earning her appearances on the television outlets *Lifestyles of the Rich and Famous*, The Discovery Channel, and PBS. Seascope's stable also includes NORTHERN LIGHT and ONAWA. Chartering a group of 12s is popular with some corporations that engage the yachts in team-building exercises; Seascope's Elizabeth Tiedemann also suggests weddings, clambakes, girls' nights, and oyster-and-wine dinners.

The third, known as America's Cup Charters, has six restored 12-Meter yachts: WEATHERLY, the 1962 Cup winner and the only 12 designed by Phil Rhodes; EASTERNER, designed by C. Raymond Hunt, which spent 28 years in California as NEWSBOY before being returned to Newport; NEFERTITI, a 1962 contender designed and campaigned by sailmaker and boatbuilder Ted Hood; AMERICAN EAGLE, which communications mogul Ted Turner campaigned with great success after her Cup days were over; INTREPID, a wooden 12 (double-planked mahogany on oak frames) that achieved the near impossible by winning the Cup twice (1967 and 1970); and last, Dennis Conner's aluminum FREEDOM, which won in 1980.

Typical day charters for those who buy tickets at a waterfront kiosk leave from one of several wharves with a dozen or more guests and a small crew, then tack up and down Narragansett Bay for a few hours. —*DS*

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America's Cup Charters, P.O. Box 51, Newport, RI 02840; tel. 401–849–5868, www.americascupcharters.com. 12 Meter Charters, 49 Bowen's Wharf, 3rd Floor, America's Cup Building, Newport, RI 02840; 800–820–1223; www.12metercharters.com. Seascope Yacht Charters, www.seascopenewport.com.

CHARLEY MORGAN COLLECTION (THIS PAGE)

**Morgan Yachts made the mold for the keel. The keel iself was poured by Gulf Coast Lead in Tampa; here, a crane lifts it from the mold.**

I said, 'Man, I keep feeling like the thing to do is make a smaller boat for light winds in the early part of the season, and then figure out ways to stiffen it in September [when the finals would take place]. The truth is, it was a light, small boat, AUSTRALIA II, that later took the Cup in '83. She was the smallest modern 12-Meter, slower on a reach because of her shorter waterline, but she could run fast downwind and jibe inside of you and be out on the loose. And she had a big sail plan, so the horsepower quotient [was high]. The 1970 designs were drifting in the wrong direction with the heavier boats. That's what I felt after the fact. We didn't realize how slow these heavier boats were or how far over to one edge or corner of the envelope we were getting. As soon as aluminum construction was allowed, the weight of 12s came back to around the range used in 1958."

The Morgan team retained the counsel of what Charley calls an "aeronautical theorist," who advised having a large foretriangle based on factors of the 12-Meter Rule. "So we went with a large foretriangle, which had been abandoned by Ted Hood," Charley says. He gave HERITAGE a 15′J dimension whereas COLUMBIA's was 14.25′. "Ted and I talked about it later in the campaign and talked to 'the Professor' [Ted's father and a sail expert] about it. Their assessments were different than the theorist's assessments. We all have opinions. But I now know that from a practical sailor's standpoint (and from later aerodynamics of sail research) there were many reasons not to follow the path we'd chosen.

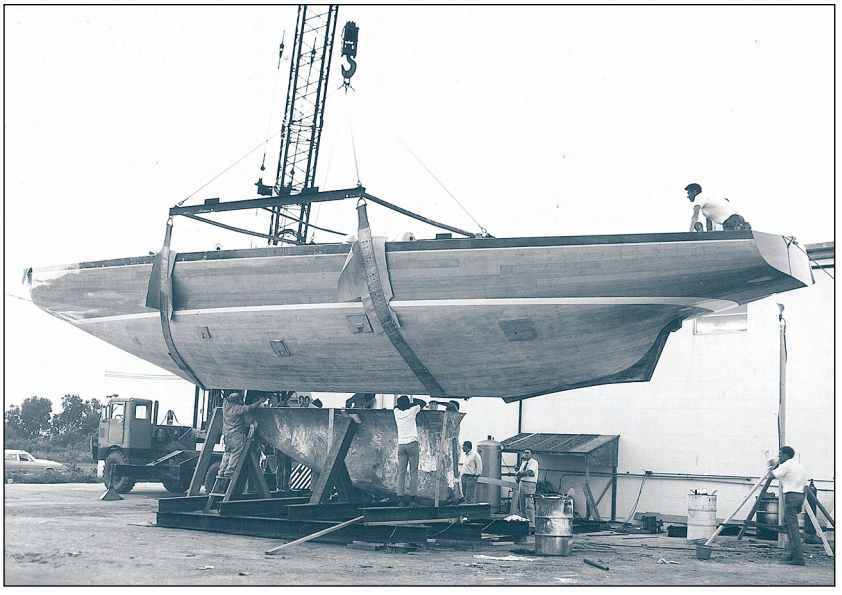
"I made the boat wider on the deck because we had a big overlapping headsail and I wanted a wider sheeting angle, similar to what Ted did on NEFERTITI. I knew Ted and his father [and their associates] were very intelligent and good engineers. I would have had tumblehome if I didn't want that wider deck and bigger chutes and big jennys. And that is not good whiskey for 12-Meters. I should have made the boat as small as I could on the waterline. As Olin said, 'Charley, that's a horse of a boat.' I didn't know what he meant for sure."

To improve maneuverability, Charley wanted a spade rudder, but during tank-testing at the Stevens Institute (Hoboken, New Jersey) the legendary Peter Desaix, who oversaw the tank, advised against it, saying it would create a new leading edge and induced drag. Charley acquiesced, but has always regretted it, noting that later 12s went to deep, high-aspect-ratio spade rudders.

"Bang, the gun goes off. You have the leeward position, he's on your hip, and you're not affecting each other. You go out on a starboard tack for awhile. The spectator fleet moves ahead and moves ahead, and pretty soon their bow waves on a moderate, light day come working their way over to you, and pretty soon you're pitching and yawing all over. These big, heavy boats steered poorly." That was especially a problem during pre-start maneuvering.

The ballast keel was shaped during tank-testing, and then cast by Gulf Coast Lead in Tampa. Morgan Yachts made the concrete mold, which took a month to cure with the crew running blowtorches 24 hours a day. The lead keel was cast in one continuous pour. A lead trim tab was mounted on the trailing edge, but the boat never developed the weather helm the team desired; they blamed that deficiency on the small mainsail—a requirement of the 12-Meter rule dictated by the long waterline.

Charley incurred another slight disadvantage when



**Not long before she had to be launched and sailed to Newport on her own bottom, HERITAGE's hull was lowered onto its lead keel by crane.**

he decided not to use the lenticular-shaped, solid-rod ribbon rigging that many of the other boats had. The reason: "I couldn't bring myself to reduce the safety factors down to the limits that would let me use that rigging." Olin Stephens had told him how COLUMBIA lost her mast when her stability was increased by adding a ton of ballast (and taking a compensating ton out of her elsewhere). Stephens told him: "We had had new pins made with higher sheer strength without changing out the rigging. Ultimately it failed because of the spreader connection and dimpling of the mast." Charley played it safe with round high-strength solid-steel stays and shrouds with titanium connection fittings.

In his ocean racers, Charley was specifying a rigging safety factor of 2.5:1 or 3:1, and he was surprised when Stephens told him he'd been going as low as 1.2:1, plus a safety margin of 5 percent. Stephens said he was comfortable with that margin because AMERICA's Cup races weren't started in more than 25 knots of true wind velocity.

Charley and his team worked through the myriad decision points, making the best judgments they could. "There were many things in the picture," he concludes. "I'd like to say today, at my advanced age of 83, that I was driven by the audacity of ignorance. There's so much to consider in the design of a 12-Meter. And *it is* the audacity of ignorance...you don't know what you don't know. At the same time you're not bound by what you think you know and can explore horizons that you never would look over because you don't know. That's a great place to be."

HERITAGE was launched in May 1970, just a month before the observation trials were scheduled. A pair of cranes—one new and never used before—were brought to the yard in St. Petersburg. The crowd of employees, dignitaries, and the curious gathered. The cranes swung out their booms and the wire lifting bridle was secured to HERITAGE's lead keel.

Remarkably, no one on the crane crew thought to install the 2,500 lbs of ballast on the new crane. To everyone's horror, as the two cranes began to lift the boat, the new crane began to tilt, looking like it would fall over. HERITAGE slammed against its boom. Only the quick thinking of the crane operator, who instantly transferred the load to the other crane, saved the yacht from further damage. Later Charley's daughter Jennifer christened HERITAGE on the hard, with her own words: "For God, for country, for honor, I christen thee HERITAGE."

Minor damage to the keel and sheerstrake were easily repaired. During the commotion, Charley had jumped into HERITAGE's cockpit and wrenched his knee. The brace he wore for the next six weeks precluded his sailing to Newport. The keel could not be removed to allow the boat to be transported by truck, so HERITAGE had to be delivered on her own bottom, loaded with sails and spare


CHARLEY MORGAN COLLECTION

**On launch day, disaster was narrowly averted when one of the cranes lifting HERITAGE started to topple over. As it turned out, no one had installed the crane's ballast counterweights. The hull slammed against the crane's boom, but a quick-thinking crane operator shifted the load, and only minor damaged was incurred.**

parts for the upcoming campaign. ALERT, a 37′ sportfisherman that would be her tender during the races, accompanied her up the Atlantic coast. Off Cape Hatteras they ran into the remnants of a hurricane. ALERT had to slow, and HERITAGE took off, racing 60 miles ahead.

Observation trials were held on Long Island Sound, followed by two sets of trials on Rhode Island Sound, with the boats based in Newport. In contrast to the secrecy shrouding other syndicates then and today, Charley was more than happy to show off his yacht's underbody, hoisting her out of the water at the end of each day without a skirt to conceal her appendages. "We were the first drip-and-dry 12-Meter," he says with pride. "I didn't have anything to hide and allowed visitors into our yard freely."

Over the course of the summer HERITAGE competed against WEATHERLY, INTREPID, and VALIANT. The crews on all boats worked hard to optimize them, but there were problems. Peter Desaix at the Stevens Institute informed all who had used his test tank's services that there had been a recalibration of the dynamometer—the device that measures force—saying they could expect an increase in upright resistance. It was a setback. Eventually INTREPID emerged as the frontrunner and was selected to defend the Cup for the second time, which she did, defeating GRETEL II.

Charley did not leave Newport without pride. On her last race against the aging WEATHERLY, HERITAGE

**After a distinguished career as an ocean racer on first the Great Lakes, and later in the West Indies and Pacific Ocean, HERITAGE was bought by Marblehead, Massachusetts, yachtsman Jeff Barrows, and placed in service with 12-Meter Charters in Rhode Island. Barrows performs most of the maintenance himself, and crews when time allows.**

beat her "rather badly in light air, in which WEATHERLY excelled."

And: "The last time I sailed against INTREPID on a close haul I was to leeward," says Charley. "The two of us were side-by-side, and I could have crossed their bow but I was reluctant to do so because it was light air. We were going faster [than INTREPID], actually. We both overstood the mark, and that kind of gave our lead up. The following day we ran with INTREPID on the torpedo range, besting her on a fresh breeze."

Once the Cup season was over, it was Charley's plan to campaign HERITAGE as an ocean racer. Yachts to his design had competed successfully around the country including on the Great Lakes, often with Charley aboard. But the governing authorities, the 12-Meter class and Lloyd's, decided soon after the 1970 event to allow aluminum as a hull material, and that changed the game. "It meant that I didn't have any hope of doing modifications to HERITAGE," he says. Plus, for ocean racing, the CCA (Cruising Club of America) Rule was giving way to the IOR (International Offshore Rule). "Although Ted Turner did very well with AMERICAN EAGLE under the IOR," Charley says, "as soon as you got the lighter IOR boats out there it was hard for 12-Meters to be competitive."

So Charley donated the boat to the Florida Institute of Technology, hoping the school would sell it to fund a chair in naval architecture. Chicago businessman

Don Wildman bought it and had it converted for ocean racing: An engine was installed, a new keel cast, and a masthead rig made up to replace the old fractional rig.

To handle the increased loads of the new rig, which would be sailed in heavier winds and higher seas than those seen in Cup racing, a large steel ring frame was installed in way of the mast, to which it was tied. In addition, three sets of steel gussets were through-bolted to deckbeams and the hull amidships.

Wildman took her first to the Great Lakes, where she sailed for several years, winning the Chicago–Mackinac Race back-to-back in 1983 and 1984. Then he took her south to Antigua Race Week, which she won, and then through the Panama Canal to San Diego, which was her home port for many years. During that time her decks were overhauled with 1½″ Douglas-fir, covered with a layer of Kevlar fabric and polyester resin.

Marblehead, Massachusetts, yachtsman Jeffrey Barrows purchased HERITAGE in 1990 and restored her fractional rig, which he got from the owner of VALIANT. The mast, which was on the West Coast, was cut in half and shipped across country where it was sleeved together in Rhode Island and stepped. Barrows says it's the belief of VALIANT's owner that the rig was originally in Dennis Conner's LIBERTY, which lost the Cup in 1983.

HERITAGE has fared considerably better, thrice winning the Nantucket Opera House Cup, and twice taking honors at the Figawi race across Nantucket Sound.

Like an old racehorse put out to pasture, HERITAGE is now managed by 12-Meter Charters, sailing daily in season out of Newport, a stablemate of COLUMBIA, STARS & STRIPES, TRUE NORTH, and CANADA II. Sometimes the passengers are tourists seeking a wee bit of adventure; other days they are corporate "suits" engaged in team-building exercises, competing in mock races. Of course, professional skippers and mates assure everyone's safety, and that of the boats (see sidebar, page 48).

Charley Morgan still resides on the West Coast of Florida, and today stays active painting seascapes—a pastime he enjoys with his wife, Maurine. He's taken his foot off the throttle just a little.

Reflecting on the changes he's seen during his life, he says, "I just can't believe that the little kid that was eight years old watching films he got for Christmas, showing [the Gloucester fishing schooners] BLUENOSE and GERTRUDE L. THEBAUD race against each other, [the J-class sloops] RANGER and ENDEAVOUR, and RAINBOW and ENTERPRISE on that little rickety stutter-shutter 8mm film.... I learned sailmaking by making sails of cotton. I couldn't have written the script. I was going to be an aeronautical engineer, and I just turned left."

*Dan Spurr is editor-at-large of* Professional Boatbuilder *magazine.*

# Reviving MAKOTO

## AN IMAGINED MUSE GUIDES THE RESTORATION OF A CLASSIC CRUISER

by Scott Andrews

Photographs by Abner Kingman

When I first started thinking about buying a classic wooden boat, it seemed a little ru about would fit well on the nearby Petalu River. The river originates in the farmlands above Pe luma and winds through miles of Marin marshland. a beautiful place to explore by boat.

I wanted a project, and was no stranger to restorati after completing several classic car rejuvenations. T classifieds turned up a number of possible boats, but most were either too far gone or were of a collectible caliber with prices close to that of my first house. The search finally led to the Classic Yacht Association's website, where I happened upon something unexpected: a particularly graceful 34′ Stephens trunk-cabin cruiser built in 1929 by the Stephens Bros. (see WB No. 175). My wife, Susan, and I were sitting in our office overlooking the river the day I discovered the boat, and I recall describing my find to her. "Oh, you mean like that one?" she asked, gesturing to a classic wooden cruiser puttering down the river. It was, indeed, an identical model to the one in the ad, and I quickly jotted down her name, KILLARA. Then I furiously searched the web to find the owner.

A few emails later and we were out on the river aboard KILLARA with Greg Sabourin, a local Petaluma River figure and longtime owner of one of the few remaining 34′ Stephens power cruisers (see sidebar, page 57). Sometime during that idyllic fall outing, Susan and I both realized that we would soon own one of these boats.

The advertised boat, then named WOODROW, was 900 miles north in Seattle, Washington. Through Lew Barrett, a Seattle-area classic-boat guru, I met Rodger Morris, a highly experienced wooden boat surveyor. Rodger knew the boat, and on the phone started explaining to me all the issues she had. I was undaunted. I remember Rodger, realizing that I didn't understand wooden boat terminology, telling me "Go read Chapelle, McIntosh, and Steward, and then let's talk." So I read these classic texts on boatbuilding, and a couple of weeks later Rodger sent me photos from a survey he had done a year earlier.


TERRY LIGGET

***Facing page*—MAKOTO is a 1929, 34' cruiser built by the Stephens Bros. yard of Stockton, California. Over the past several years, her owners have carefully restored the boat. *Left*—MAKOTO as she was found in the Everett (Washington) Marina by Terry and Diane Ligget in the early 1980s, before a major earlier restoration done by Seattle boatwright Pat Ford. *Below*—Looking aft toward the galley, here we see MAKOTO's saloon and its restored overhead, new bunk and dinette arrangements, overhead hatch ring, slatted teak locker grilles, and new teak sole.**

The images were ugly. WOODROW was a pretty boat with a dark secret: Her shaftlog, horn timber, and deadwood were in serious trouble. A few weeks later Rodger and I spent two days in the bitter December chill on the hard at Sea View East shipyard surveying the horrors up close. The drifts holding the upper part (a combined shaftlog and horn timber unit) to the lower shaftlog and the deadwood were actively decaying, and the rust had caused them to emerge from the sides of the deadwood. Metal straps had been bolted onto each side to stabilize the lower keel. When I posted photographs on this magazine's online Forum, Lew Barrett commented: "WOODROW is an example of how a boat can look okay but need a lot of work."

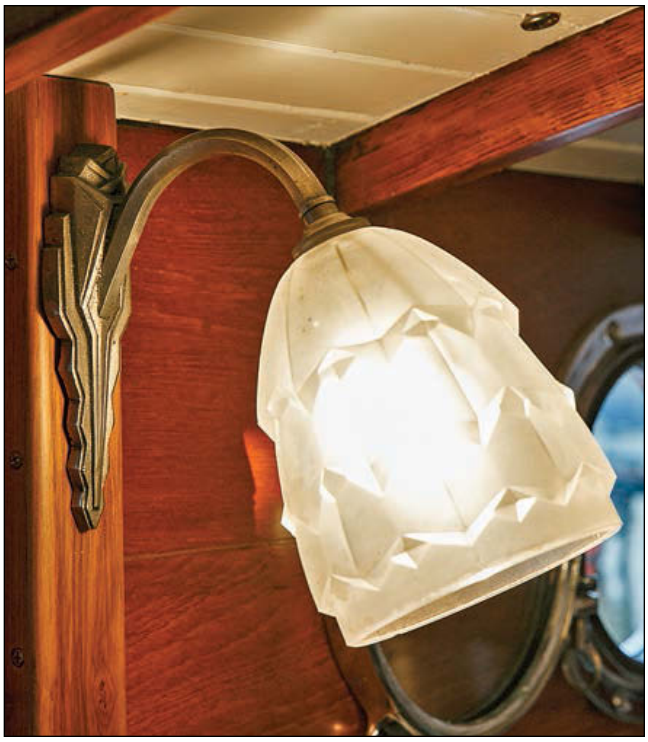
## The Stephens Bros. Yard and its Legacy


Stephens Bros. was a Stockton, California-based boatbuilding firm founded by Theodore (Thod) and Robert (Roy) Stephens in 1902. Over its 85-year history, the company built a range of pleasure craft, including runabouts, power cruisers, and sailboats—some of which were the West Coast's best known offshore yachts of the prewar era. They also built a number of vessels for the United States military during World War II. The company closed in 1987, and its records, drawings, and photographs were donated to the Haggin Museum, also in Stockton, where they are preserved and available for a modest fee to researchers. WB No. 175 included a history of the business. —*Eds.*

The Haggin Museum, 1201 N. Pershing Ave., Stockton, CA 95203; 209–940–6300; www.hagginmuseum.org/stephens

Lew was right. The transom timbers were soft, frame heels were loose, and, according to Rodger, the 1,100-lb John Deere diesel engine was too heavy for the boat. Despite these woes, we struck a deal with owner Larry Benson, who was also Commodore of the CYA. A few months later WOODROW was on a semi-trailer heading for her new home.

It took us a year or two to get comfortable with the boat and to form a vision of what we really wanted to do. I remember initially jumping in with my somewhat primitive woodworking skills and rebuilding part of the cabin step and its associated locker. The result fit poorly and looked cheap. Susan and I realized that this project was not so much about us and what we wanted, but was more about what the boat, and her history, demanded. For inspiration, we read Wylie Blanchet's *The Curve of Time* aloud to each other. In that lyrical book, the widowed author moves her five children aboard a small cruising boat and explores the Pacific Northwest with them over a succession of summers. We began developing a feel for what we wanted *our* boat to be.



**MAKOTO's cast bronze 1930 French sconces were found in an antique shop in Rotterdam.**

We have a deep appreciation for Japanese art and architecture. We've both lived in Japan at different times, and as it would turn out, our Japanese experiences would have a profound influence on the project. We rechristened the boat MAKOTO, which means "Sincerity" in Japanese.

Susan noticed that MAKOTO fit right into the late-1920s genre of Japanese-influenced Arts-and-Crafts style that we enjoy. A family photo, taken about 1920, shows three young girls—my grandmother and great-aunts—holding Japanese fans while posed in kimonos, their hair up with chopsticks. This image inspired the invention of a fictitious muse named Mr. Andrews who guided our decision-making process as the restoration progressed.

The worldly Mr. Andrews was a genteel and well-traveled man of the Roaring Twenties. We would consider the choices he would have made, and why he might have made them. His world travels would have, of course, taken him to the U.K. where he would have seen Gilbert & Sullivan's *The Mikado* at the D'Oyly Carte Opera—and would have purchased the libretto. Intrigued with things Japanese, he would have found business interests that took him to "the Japans," and thus he would have acquired the kimonos in the photograph. Using the artifice of the fictional Mr. Andrews and his travels and sensibilities, we were able to shift our decisions away from what might be attractive today, and ask, "What would Mr. Andrews have done?" That shift brought a level of objectivity and design aesthetic that might have otherwise been overwhelmed by convenience or momentary vanities.

SCOTT ANDREWS

**The author built this teak hatch coaming to replace a large portlight that had been doing duty as a hatch.**

We began the project by removing things. Many inappropriate items had been added over the years, including plastic drawers, newer-era lamps, and a plastic VHF radio. Starting with a clean slate allowed us to understand where the focal points of the interior really were. For example, the cabin lamps are a key interior element, because they frame the small space; they're the first thing one sees when coming below. The original Stephens lamps were long gone, and their bases, which also serve as part of the cabin structure, had been drilled and screwed into over the years. These bases were relatively narrow, so the lamps either had to have long thin bases, or they had to be very small. We saw some original Stephens Bros. "dolphin lamps" on a boat at the 2010 Stephens Rendezvous, and seriously looked into having duplicate lamps cast. We also searched all sorts of antique stores and websites. For a while the idea was to adapt vintage Pullman railroad car lamps, but these seemed too stuffy. Then I happened across some beautiful cast-bronze Art Deco sconces made in France in 1930. They were expensive, and the dealer was in Rotterdam, so we had to consider this acquisition carefully. We took measurements, made mockups, and consulted Mr. Andrews. We finally agreed that he would have picked up these lamps on one of his frequent trips to Paris.

Another significant cosmetic undertaking was the replacement of the cabin hatch bezel. Unlike her sisterships, MAKOTO does not have a butterfly hatch on the cabin roof. Instead, a large portlight, apparently made for the Stephens Bros. and used on their 1960s yachts, had been fitted to the cabin roof at some point in her history. The exterior bezel was very thin, and was coming apart at the joints. The interior bezel was painted plywood that looked like plastic. The worst part was the gap between the top piece and the bottom piece, which provided an unwanted view of the ends of the housetop planking.

## Stephens Bros. Stock Cabin Cruisers

**MAKOTO (left) and her sister KILLARA on California's Petaluma River.**

According to records maintained by the Haggin Museum in Stockton, California, the Stephens Bros. yard, also in Stockton, built seven 34′ trunk-cabin cruisers. Of these, four are known to exist today. KILLARA (Hull No. 563, original name CHOTA PEG) is berthed in the slip next to MAKOTO's in Petaluma. SKAL (Hull No. 559, name unchanged) resides in the Sacramento Delta. UNCLE ROY (Hull No. 564, originally PEMIA) was moved from the Bay area to Maine around 2005, and is available to qualified crews for bareboat charter (www.northpointyachtcharters.com). DUNYA (Hull No. 562) was scrapped in Sausalito around 2005. MAKOTO's hull number is unknown, but she is believed to be No. 561, originally christened FANTASY. I remember at the 2012 Stephens Rendezvous that Dick Stephens, 94 years of age, came walking slowly down the dock. He paused at MAKOTO and asked, "Is this SKAL?" I told him no, SKAL was still around, but we thought this was FANTASY. He said, "Oh yes, I remember FANTASY. My mom sewed the curtains for that boat." The whereabouts or fates of the other two 34-footers, hull No. 557, originally christened LADY CAROLYN and built in 1928, and hull No. 565, originally christened FLORENCE, are unknown. —*SA*

Our solution was to fabricate a pair of large teak rings—one scribed and fitted to the deck, and one to the overhead. A third ring fits between them to cover the edges of the cabintop planking. The entire assembly provides an elegant focal point for the cabin. This was the first time I had steam-bent anything, and I wasn't quite sure how to go about it. To make a steamer I ended up using my barbecue and a big pot borrowed from my neighbor, along with an aluminum dryer hose. When I felt the teak boards slowly yield as I bent them, I realized this was going to work. The result, says Susan,

SCOTT ANDREWS

**Shipwright Jeremiah Goodwin applies red lead over the newly replaced horn timber and shaftlog in anticipation of installing replacement oak floor timbers.**

seems like something Mr. Andrews would have done.

The unattended hull issues were finally addressed when, in late 2011, MAKOTO was hauled out and set up for a major refit at Rutherford's Boat Shop in Richmond, California. I was out of town, so, with Jeff Rutherford aboard, Susan ferried the boat down the Petaluma River and across the Bay to Richmond. This was the start of a four-month refit that included replacing the shaftlog, horn timber, and frame heels; refastening all of the frames to the floor timbers; sistering and re-drifting many of the floor timbers; replacing keelbolts; rebuilding the transom; repowering with a smaller, lighter Yanmar diesel; and a host of other improvements. Jeremiah Goodwin, a superbly skilled woodworker and shipwright, and Jodi Watt, who rebuilt or replaced most of the boat's systems, executed this phase of the project.

The panels of the wheelhouse and saloon soles were so large it took two people to move them, so we decided on new soles. We basically ripped out the old ones, as well as the shabby cabin bunks. I had already been remaking the galley lockers, and with access to Jeff's shop, we decided to just redo the entire space. The galley lockers had been a hybrid of parts. The original site of a stove or heater had been replaced

**The rebuilt Yanmar engine, new electrical wiring, and other systems are carefully installed under the new wheelhouse sole.**

with a non-matching locker and countertop, and the layout of the original lockers and drawers was choppy, with different heights on the doors. The drawers had flimsy, warped, Masonite bottoms, holes had been drilled for power plugs, and the insides of the lockers were in even worse condition. I remember when I took it all out, and discovered that where the heater had been there was about ½″ of diesel sludge. That was a particularly nasty job of cleaning.

With the boat undergoing major hull and engine work, Susan and I refinished what was left of the now-gutted cabin. We stripped the gracefully arched overhead beams of their "shoe polish" stain, only to reveal thousands of flecks of green paint embedded in the oak grain, probably left over from the boat's wartime days with the Navy. Removing the paint required hours with paint remover and a small wire brush, after which we sanded the tongue-and-groove overhead. Eventually a lovely cabin space emerged. Uncovered, stained, and varnished, the quarter-sawn oak beams now show their beautiful ray-fleck grain set off against the satin white overhead.

Restoring the cabin interior teak required plugging nearly 100 screw holes, the remains of various sets of curtains, lamps, and other interior fittings over the years. Once this was done, I stripped the interior brightwork and refinished it in 10 coats of varnish.

SCOTT ANDREWS

**The replacement aft canopy was built by carefully transferring measurements from the boat to a purpose-built lofting table. A teak perimeter framework and oak beams are covered in marine plywood, which is grooved to duplicate the original V-matched pattern of the original overhead.**

After the shop finished the hull work, Susan painted the bilges and garboards with red lead, and the team poured new pitch to level the bilges to the limber holes. Susan then painted the entire inside of the hull with several coats of bilge paint, and the Rutherford crew built the new sole for the wheelhouse and saloon.

While the new engine was being installed, I rewired the entire boat using modern electrical components. I also replaced all of the through-hull fittings and seacocks (see WB No. 224). We had all of the usual bad stuff: ground junctions with 25 corroded wires attached to them, unlabeled fuses in inaccessible places, wires draped along the floor timbers, twisted-wire joints, ball valves hanging onto through-hulls by three threads and attached to a "plumbing tree" of other pipes and hoses. There were 83 years of accumulated fixes on fixes. One of the guys at the shop showed me how to shape the through-hull backing blocks, so I went around and redid all of them. I kept the original bronze cone-type seacock in the head because, when I took it apart for inspection and refurbishing, it was in almost perfect condition. I cleaned it up, greased it, and put it back together.

The boat's aft canopy had to be removed to facilitate the engine installation, and we decided to replace it with a newer, better-fitting one. I first built an 8′ square table on my back patio, supported it with sawhorses, and, with careful measurement, lofted the replacement canopy directly on the table. I then steamed 1⅛″ by 1¾″


**MAKOTO's nameboard and navigation lights show Arts–and–Crafts–inspired elements and Gilbert & Sullivan inspired lettering.**

white oak beams to match those in the cabin. To minimize springback, while the beams were still clamped to shape, I laminated three layers of ¼″ marine plywood over them to create the roof. (I grooved the underside with a router to match the tongue-and-groove of the saloon's overhead, and painted this surface before I installed that first sheet of plywood.) To my surprise, the canopy went on with only minor fitting. It has a generous aft overhang with a graceful double arch shape—which provides an interesting "frame" looking aft. Susan says it's reminiscent of a Japanese Torii gate, which fits our Mr. Andrews's tastes.

The Japonisme theme is also apparent in how the boat's name is lettered. We discovered that an early libretto for Gilbert & Sullivan's *The Mikado* had just the right "Japanesque" font (and the appropriate "Mr. Andrews" backstory). Veteran boat letterer Brian Rutana scaled this font, made a few adjustments, and then applied it in gold leaf on the new transom and nameboards.

We finished the work at Rutherford's in March 2012, and within a couple of months took the boat on a 170-mile cruise to the Stephens Rendezvous in Stockton. After months of working our day jobs until 3 p.m., then working until 9 p.m. at the shop, we needed a break. The weeklong cruise included several days in the Sacramento River Delta, and a harrowing five-hour slog though terrible seas across notorious San Pablo Bay. We'd touched every piece of the boat during our structural restoration, so we were confident in her—though are not eager to repeat that passage.

While outwardly MAKOTO appears to be a vintage boat, beneath the surface she has been substantially modernized. The AC receptacles are old-time brown


**The author and his wife, Susan, aboard MAKOTO on the Petaluma River.**

Bakelite, but the wiring is all done to current ABYC standards. The boat has WiFi and a nice sound system, but the electronics are hidden away inside the lockers, and the speakers are mounted inside old radio cabinets found by Mr. Andrews on one of his trips to the Ukraine. (Susan actually found them in that country through an online antique dealer.)

Once we formed the vision, helped out by our Mr. Andrews muse, we were able to come to important decisions relatively quickly, and from there it was just a case of executing the to-do list—a list that seems to perpetually fill one full page. At this point Susan and I have an intuitive understanding of what fits and what doesn't. An example is the handmade 48-star linen flag that MAKOTO flies from her stern. I ordered one online, and it turned out to be a flag printed on cheap cloth. Mr. Andrews would never have accepted that, so we searched again. Eventually we landed on a U.K. website offering custom-sewn flags. Weeks later I received a notice from the post office saying I had a package from Lithuania. It turned out that the flag was drop-shipped from a seamstress there, and this too has become part of the Mr. Andrews lore. We joke that it was made by the wife of an old Lithuanian family friend of Mr. Andrews's father, with whom he served as a spy in the late 1800s.

Executing a project of this scope and complexity requires a lot of planning. It also demands a long-range view. With an heirloom boat such as MAKOTO, you need to approach things with the idea that someone else, 50 or 100 years from now, will be restoring your work, too, so it is worth the time to get it right. It has also been important for us to take time to enjoy the boat even though she isn't finished. "Boat fatigue" is a common malady with projects like this, and we have found that a little time off, a cruise on the river, or sometimes just sitting under the aft canopy with a glass of wine on a nice evening, is an effective cure.

**MAKOTO's 48-star linen flag was hand-made in Lithuania.**

**Here we see MAKOTO's orderly foredeck, with decking that was replaced in the 1980s.**

In fact, a boat like this will never be actually "finished"; it will just reach periods where less work is to be done. MAKOTO has come a very long way over the past three years. The wheelhouse overhead is undergoing a restoration similar to what the cabin saw, and Susan is busy sewing canvas covers. The captain's seat and engine cover need to be re-created, and there is the never-ending list of work that any wooden boat seems to always have. So we try to take her out regularly and enjoy her for what she was made to do.

Susan jokes that if I don't have the right tool, I'll make one, and I guess there's some truth in that. The project has stretched my skills, and I have gone back a few times and torn out my work because, as my craftsmanship improved, what I had done before didn't look right. But that's part of the beauty of a wooden boat: It is pliable. You can fix things, and then re-fix them. What soul we have given back to MAKOTO, she has given back to us tenfold in experience, knowledge, and joy. It really is about the journey and not the destination.

*Scott Andrews develops advanced technologies for future automotive and transportation systems. He enjoys cycling, and spends his free time restoring old boats and cars. He and his wife, Susan Takami, live and work in Petaluma, California.*

**MAKOTO, ghosting along in her home waters.**

# madness

## A proa for modern times

by Geoff Kerr

JOHN GUIDER PHOTOGRAPHY (THIS SPREAD)

***Facing page*—Ghosting along in light air, MADNESS is a portrait in minimalist efficiency. John Harris conceived of the boat as a fast cruiser with spartan accommodations in a leeward "pod" that doubles as buoyancy in case of excessive heel. *Right*—Designer and builder Harris uses a push-pull tiller for steering. The crew bench (shown collapsed in this photo and in use on the opposite page) over a taut trampoline promises uncrowded sailing.**

An empty dock and a shop full of machinery and materials could be a recipe for joy—or trouble. A few years ago, John Harris—boat designer, builder, and CEO of Chesapeake Light Craft in Annapolis, Maryland—found himself standing on that precipice. His design work most often involves a wide array of small-boat kits for home builders, some 24,000 of them to date. But as a lifelong sailor and an incurable schemer, Harris's "personal" portfolio is replete with everything from solo canoe yawls to world-cruising schooners. Occasionally, he melds his two worlds by developing a personal dream boat into a CLC flagship.

His most recent such adventure is MADNESS. She is a proa, a type he has been experimenting with since his teenage years. In his early CLC days, his first "development" project was the proa MBULI of 2001 (see Designs, WB No. 169), which started off as a 20′, wing-masted handful in prototype but eventually reached the design catalog as a better-mannered cat-schooner with conventional spars and a reduced rig. Still, somewhere beyond MBULI lay the tantalizing world of cruising proas.

Today, the kingdom of cruising proas is ruled by Russell Brown, now of Port Townsend, Washington. His history with the type started with the 30′ JZERO in the late '70s (see WB No. 83), and since then he has logged more ocean and coastal cruising miles than any other modern proa sailor. Although not one to proselytize, since he suspects that proas aren't for mass markets and many sailors aren't for proas, Brown has been both an inspiration and a resource for Harris. Recognizing a fellow traveler, Brown generously passed on to Harris his insight, experience, and even a surplus spar for the MADNESS project. (Note: The world of proas is full of "traditional" Pacific jargon, but in keeping with Brown's sensible practice, this article uses familiar terminology for these unfamiliar boats.)

Brown, too, was far from the first to admire proas. The type caught the attention of European explorers all the way back to Magellan. Lt. Peircy Brett's renderings made during George Anson's circumnavigation of the 1740s provided detail, and a British yachtsman built a facsimile as early as 1860. Better-known experiments came from Florida, where Biscayne Bay wizard Commodore Ralph Munroe built a series of proas. "Sailing is no name for it—flying is better," he wrote in *The Rudder* in June 1898. "Out into the bay she skipped, boys yelling with delight on the uplifted outrigger, spray from the lee bow and steering oar riven into vapor by the speed blowing to leeward. It was grand!" The same issue of *The Rudder* noted that the Roosevelts sailed a 50′ proa in Long Island Sound.

Modern proa history begins with designer Dick Newick, whose proa CHEERS finished third in the 1968 OSTAR race, after first crossing to England from the Virgin Islands to dispel doubts about her seaworthiness. Proas traditionally carry their outrigger hulls to windward; Newick, also a catamaran pioneer, made his outrigger equal in length to the main hull and carried it to leeward. He thus gave the world what became known as the "Western" or "Atlantic" proa, together with a combination of ultralight construction, trunk rudders, and a buoyant offset sponson.

Proas attract tinkerers and innovators. In simplest terms, the proa can achieve the greatest speed for the least weight and structure, the two evils that rack up the expense. For Brown, cruising proas "generally provide more performance for a given amount of material." It was a principle that Munroe had also observed a century earlier: "The rig should strike our mechanical experts as being as near perfection as can be to meet the greatest stress and strains with the least possible material." Consider proas in this light: The fact is that you only have to build about one-half of a boat for an equivalent rig.

MADNESS began taking shape in Harris's computer in January 2010. She was conceived for fast inshore cruising for two people and day-sailing for perhaps four. The first parameter was her configuration in the Pacific style, with the outrigger to windward. The target overall weight was 1,000 lbs. The main hull soon came in at 31′ or so long, with an astonishingly narrow waterline beam of less than 24″

and a loaded draft of only 17″. Need we say any more as to why a proa is fast under a moderate rig?

The outrigger is the toughest nut to crack. At rest, it merely keeps the main hull upright and happy. Under sail, however, the weight of the outrigger as it begins to lift clear of the water counters the heeling force of the rig. For speed in many other kinds of boats, efforts to get weight to windward are often heroic: Spend a day tweaking your knees with hiking straps, another scrambling through the close combat of Chesapeake Bay log canoe cluster-tacks, or an afternoon on a one-design loaded with "friends" from the gym. Proas cleverly use an integral streamlined counterweight placed well to windward and just leave it there. The challenge, then, is to shape a wave-friendly outrigger with enough buoyancy to stabilize the boat at rest, enough weight to keep the rig upright under sail, and enough length to keep up with the big sister to which it is attached by crossbeams. MADNESS's outrigger ended up as a 22′5″ × 21½″, V-bottomed hull with high, flared ends, weighing 180 lbs dry. Water ballast of several hundred pounds can be added should conditions get sporty.

That weight of the outrigger hanging from the masthead and held some 15′ outboard represents a lot of rail meat that you don't have to move from side to side during tacks and don't have to feed. The connecting crossbeams, which weigh about 60 lbs each, are streamlined to shed waves and are also arched to keep them out of the water, along with the trampoline rigged between them. The crossbeams are braced by diagonal cables rigged from the ends of the mother hull.

Once the general configuration was established, Harris incorporated three features that are common to modern proas: a mast stepped well "inboard," a buoyant "pod" extending to leeward, and dual "cassette" rudders.

The mast is stepped toward the windward side of the main hull, over a reinforced cockpit bulkhead. This allows the ambidextrous forestays to have an outboard lead, supporting the mast in case the helmsman inadvertently allows the wind aback the sail.

The "pod," a flying-saucer-like appendage off the main hull, might prompt some to conclude that the designer needed more deck space for sheet leads or more space below for accommodations. Those are both handy by-products, but the pod's true purpose is to provide reserve lee-side buoyancy. If the boat heels excessively, the pod hits the water and helps return things quickly to the "status quo ante" as soon as the sheets are slacked. Indeed, the pod's outboard face is curved to provide hydrodynamic lift as soon as it touches the water.

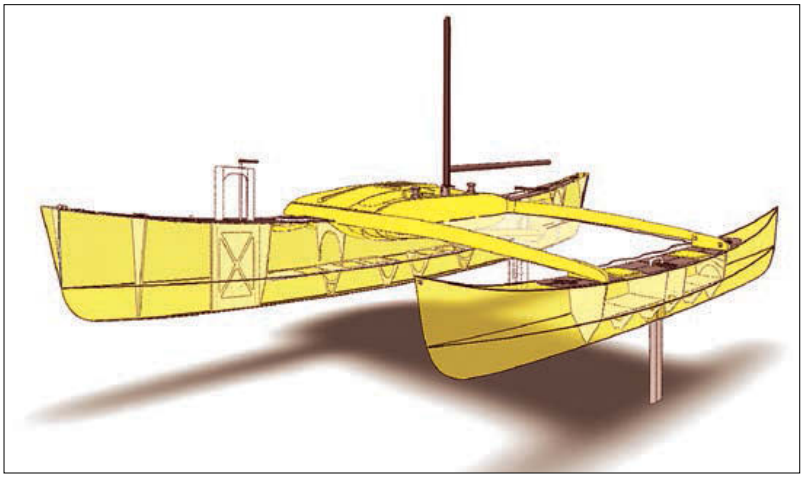
For proa steering, dual rudders, one at each end of the main hull, have proved the most practical solution. Each can be raised or lowered, daggerboard-style, as needed. They are inboard from the extreme ends to protect them from mishap, to keep the leading bow clean, and to keep them within reasonable reach. The boat's light weight and speed allow the rudder blade to be small and hung on the trailing edge of a fixed foil that serves as a skeg, raising and lowering with the rudder in the cassette.

With the hull configuration established, the next challenge was the rig. Here, Harris followed Brown's example, choosing a sloop for windward efficiency instead of the unstayed two-masted rig he had used with MBULI. For the sloop rig, the mast must have stays, but it also must be able to rotate. The rig also requires two jibs, one set up at each end of the boat, and when tacking one must be doused and the other set (see sidebar, page 68).

At 364 sq ft, MADNESS's rig is conservative for a 31′ boat. By comparison, a Farrier 31 trimaran hoists 560 sq ft in its working rig but has more than twice the displacement and cost. Harris characterizes the two as a Lotus versus a Camaro, with the price tags switched. The standard MADNESS rig has Vectran sails, with a fully battened, square-top mainsail. An optional cruising rig, even more conservative at 294 sq ft, can use repurposed spars and sails.

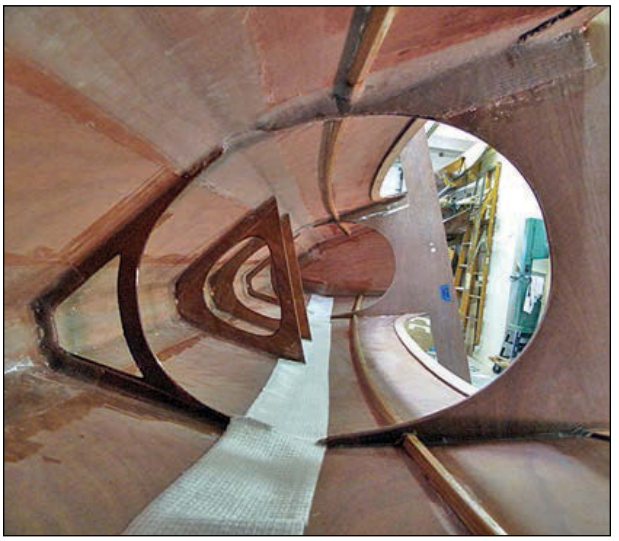
With the design finished, Harris turned to construction. Here, he cast his eye upon the playground that is the CLC shop. MADNESS would be built with on-hand materials and systems for efficiency and simplicity. Harris has characterized her structure as "state of the art, circa 1975."

The boat's two hulls are made from 6mm okoume marine plywood using stitch-and-glue techniques, with pieces cut on the same CNC machine that has strewn thousands of kayaks and small boats across the land. Panels, which were assembled on temporary work tables, were sheathed both sides with inexpensive e-glass set in epoxy, then stitched and filleted just like a kayak, albeit with seriously heavy biaxial tape inside the main hull seams. The rounded, flaring bows were glued up from structural foam blanks, sculpted in place and 'glassed over. The curvaceous pod is a hybrid, with its



JAY HOCKENBERRY

**Narrow, aileron-like rudders are fitted to the outboard edges of daggerboard-like cassettes in each end of the main hull, one of which is retracted while the other is used for steering, as shown in this rendering of MADNESS set up for port-tack sailing. The rudder cassette in use contributes to lateral resistance, as does the outrigger's foil-sectioned daggerboard.**



CHESAPEAKE LIGHT CRAFT

***Left*—Lightweight and strong plywood-epoxy construction is exposed during the rollover of the proa's 31′ main hull, which has a waterline beam of less than 24″. *Above*—Like any proa, MADNESS's most distinctive element is its slender outrigger, whose weight is kept 15′ to windward by crossbeams. (In this photo, the daggerboard is retracted.)**

underside made of plywood and the deck strip-planked in ¼″-thick bead-and-cove cedar, right out of the kayak kit inventory.

The crossbeams, a particularly intriguing bit of engineering, are composites of vertical 12mm plywood "webs" with strip-built leading-edge foil sections reinforced with carbon fiber set in epoxy—the only place in which the hull construction has carbon fiber reinforcement. The main bulkheads in both hulls, which serve as attachment points for the crossbeams, are made of 12mm plywood beefed up on both sides with two layers of 6-oz 'glass. The only difference between MADNESS and a CLC kayak kit is scale: One simply needs a bigger shop and a few more friends.

Construction commenced in May 2010. Itinerant boatbuilders, augmented by Harris and some moonlighting CLC staff, provided labor. A timely facility expansion provided a clear shop bay at first, and after the main hull was assembled, a simple four-wheeled cradle allowed the project to move to the corner of least resistance as regular CLC business imposed.

After a year of sporadic progress, Harris was forced to confront the calendar and balance the boat's gestation period against that of the child that his wife, Kerry, was now carrying—and to accept the fact that on current schedules their child looked to be launched well before the boat. Since only one of these schedules had any flexibility, the dad-to-be hastened the schedule for the boat by trailering the unfinished hulls and crossbeams to Sea Island Boatworks in Charleston, South Carolina. In May 2011, Mark Bayne and his crew completed building the pod and detailed, faired, prepped, and painted the lot. The color is Federal Yellow, a tip of the hat to the color Newick used in his groundbreaking designs.

The beast was returned to Annapolis in August 2011, and Harris boldly announced a launching party for September 24. To help him meet the looming deadline, I joined a steady stream of touch-and-go boatbuilders in conspiring to build the mast blank, mount hardware, and fit hatches as Harris orbited Annapolis in a daily purchasing frenzy. The final assembly overwhelmed even the generous shop space, so the hulls were joined outside the showroom in a deft ballet of hulls, trailer, kayak cradles, and forklift.

September 23 dawned relentlessly. Ready or not, MADNESS's two hulls were separated by removing 10 bolts, then she was loaded on the trailer, enduring an epic summer toll-booth backup on the Chesapeake Bay Bridge before reaching her Wye River home and launching site.

Despite threatening tropical weather, Saturday morning proved once again that all hands love a launching party for a charismatic boat. As the crowd slowly gathered, the hulls were again joined, and punch-list tasks were assigned. The Spectra-mesh trampoline, which is made of repurposed fishing net, was seized on for the first time. The bottom paint was touched up, the graphics applied, the champagne chilled, and the tide encouraged. The buffet centerpiece was a dramatic Federal Yellow proa cake served on an okoume platter. For spiritual gravitas, "Trimaran" Jim Brown, father of Russell and godfather of countless multihulls (see WB No. 202), sent MADNESS to the water with a traditional Maori prayer to the sea god Tangaroa: "Accept as our gift, this canoe!" She was handed down the lawn, through the reeds, and into the river.

After she was rigged and the paddling and power trials were completed, her inaugural sail came October 24. The unqualified success of the shakedown season was deftly punctuated by Ella's birth on November 3.

During the 2012 season, MADNESS proved both Harris's vision and her own mettle. She proudly filled her slip at the Annapolis Sailboat Show—not to mention adjacent slips as well—and at this midwinter writing she sits at her dock calmly awaiting the next warm day.

Over the winter, I tracked down and read *Project CHEERS*, a first-hand account of the boat that established the modern proa as a seaworthy rig. One passage struck me as equally appropriate for her new cousin a half-century later: How lucky some of us are, Ian Major wrote, to live in times in which a "man can pursue his leisure creatively."

*Geoff Kerr, proprietor of 2 Daughters Boatworks in Westford, Vermont, is a regular contributor to* WoodenBoat.

*Chesapeake Light Craft, www.clcboats.com; 410–267–0137.*

See Sidebar "Sailing MADNESS", next page.

# Sailing madness

I like to think I can step aboard any sailboat and soon get her under way. MADNESS gives one pause, though—mostly because port and starboard and forward and aft are no longer safe refuges for a fumbling deckhand. The many hours I spent helping to build, rig, and fit out the proa proved fortunate because, frankly, the biggest challenge aboard MADNESS is knowing where to be.

The first few crossings of the trampoline are disbelieving moonwalks over the briny void. Familiar handholds on the stainless-steel wire shrouds and stays are far away. The decks, though given an ample nonskid surface, are only 18″ wide where the rudders are located and only about 9″ where the bow line comes aboard. The cabintop, a seductive refuge full of familiar hardware, curves away to the infinity of a sure swim.

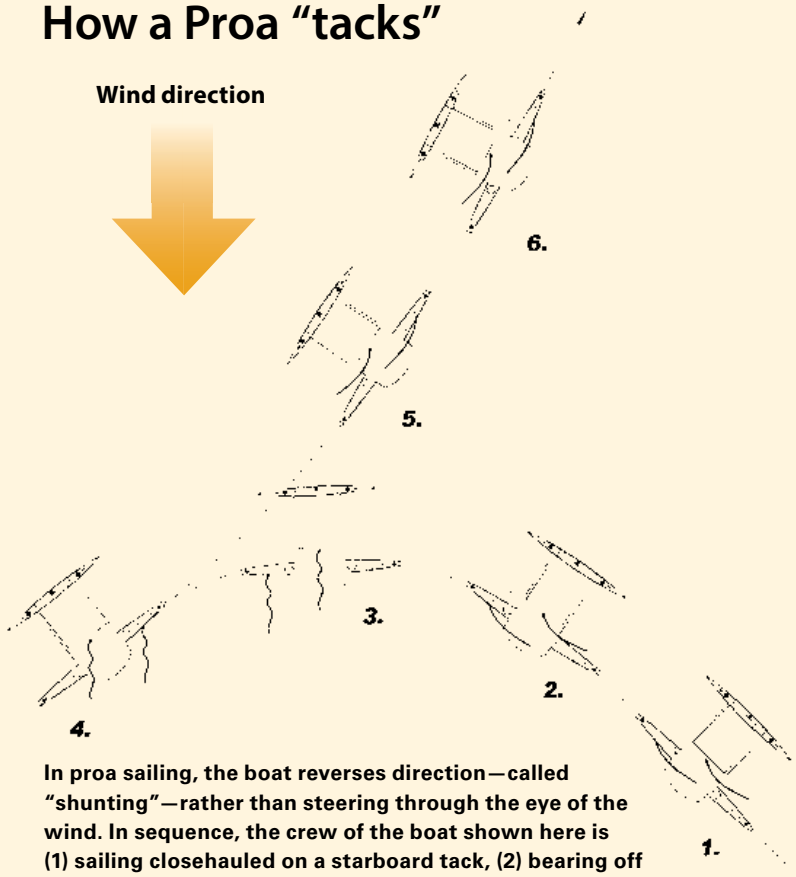
So, let's sit on the comfortably solid crew bench, take a deep cleansing breath, and summon our inner ancient mariner. We're in unfamiliar territory, so let's cast off the docklines fore and aft (umm, why don't you do that...) and motor to open water. Then let's shut down, hoist and tilt up the outboard, and drift a bit.

Like magic, the puzzle reveals itself as the boat settles beam-to in the wind, its natural state of grace. First, let's go to the outrigger and drop its daggerboard, and while we're there let's face the main hull and choose a tack. Let's go left, shall we? That means we'll lower the right-hand rudder and leave the left-hand one raised. The mainsail comes next, hoisting by an internal halyard with sail slides that fit into a channel molded into the mast. A mast-mounted winch assists in hoisting the main and jib alike, the individual lines leading through stoppers fitted above the winch. The mainsail will luff downwind, at right angles to the boat. Because the left-hand end of the boat is now the bow, we'll hoist the rolled-up jib on that end, then clip on its sheet. Now grab the right-hand tiller, look salty, roll out the jib, sheet in the main, and go!

Steering is simple. Short side-arm tillers with rubber universal joints connect to long, light, push-pull sticks—the dreaded Norwegian tiller. Real sailors just boldly look ahead and steer. This flexible arrangement allows one to steer not only from the cockpit whether standing or seated but also from the crew bench between hulls.

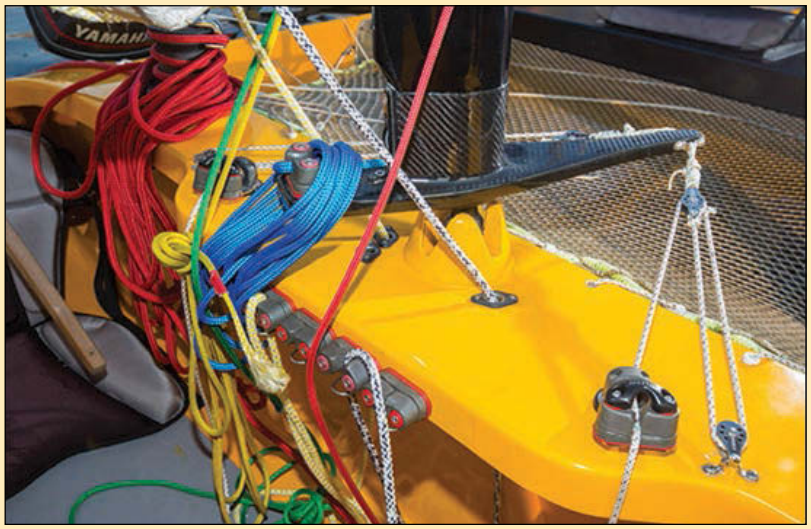
Now, slip into a cockpit as snug as the driver's seat in an Austin Healy Sprite, focus on the mainsheet, and look ahead. Why does the tiller feel so light? We're doing 10 knots, rock steady, quiet, and schussing along, and I'm using three fingers on the tiller while it's resting on my shoulder. In 10 minutes, the fear

## How a Proa "tacks"




**In proa sailing, the boat reverses direction—called "shunting"—rather than steering through the eye of the wind. In sequence, the crew of the boat shown here is (1) sailing closehauled on a starboard tack, (2) bearing off the wind, (3) letting go the sheets, (4) dousing the former jib, unrolling the "new" jib on the opposite end, and switching rudders, (5) making way after sheeting in on the new port tack, and (6) trimming to settle in for closehauled sailing on the new tack.**

JOHN HARRIS



BILLY BLACK

**The carbon-fiber mast steps into a deck-level socket allowing it to rotate by means of vang-like lines fitted to a tiller arm. The helmsman's seats, which are at each end of the cockpit and face opposite directions, permit easy access to the console.**

of sailing a lopsided boat recedes. The outrigger seems happy to stay attached to the rest of the boat and in contact with the water. It moves in unison with the main hull, neither working nor wracking, with no disquieting creaks or groans. The overwhelming sensation is stability, with very little heel. I'm tempted to use "stately" to describe her balanced, deliberate, and responsive motion, but that somehow misses her essence: speed, deceptive speed, making it difficult to sense how very fast you are going. The outrageously narrow hulls leave no wake, just a little furrow in the water.

Soon, with an island looming ahead, it's time for the first tack. Leave a bit of room to leeward, and ease the sheets right off as you steer off the wind a bit. She quite docilely comes to her natural state, outrigger to windward, sails trailing downwind, calmly and quietly drifting so you can tack at your leisure. Full battens keep the mainsail from slatting. Once you roll up the jib, there are no sheets to flog your companions and no tyrannical commands to shift sides, hike out, sheet home!

We'll first drop that furled jib, then hoist its counterpart on the opposite end of the boat, still furled. Now we can step out of the cockpit and lower the left-hand, new rudder and gather up the now-struck jib on deck. Next, wander to the new forward end and raise the old rudder, which will be held to the prescribed height by a tensioned bungee loop. While we're in the neighborhood, we'll clip on the new jib sheet.

We'll also use vang-like tackles attached to an 18″ tiller arm used to rotate the carbon-fiber mast. The mast, which has no taper and is oval in cross-section, has a 2″ trailer hitch ball bolted to its heel and socketed into a purpose-made deck fitting. The mast rotates to improve airflow over the mainsail. Tuning the proper angle of attack results in a tangible 5- to 10-percent increase in boat speed. The long diamond stays and their aft-trailing spreaders keep the lightweight spar in column.

Now, we'll settle into the other bucket seat, roll out the new jib, sheet in the main, and we're off. Once on course, trim both sails. No cold sweat, no spilled peanuts, and no hurt feelings or Polynesian curses.

My biggest challenge is keeping the proa's speed and its 20′ beam in mind as we enter Annapolis's busy harbor. Prudently, we choose to furl the sails and motor to a city mooring. The launch driver certainly had no trouble finding us when we called for a ride to Mother's Day brunch. —*GK*

CHESAPEAKE LIGHT CRAFT

**With her fully battened mainsail, minimal wetted surface, narrow beam, light weight, and relatively high ratio of sail area to displacement, the proa promises to be a fast sailer.**

# Peter Chase
## *Lessons of a Boatbuilder*

**Peter Chase (left) has been building boats on the Maine coast for more than 40 years. Working alongside him on two major projects, the author took away not only lessons in efficient and sensible boatbuilding, but also deep insights into weaving together the threads of a working life, a passion, and family.**

Text an
by Bill

A keelbolt transplant is an anxious undertaking in a 40-plus-year-old boat such as my 31′ ketch, VITAL SPARK. As is the case in a lot of traditional boat repairs, I didn't know what I'd find until I got in there. I knew my steel bolts were nearing the end of their collective life and, naturally, I had been procrastinating about the job for several years. Then a sister Concordia 31 suffered an alarming calamity: A sudden summer squall struck her at her mooring, and as huge waves swept through the anchorage she bottomed out several times. Her keelbolts failed, her ballast keel fell off, and she capsized on the spot. If ever there were a wake-up call, this was it. Without further ado, I engaged Peter Chase's freelance services.

Peter, an expert in wooden boat repair, is a legend in the Downeast Maine wooden boat community. He isn't simply a man who likes traditional wooden boats; he thinks wooden boats are the only kind worth bothering with. He likes the clarity of their structure. He likes the fact that plank-on-frame designs can't be pushed into shapes that aren't right. I knew Peter would tackle things sensibly, and when the project inevitably expanded, as these things tend to do, he would keep his head about him.

On the appointed morning, Peter rattled up to my boat shed in one of his decrepit cars in that classically disheveled way of his. While snapping and barking dogs poured forth from the car, Peter emerged with a few tools: bottle jacks, a large sledgehammer, iron rods of differing lengths, a chisel to dig out the bungs at the bottom of the iron ballast keel, and wrenches to wind off the top nuts.

Although I had known him for many years, sailed with him in local races, and played pond hockey with him for years, I had never experienced his skill as a shipwright firsthand until that job. I came away from

**Peter Chase built this new cockpit for the author's Concordia 31 ketch VITAL SPARK. The new work had to fit seamlessly with the original, so as not to appear "grafted on." Chase took joinery design cues from the original, and topped it all off with a coaming cap of local locust.**

the experience with not only a lesson in efficient and can-do wooden boat repair, but also some insight into a man whose working life, passion, and family time are deeply interwoven threads.

On a recent visit to Peter's boatshop I noticed the outside door was hung on wooden hinges he'd made. Those hinges are a metaphor of sorts, as they connect shop and garden and house and saltwater creek beyond; they demonstrate a man who has built a life of work, family, and friends playing out as a seamless whole. In this Peter seems the perfect opposite of the office-cubicle guy for whom work and the rest of life operate in different universes.

Back at my boat shed, we jacked up VITAL SPARK, steadying her new height with blocking and jackstands as we went. When she was a couple of feet or so higher off the ground, we went aboard to see if we could pound the old bolts down through. This is where things can get dicey. Keelbolts usually rust away in an hourglass fashion somewhere deep down where salt water is able to leach in and do its worst. If a bolt is too-far hourglassed, the risk is that when pounded on it will break and the top end will turn into a gigantic nail that then gets wedged alongside the remains of the bolt remnant below. With everything jammed to a standstill, one then has to drop the ballast keel and dismantle the deadwood to get the old bolts out before rebuilding the whole business from scratch.

Although worries about such a calamity scurried through my brain like mice while we worked, the scarier part was actually the bolt pounding. To accomplish this, Peter and I, both over 6′ and both over 200 pounds, had to first scrunch into the boat's narrow bilge. Once settled in, I would hold a driving rod atop the bolt with Vise-Grip pliers while Peter whacked it with the sledgehammer.

Was I nervous as the sledge whizzed by my temple? Well, kind of. But Peter seemed confident. He is very strong and, after all, has been swinging heavy tools like adzes and mauls with precision for decades. Clank, clank, clank went maul on steel. Down went one bolt after another until soon we knew we could get them out.

When the lower end of each bolt was down 18″ or so below the ballast keel, we hacksawed it off and went back to pounding on the remains. By lunchtime, they were all out. Looking back, even when I felt the breeze of the maul blow by my cheek, I wasn't too scared. That's how good Peter is. It was only later when I remembered his modest finesse wielding a hockey stick on the pond that I got the cold sweats. But by then the new bolts were driven home and their big, comforting nuts threaded on just like brand-new.

**This 18′ Peter Chase–designed and –built Cape Rosier Guide Boat evokes the builder's Scandinavian heritage. The boat is meant for recreational rowing, fishing, and guiding, and can be rowed from three different stations—or by three people at once. It's planked in local cedar and framed in oak, and the interior is finished in oil.**

The wherries and skiffs Peter builds to his own designs radiate similar confidence. Peter's mother was Swedish and his lapstrake boats, with their broad planks, heavy riveting at the laps, generous sheer, and pronounced flare from waterline to gunwale have, with little question, a touch of Scandinavia about them. Simple to build and shapely from any angle, they are also capacious vessels because carrying capacity is important to Peter. Not only does he have six siblings, he is now a grandfather of an expanding brood—and his wife, Sophie, can be counted upon to invite a few extras along. So whenever it comes to doing something like rowing to a beach, there's generally a large crowd to deal with. Not to mention the dogs.

Since he was a kid on Cape Rosier in Brooksville, Maine, Peter has been part of a hand-made, locally grown world. In the 1950s and '60s of his youth there were lots of traditional vessels around, especially schooners out of Camden taking passengers for week-long cruises. For a while Peter's older brother Carl had one of these, the 80′ NATHANIEL BOWDITCH. Not only did this and other family-owned vessels get Peter out on Penobscot Bay at an early age, they developed in him a taste for the traditional. When his high-school girlfriend Sophie Spurr went off to Trinity College, Dublin, on a junior-year-abroad program, Peter went along with her and soon was drawn to the Emerald Isle's ancient charms like a moth to a flame.

In these pre–European Union, pre–Celtic Tiger days, Ireland's economy was operating at close to a pre-industrial level, and it wasn't long before Peter decided to buy himself a boat, in this case a 34′ Galway hooker. The details of his long affair with the hooker are covered by Dan Spurr in WB No. 193, but the gist of the story is this: After buying AN REAMON, as she was called, he spent the rest of the year fixing her up before Sophie and he sailed her around Ireland and then put her on a freighter as deck cargo bound for Halifax, Nova Scotia. From there they eventually sailed her to Maine where she lounged beside his barn for many years waiting for Peter to put together enough time and money to get her right again. Finally she was reconnected to people in Ireland who shipped her back home to be rebuilt in Galway.

While he was in Ireland, Peter heard about a boatbuilding school, The Washington County Vocational Technical Institute, in Lubec, Maine, that could give him the skills to take up the shipwright's trade. After Peter graduated from Lubec, he and Sophie migrated to Maryland's Eastern Shore where she started law school and he got a job restoring boats at the Chesapeake Bay Maritime Museum in St. Michaels. In such a traditional boat heaven Peter further refined tastes and skills first imprinted upon him as a barefoot towhead kicking around the waterfronts of Cape Rosier and nearby Bucks Harbor.

When Sophie finished law school they headed back to Maine where Sophie established herself as an attorney while Peter began a circuitous route that would ultimately land him in his own backyard on Cape Rosier building and repairing boats of his own choosing.

Like most journeys home, it took a while to gather way. First he worked with his brother Carl finishing off fiberglass-hulled Friendship sloops. Next he went into a partnership called Caterpillar Boatworks (some joked the title made it seem like a business that moved real slow and chewed up the green stuff) with Barney Boardman and Elliot Spear, repairing boats and building wooden kayaks. Then came a 20-year stint at Brooklin Boat Yard where Peter became one of the most beloved builders in a crew that swelled from fewer than a dozen to well over 60. With a couple of daughters going through school and developing an interest in

**Chase's Cape Rosier Wherry is a 12′ sailing and rowing boat; like its stablemate above, it's built of cedar on oak, and the interior is finished in oil. The rig is a sliding gunter.**

**Peter Chase in the shop, with a Cape Rosier Wherry in progress.**

horseback riding, it was a good time for Peter to work regular hours for a steady paycheck. I once asked him how he was able to manage what for many would seem like a grinding 35-minute commute each way from Cape Rosier to Brooklin.

"Jeez," he said. "It's just so beautiful. Every day is always different. I just never get tired of it."

But, when the girls left home for college, marriage, their own kids, and their own careers in Vermont, Peter decided it was time to hang out a repair-and-construction shingle.

Remembering the keelbolt project, I called Peter when, a few years later, the time came to replace VITAL SPARK's vertical cockpit staving. I'd been invited to an education-consulting job in the Middle East for a number of months, and this time Peter would be working on the boat while I was away. To leave somebody else to do major repairs on a beloved wooden boat seems, to say the least, like a nervous-making proposition. But the job had to be done before the next sailing season.

In previous years as problems spread, I had diddled around with quickie fixes of one kind or other; fitting graving pieces into soft spots and even, in a bout of giddy optimism, drizzling a miracle epoxy concoction along the grain in hopes of stiffening things up for another year. But when I stuck an experimental thumb clear through one of the staves in late August, I knew the time had come for a rebuild.

It was critical to me that everything be structurally appropriate and fit seamlessly into the overall look of the boat. When VITAL SPARK was built at the Concordia Company, Capt. Pete Culler was the yard's lead shipwright. Thanks to his aesthetic vision, the boat's level of finish falls comfortably between "New England workboat sturdy" and "1950s yachty." I love this look and don't want anything that might seem fussy—or worse yet, grafted on—to interfere with it.

Not surprisingly, Peter prefers to build with local materials: oak for frame stock, northern white cedar for planks, and for strength and accent, locust—a particular favorite of his. Such affection for locust helps us understand something about Peter. A lot of builders stay away from locust because large sawmills and boat lumber dealers rarely bother with it because decent lengths are hard to come by. It also takes a long time to steam-bend. These complications don't bother Peter one bit. He knows if he gets the right piece of locust in the right place, no wood is tougher and few woods are as lovely. Maybe best of all, Peter knows that all over Cape Rosier or in Vermont when he visits his daughters, old locusts stand sentinel beside long-abandoned farms and cellar holes waiting to be turned into knees, stems, and breasthooks.

Peter prefers old-time substances—linseed oil, pine tar, beeswax—and avoids high-tech concoctions whenever he can. To develop his own boat designs, he likewise follows the time-honored tradition of carving half-models and lifting offsets from them. In fact, about any time Peter talks about a particular set of lines, he prefers to elucidate his thinking by reaching for one of the many models that hang above his workbench or decorate the walls of his house. For Peter, these are moments of deep communion, and as his big boatbuilder's hands cradle a model, while his fingers trace out a particular line or curve he is trying to explain, one begins to understand his intuition for boats, developed over a lifetime.

I figured the cockpit job would proceed as smoothly as the keelbolts had, and it did. Week after week I received an email in which Peter described work done and hours expended. Best of all, for a guy on the desert, were the pictures he sent along with the narratives. From the start I could see things were moving along clean and fast, so when it came to the final detail, the railcap, we decided to celebrate with varnished locust from Vermont. This flourish accentuates the buxom amplitude of VITAL SPARK's cockpit. Far from appearing extraneous, it is just the touch the job needed, and since then sighting along those sweet curves gives me pleasure every time.

As the path of life already lived wanders out behind me ever longer, I find it instructive to pay heed to people like Peter Chase—people who are living lives animated by good work, generous spirits, curious natures, and a sufficiently humorous view of the world to give them a shot at making sense of things. Such friends serve as crucial markers to steer by.

*Bill Mayher is a regular contributor to* WoodenBoat.

# Istanbul's Rahmi M. Koc Museum

## Preserving the past in a city of connection


ALI KONYALI/RMK MUSEUM (BOTH)

**Rahmi M. Koc Museum houses a diverse collection. At -sized caique (see page 76). The cutter SWELL (above), Dutch design, was built in 1910 by Southern Yacht ngland, and owned by a succession of Istanbul residents.**

by Peter Neill

Istanbul is an astonishing city. It is authentic and antique in its catalog of mosques, bazaars, churches, neighborhoods, and cacophony of voices. Its population is in fulsome growth, and its economy is burgeoning. Turkey has a pending application to join the European Union. There's a palpable sense of optimism here, although Turkey's secular government is now grappling with the same tumultuous religious, social, and political forces that seriously affect all nations of the Middle East. It is a city of connections: past to present, west to east, old to new, ancient to modern, land to sea.

The city is aligned along three bodies of water: the Black Sea to the north, the Bosphorus as a channel to the Sea of Marmara to the south. Thus, an axis is established that enables an extraordinary progress of marine transportation—some 300 ships daily, a tanker or freighter every five minutes, 24 hours a day, carrying import and export from and to Russia, Bulgaria, Romania, Ukraine, and Georgia through to the Mediterranean Sea, the Atlantic Ocean, and the world. Surely the Bosphorus is one of the most strategic connections extant, like the Suez and Panama Canals, and other key straits through which an enormous volume of seaborne trade must pass.

But there is a second axis, east to west across the Bosphorus, that connects the European side of the city to the Asian side, to the vast Anatolian plain of Turkey and on to Syria, Iraq, Iran, and the nations beyond. This connection, too, is primarily marine—a perpendicular flow of ferries, excursion vessels, small transports, support vessels, private yachts, local fish boats, and more across the line of the first axis in equally dense patterns of activity. There are pilots aboard the larger ships, and there is a series of radar towers and a few cursory aids to navigation, but the operative appearance is of disorder. From this apparent chaos rises a daily miracle as each vessel reaches its destined shore, and a torrent of passengers, produce, rugs, and chickens and sheep flows against a waiting current of equal volume prepared to board those vessels for immediate return. It never stops. To walk the edges of the city everywhere is to be confronted by an unavoidable, insistent, sensory experience of the sea.

Such a city should have a great maritime museum. And so it does: the Rahmi M. Koc Museum, which opened its doors in 1994 in an abandoned marine foundry on the Golden Horn—an inlet of the Bosphorus that divides Istanbul and forms a natural harbor that has sheltered Greek, Roman, Byzantine, Ottoman, and other ships for millennia. The museum is the stunning manifestation of a dream and transportation collection amassed by Rahmi Koc, one of Turkey's most successful international businessmen and clearly someone with the highest standards of historical taste, artifact restoration, and commitment to installation, display, and interpretation.

## An Overview of the Museum and the Golden Horn

ALI KONYALI/RMK MUSEUM

The museum comprises three parts. The Lengerhane is in the center (with domes and adjacent building); it is a factory constructed in the 16th century on a 12th-century Byzantine foundation to make anchors and chain for the Ottoman navy, and it now houses an extensive number of marine paintings, ship models, figureheads, and communications and navigational instruments. Then there's the Haskoy Shipyard (on the water, left, two brick buildings and central slipway) for small craft and yachts shown both in and out of the water; here there are also outboard motors, a 453-ton English steam engine of 1911, other large industrial objects, a re-created boatshop, chandlery, and fisheries store. And finally there are modern buildings (on the water, right) with an excellent restaurant and a display of other remarkable transportation examples. These include a 19th-century Italian luxury train, a collection of 20th-century British and American automobiles and motorcycles, military and civilian trucks, tanks and aircraft, an immense crane, multiple capstans and winches, and dockage for a former American submarine, built in 1944 and recommissioned by the Turkish navy in 1970s. Also in this area is FENERBACE, an exquisite example of Istanbul's historic ferry fleet, built in 1952 in Glasgow. The fascinating collection is eclectic, surprising; it is perfectly maintained, and a wonderful insight into the maritime history of the city.

RMK MUSEUM

The small-craft collection is remarkable. It speaks to local history, and includes canoes, skiffs, recreational excursion gigs, lifeboats, caiques, and small one- or two-man rowboats associated with the *yali*—waterfront houses inhabited by Istanbul's gentry. There is also ZIYA USTA, one of the last gulets—indigenous craft familiar to the small bays and ports of the Aegean coast and used for local fishing and sponge diving. The collection reflects European tastes as well, with imported small one-designs such as a Norwegian Dragon-class sloop (which has a fleet of 10 still actively racing today in Izmir and Bodrum); LADY EDITH, an 18-meter gaff cutter built in 1925 by William Fife & Son; and the cutter SWELL (see page 74).

## Caiques

ALI KONYALI/RMK MUSEUM

The caique was once the ubiquitous working boat of Istanbul. Boats of this type ranged from a charming rowing skiff for a single child (see page 74) to intricately carved royal barges decorated with gilded birds, inlaid ivory, and figureheads. These larger ones were some 40 meters in length, with 24 pairs of oars manned by three rowers each, or 144 in all. The most impressive remaining example of these was constructed for Sultan Mehmed IV (1648–1687) and can be seen in the collection of the National Naval Museum, which was closed for renovation during my visit. The Koc Bosphorus caique is a mid-sized example; it is more modestly decorated, about 14 meters in length. It has a high hooked bow and a wide stern deck for guest seating, for heaping and casting nets in more utilitarian versions, or for carrying goods to market and ferrying passengers—up to 60 in a boat typically propelled by three or four pairs of oars.

## The Cektirme


RMK MUSEUM

The workhorse of the region, from the Black Sea to the Straits of Marmara, was the *cektirme*, a large wooden transport type ranging from 10 to 15 meters in length, 4 to 5 meters of beam, and 30 to 80 tons. According to a 1959 survey, some 7,730 wooden boats were registered in the 51 ports of Turkey, 2,500 of which were cektirmes, carrying more than 50 percent of the country's domestic waterborne cargo, mostly large bulk, stone, and sand for construction in a city just beginning a major expansion and building boom. The Asian side of the city has grown now enormously, mostly south along the Bosphorus until today when high-rise apartments and new mosques are built up from the shore as far as the eye can see. The museum's cektirme, TEKEL 15, the last example of her kind, was built in the mid-1940s and served Tekel, the Turkish alcohol and tobacco monopoly throughout her career. She is displayed on the slipway at the heart of the outdoor marine exhibits and stands as a fresh-painted icon for the smaller workboats, for the re-created industrial workshops alongside, and for thousands of workers in small coastal yards the country round who built and ran these vessels and whose descendants may still be employed on new ships from new yards along the city's waters.

## Runabouts

The contemporary recreation theme is anchored in an exquisite selection of runabouts by Chris-Craft, Riva, and Century. This Chris-Craft is one of 725 examples built by the company between 1949 and 1953 and was used by Iraq's former King Faysal II (1935–1958) during his vacations in Istanbul. From the Italian Riva company, the museum collection includes three of the most elegant models: Aquarama (pictured), Olympic, and Florida. And finally, there are two Centurys from the 1930s that were part of Rahmi Koc's family and surely part of his introduction to things maritime.

ALI KONYALI/RMK MUSEUM

ALI KONYALI/RMK MUSEUM

The in-the-water collection is representative and superb, especially since all of these vessels are restored to operable condition. The most mundane is the rescue tug VERNICOS IRINI (right, near), built in 1944 in New York as U.S. Army ST-755. This vessel was part of a fleet that assisted Allied merchant ships in World War II and was given to Greece in compensation for its almost complete loss of such ships in battle. Formerly owned and operated by the Greek company Nicolas E. Vernicos Maritime Ltd., the owners donated her to the museum in 2003, where she was completely rebuilt.

It is the steam yachts and tugs, however, that truly distinguish this collection. GONCA (far right) was built in England in 1908 as a tugboat and was incorporated into the Ottoman navy in 1914, during which time she served as a mine ship in the Battle of Gallipoli. Rahmi Koc purchased her in 1992, and restored and converted her into a traditional luxury yacht with varnished woodwork throughout, multiple staterooms, an elegant formal saloon, and a spotless, brass-accented engine room. The steam tug LIMAN 2 (foreground) was a familiar sight in the harbor for many years, and is now again perfectly restored with bright paint and a tilting stack for passing under the low bridges of the Golden Horn.

## Other Steam Yachts

BRUNO CIANCI/RMK MUSEUM

Other steam yachts include the launch ESRA, built in 1888 in the Chatham Royal Shipyard in England and used as a pinnace for a Royal Navy cruiser, and YSOLT (pictured here passing under a Golden Horn bridge), built in Lymington in 1893 and powered with a steam engine by Simpson Strickland & Co. Ltd., Dartmouth, England. She was found by Koc abandoned after 40 years in Scotland; he returned her to Istanbul and had her beautifully rebuilt. During the summer season, all of these boats cruise the waters of Istanbul with museum visitors aboard.

What to make of all this? The paradox is obvious: Who needs the past when the city's present-day maritime activity is so visible and vibrant? Who needs retrospection when the present prospect is so pervasive and real? Who needs a renaissance when the reality is so alive and well? Modern Istanbul is a stunning realization of the sea's connections, of goods, people, and ideas, on and across the water, linking our hearts to minds, hands to ideas. One could argue that Istanbul does not need its maritime history; it does not need old-boat nostalgia. It has built into its geography, environment, transportation system, economy, and recreation—indeed, into every aspect of its daily life today, into its very soul—a direct, visceral connection to the sea.

But it has been ever so. And we ignore that past at our peril. Istanbul's mosques are historical monuments beyond compare, and when the entire city is engulfed in multiple, amplified calls to prayer, past and present meet and the connection is revealed. So, too, is Rahmi Koc's museum not a folly but a monument, one man's extravagant celebration of a continuity that is real and sustained and lies at the heart of his city and its culture. It is a living tribute to one man's passion for the sea and his gift to us all.

*Peter Neill is a regular contributor to* WoodenBoat.


# Many Hands, Light Work

ELIZABETH BECKER (BOTH)

by Tom Jackson

Clear-eyed and quick to smile, eight young men and four young women gathered in the deckhouse of the schooner ADVENTURESS, coffee cups in hand to ward off the damp morning chill. They followed various paths to Haven Boatworks in Port Townsend, Washington, where the schooner was hauled out. A few were paid staff, but most were donating their labor and living in a crowded basement apartment, taking turns cooking vegetarian fare. On this Wednesday morning in January, they all seemed eager for the coming weekend, when more volunteers—dozens more—would swarm the boatyard.

The schooner, owned by the nonprofit environmental education organization Sound Experience, brought them together. Friendships, shared effort, and sailing kept them coming back. Aleythea Dolstad, for example, first saw the schooner at the age of seven during a school program aboard. She returned as a volunteer, and "didn't really leave." She was now the winter mate, organizing work assignments. Alea Robertson started as a volunteer deckhand in September 2012. "I was only supposed to come for a month, and I haven't left," she said. Journeying around the country, Bob Downes of Florida met crewman Orion Marion, then caught up with the schooner at the Port Townsend Wooden Boat Festival in 2012. "It just seemed like a great project to be part of," he said, and he contributed yacht joinery skills to rebuild bunks. Others, too, came from far off. Rosie Wilson-Briggs and Josh Ingram arrived by separate routes from different parts of California. "I went out just a couple of days as a volunteer crew, and then decided I just better do that all the time," Wilson-Briggs said. Jesse Wiegel, on the other hand, came only from the neighboring town of Sequim, first as an intern, now as a deckhand and relief engineer. Esther Whitmore, an experienced tall-ship sailor, came aboard in 2012 as second mate, and during the winter she worked as an apprentice shipwright.

This core group, all in their 20s, worked for two paid captains, Joshua Berger and Daniel Evans. For these few days, their primary job was to get everything in readiness for the weekend. By Saturday, 46 fresh

# Sharing a commitment to the schooner ADVENTURESS

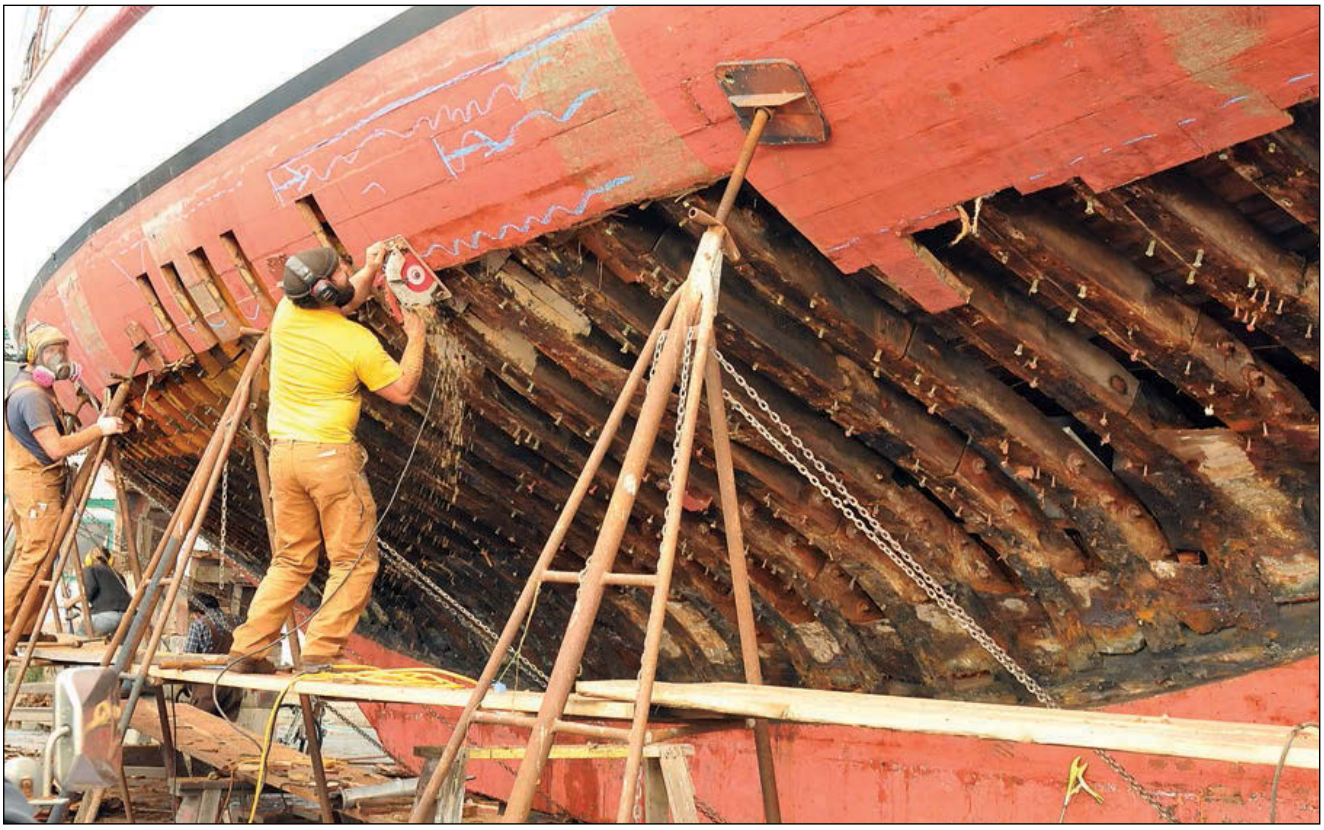
TOM JACKSON (THIS PAGE)

***Facing page*—Volunteers working for Sound Experience in Port Townsend, Washington, scraped and then painted the starboard topsides of the 101′, 1913 schooner ADVENTURESS (left) while the port side was reframed and replanked by Haven Boatworks' shipwrights, assisted by a few volunteers. *Above, top left*—A condemned mainmast was cut up and carted out of the way by volunteers. *Above, right*—A small army put 1,029 hours over a single long weekend in January into such routine maintenance tasks as scraping and repainting the starboard bottom. *Above, lower left*—With a whole side of the hull to be replanked, Blaise Holly, lead shipwright on the project, was able to reduce the original layout of 28 narrow strakes to 22 broad ones, using available sapele stock to advantage.**

volunteers joined them, and more followed. By the time it was all said and done, 77 individuals logged 1,029 hours of volunteer work in three days.

Many nonprofit organizations rely on volunteer help to survive, but Sound Experience and its schooner seem to command uncommon loyalty, and some volunteers have given months to her maintenance. Most have returned year after year. The organization recorded 5,500 volunteer hours in winter 2010–11, a high-water mark that was expected to be far surpassed by the completion of the 2012–13 work. This level of commitment is no small matter for Sound Experience, which combines sail-training with environmental education (see sidebar, page 86). It has contributed mightily to ADVENTURESS's ability to navigate shoals that can sometimes imperil nonprofit organizations.

Whether in the hands of a private yachtsman, a museum, or an educational organization, any large or historic vessel—and at 101′ long and a century old, ADVENTURESS is both (see sidebar, page 85—faces inevitable major restoration. No project on a boat like this is small. For nonprofit organizations that oversee aging wooden boats, funding can be a struggle, and sometimes they face a dichotomy between the temptation to make do and the imperative to keep the boat seaworthy.



COURTESY OF HAVEN BOATWORKS

**During a 2012–2013 winter haulout, almost all of ADVENTURESS's longleaf pine port side planking and white oak framing was replaced. Next winter, the starboard side is expected to receive the same treatment.**

And yet, even amid dismal economic times, Sound Experience has put nearly $800,000 worth of work into the schooner over the past four years, not counting the value of the volunteer hours. The schooner in the past few seasons has been undergoing the most extensive refit in her history. Most recently, her port side was completely rebuilt, with 240 new double-sawn purpleheart frame futtocks and 2,000 lineal feet of sapele planking that will finish out to 2″ thick. And while the interconnected projects have proceeded in annual phases, the schooner has not missed a day of its April-through-October sailing schedule, when thousands of students and adults sign up for voyages as short as a few hours or as long as a week.

"If we didn't have these weekends," Capt. Evans said, "the scale of work would have to be dramatically reduced, just because of how time-consuming something like scraping the bottom or the topsides is. It's incredible. If we didn't have these weekends, I literally would be striking huge tasks off my list, that I otherwise couldn't do. It's crucial, I'd say. There's nothing like 50 people to rotate through in scraping the bottom." Daunting tasks lose their power to overwhelm when a gang can go after them together and have the whole thing done in a day.

Such efforts are noticed when grant applications are filed. Plus, they give private donors the sense of belonging to a broader effort. "Nothing breeds success like success," says Catherine Collins, executive director of Sound Experience, who holds an MBA from Seattle University. Funding for the port-side reconstruction was secured before the work started—and when the keel proved to be in unexpectedly good condition, there was money enough to expand the reframing and replanking from the lower hull to cover almost the entire port side, as problems emerged. In earlier phases of the project, the stem, forekeel, horn timber, counter stern, and transom had all been replaced. This year, the "unexpected" also came in the form of rot pockets found in the Douglas-fir mainmast, which had to be condemned and replaced.

An additional $300,000 project is expected for the winter of 2013–14—this time reframing and replanking the starboard side. A probable deck replacement, including covering boards and sheerstrakes, may also be just over the horizon. Money is still being raised for the next season, but Collins is confident that it will come through in time.

It was not always so. "When we came in seven years ago," Collins said of herself and her staff, "we were about $120,000 in debt." She became executive director after serving on the board of directors. "We came in at the end of a project, and I have to say I didn't know the extent of what was going on at the time. Over the course of 18 months, we painstakingly paid off every bill, begging and pleading with our vendors to be patient, and we did what we said we were going to do. I will never go there again. That memory of the pain of doing that every month is still so fresh." But establishing

*Continues on page 84*

# Seafaring with a Purpose

The schooner ADVENTURESS was launched in 1913 with an educational purpose. Chicagoan John Borden II commissioned B.B. Crowninshield to design the 101′ LOD schooner, built at Rice Bros. Co. in East Boothbay, Maine, for a voyage to high latitudes in the Pacific Ocean. His goal was to secure a bowhead whale skeleton to augment the collections at the American Museum of Natural History in New York.

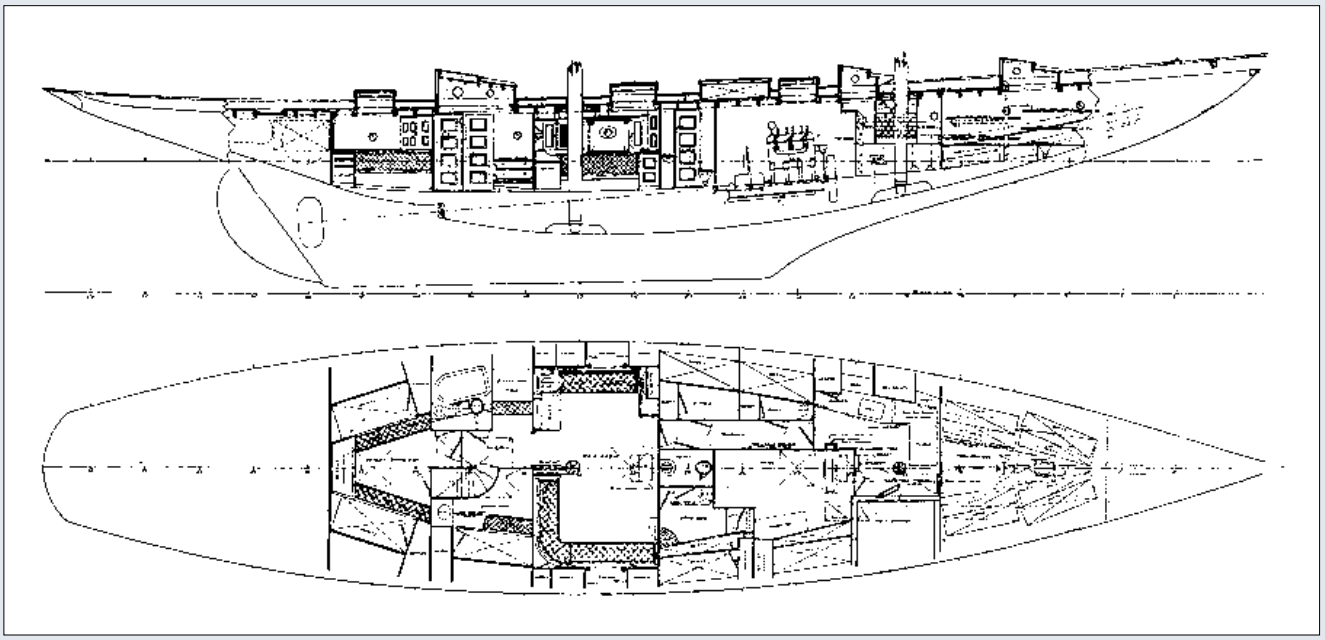
The voyage was completed, unsuccessfully, and Borden must have seen enough, since only a year later he sold the schooner to the San Francisco Bar Pilots Association. She was refitted as a pilot schooner, starting in 1915. With the exception of the time she was on loan to the Boy Scouts for sail training in 1939–41 and conscripted for U.S. Coast Guard service for two-and-a-half years during World War II, she continued as a pilot schooner off the Golden Gate. After the war, she languished in Sausalito for years, suffering many alterations. Seattle marine supply entrepreneur Doc Freeman bought her in 1952 and sailed her home, but his ownership, and that of several successors, proved desultory. In 1959, she was purchased by the nonprofit Youth Adventures, founded by Monty Morton for youth sail training largely through Scouting programs. By 1974, Ernestine Bennett (see WB No. 90) became the primary benefactor for the organization and the restoration of the captivating schooner.

In 1989, Sound Experience was founded with a primary focus on environmental education, sometimes in conjunction with ADVENTURESS. "Then came the time that it was evident that there was a need for more fundraising," says Ken Greff, who was then on the board of Bennett's organization. "Youth Adventure decided to sell the boat." Several offers would have taken the schooner away from the region or radically changed its purpose, which didn't sit comfortably. "We decided that wasn't right for the ship," nor its programs or people, Greff said. "So we approached Sound Experience and said, 'You need to buy this boat.'" The transaction was completed in 1991, and Sound Experience's fusion of sail training and environmental education has continued as its basic framework. *—TJ*

COURTESY OF SOUND EXPERIENCE

**A "school bus" deckhouse aft and a much-altered rig, which show in this photo from the early 1970s, were among ADVENTURESS's many earlier misguided alterations.**

**Commissioned from designer B.B. Crowninshield, ADVENTURESS was conceived for high-latitude sailing, and she even carried a fully outfitted 28′ Beetle whaleboat on deck. Her auxiliary, a gasoline-powered, 80-hp three-cylinder Frisco Standard, was large for her day, giving her a margin of safety. (Her modern engine is a 250-hp diesel.) Her long overhangs, bowsprit, and comparatively thin 2" planking made her ill-suited to Arctic voyaging. Her owner, John Borden II, sold her to the San Francisco Bar Pilots only one year after her launching, but Borden returned to the Arctic with two subsequent boats.**



THE RUDDER, MARCH 1913

## The Schooner as Metaphor

In the late 1960s, Pacific Northwesterners could be smug about their surroundings, while back east in 1969 the Cayuhoga River burned. But it came as a shock to the region only a few years later that some of its own waters were among the worst-polluted in the nation. A population boom since then has only increased concern.

"We use the boat as a metaphor for the planet," Capt. Joshua Berger said. "We're a closed system. We're really careful with our overboard practices and our operational practices. We're careful with the products that we use, both for livability with crew down below as well as what we're putting in our graywater tank and the like. We're moving toward basically a net-zero energy and net-zero water vessel."

Repairs to the ship, which is a historic landmark, must meet a longevity target of 50 years. Most available local materials would be hard-pressed to achieve that mark. Sound Experience purchases certified wood through Edensaw Woods in Port Townsend. Washington's new ban—the first in the nation—on copper paints exempts boats as large as the schooner, but Sound Experience nevertheless is moving ahead this year with water-based, non-metallic antifouling paint on her port side's fresh wood, leaving the starboard in traditional paint until after its reconstruction next year. The comparison may help give boatyards good data on how the paints compare. Her sacrificial anodes have also been switched from zinc to less-harmful aluminum. "Green" systems are planned, including a deckhouse capture system to use rainwater as a supply for the boat's non-potable plumbing.

ELIZABETH BECKER

**Sail handling gives students a unique perspective on the marine environment of Puget Sound.**

Whether the schooner is moored or sailing, environmental education is her job. The schooner is licensed to carry 45 passengers and 15 crew for daysails and has bunks for 24 passengers and 13 crew. Students may haul nets that help university researchers study algae blooms or help gather data about microplastics used as fillers in toothpastes and the like. They learn about salmon habitat, stresses on the Sound's beloved orcas, the physics of pulleys, ocean acidification, watersheds, marine invertebrates, and a host of other subjects. "Our educators are trained to give those same lessons to third-graders and to high school kids; we model and adjust the program based on what the participant youth is on board." *—TJ*

**Deck work may give a macro view of surroundings, but students also get a micro view—via a microscope linked to a flat-screen monitor in the schooner's main deckhouse. Environmental education is the overriding purpose of the schooner's nonprofit owner, Sound Experience.**


ELIZABETH BECKER

*Continues from page 82*

such a stable foundation paid off when the hard work of building major funding came. State and federal grants were secured by local matching funds at critical times. The schooner, which is listed as a National Historic Landmark, also won $125,000 from the National Trust for Historic Preservation in an online public vote.

"When there is a crisis in a nonprofit, there's two ways it can go. It can rally, or it can take you down," Collins said. "This organization has this track record of rallying like none other. But thankfully we haven't relied on it in recent years. We got ahead of the need to respond to a crisis. This organization does not define itself on the crisis effect. It defines itself on its successes. And I believe that's why we're here."

She herself started off with a personal commitment to the schooner, as many have. A tech-industry veteran, she worked in Massachusetts in her early career, and after volunteering in a homeless shelter came to be the godmother of a young boy, whose mother had died. Later, then living near Seattle, she took the boy into her own home. By 14, he was getting into serious trouble, and the summer camps that Collins tried didn't seem to help. Then, "I was wandering around The Center for Wooden Boats, and I saw the schooner ADVENTURESS," she said. "It was amazing. I started talking to people, and I thought I'd give it a shot. I went and got him at the end of the week, and this kid was, like, all over the boat, grinning from ear to ear. He was elated. He felt a part of something that stayed with him, and we brought him back for an apprenticeship year after year. He was a tough act, and so I said if anything does this for *this* kid, I want to be involved in that. I think it changed his life, and it's changed mine."

The schooner seems to be a magnet for commitment and a catalyst for change. Board president Ken Greff experienced it as a graduate student. He got interested in sail-training after seeing coverage of the 1976 Bicentennial Parade of Tall Ships. "One of the things that I recognized I wanted in my life was a component where I felt that there was enrichment for young people," he said, to balance the challenges of being a school psychologist. He went looking for a ship-based program in Puget Sound but came up empty. Two years later, he encountered ADVENTURESS, then owned by a relatively low-profile nonprofit called Youth Adventures, run by Ernestine Bennett (see WB No. 90). He volunteered for winter work, and later for sailing; eventually he himself became a licensed captain and a board member.

The schooner has survived, Greff said, primarily because in the 1960s it was licensed by the Coast Guard to carrying passengers "and has been continuously operating every season since then. So it's always been about people experiencing a connection and an opportunity on that ship." Some 3,000 participants come across her decks in any given season, ranging from third-graders to senior citizens. Some 60,000 have sailed with her as paying guests just since Sound Experience began operating the schooner in 1991. About a third of the sailing crew are volunteer deckhands, doubling as educators; in fact, many winter volunteers also volunteer during summer.

# *TRANSITIONS:* Esther Whitman

ELIZABETH BECKER

**During the schooner's most recent haulout, Esther Whitman, a longtime sailor, worked as an apprentice alongside Haven Boatworks shipwrights. In season, she is the schooner's mate and bosun.**

Whitman was only 12 years old when she started sailing tall ships as a volunteer. At school in Yakima, in the semiarid eastern part of Washington state, she came across a photograph of the replica brig LADY WASHINGTON on a computer. Something in her was sparked. "I came out for a couple of weeks when I was 12 and volunteered, and then I was hooked, and I just kept coming back every summer since then," she said.

Her life could have gone any number of directions—college, regular career—but she found herself increasingly gravitating toward direct, hands-on learning, exactly the kind of thing that happens aboard ships. Her parents, both teachers, encouraged her. After LADY WASHINGTON, she worked on the schooner CLEARWATER in New York, becoming chief mate and also working on restoration projects. She joined ADVENTURESS in 2012 as second mate and bosun and learned about the possibility for shipyard work. "I was really excited about that, because I've been looking for a way to learn more, to increase my carpentry skills but also apply them to a specific trade, like boatbuilding. It's a great place to learn, the people are great to work with, and I'm learning as much as I can soak up.

"When you just sail on a boat, you start to develop that relationship with it. You get a sense of sort of the boat's personality, and then when you tear it all apart and put it back together, you get to know it on a totally different level. I feel that I know her better now, and I've put a lot of work into keeping her afloat, so that changes the relationship with her as well." *—TJ*

# TRANSITIONS:
## Brad Seamans

TOM JACKSON

**A full-time employee at Haven Boatworks for more than seven years, Brad Seamans found his path to boatbuilding by first volunteering as a deckhand on ADVENTURESS and later serving as a shipyard apprentice.**

On a lark, Seamans came to the Port Townsend Wooden Boat Festival in 2003. He was living in Colorado at the time, establishing residency for graduate school in architecture, which had been his major (with a minor in music) at Lehigh University. The Pennsylvania farm boy, however, struggled with office work. "After working in a firm for six months, I pretty quickly realized that wasn't what I should be doing. I made coffee for Starbucks and made more money than I would have made in an architecture firm. I don't know how anyone can go get that amount of debt and then be able to pay loans and live in a big city." A college friend's interest in hull design had captured his curiosity, though he knew nothing of boats.

"I came out during the festival, sleeping on the beach just outside the festival grounds with my pack, and I was just blown away," he said. ADVENTURESS was there, and he was surprised to hear from one of the crew in a dock-to-deck conversation that he might be able to sign on even though he had zero experience. Back in Denver, he persisted, and the following summer he served three months as a volunteer deckhand. He went on to the Northwest School of Wooden Boat Building, then became ADVENTURESS's shipwright apprentice the next winter. He's been full-time at Haven Boatworks for more than seven years now, often working on the schooner itself.

"Now, it's like an old friend every time it comes back out. When I sit down and think about all the planks and frames I put on—I might be the only person that's alive that's put that amount of planks on this particular boat, which is a strange thought, because I know how many hands have touched that boat. " *—TJ*

Greff is fond of pointing out that only 11 National Historic Landmarks vessels in the United States are still sailing, and of those only two are on the West Coast: ADVENTURESS and the scow schooner ALMA in the National Park Service collections in San Francisco. "What we view that we're in the process of doing is reinventing how people experience maritime heritage. So when we look at things like this relationship between what happens on the ship in terms of program and the support to keep the National Historic Landmark vessel strong and vibrant and alive, it is an absolute direct connection. These vessels don't come back. We can have replicas, but they're not the same. If we don't take care of them and figure out how to make the experience with these vessels meaningful to people's lives *today*, then they will go away and they won't come back."

To have volunteers work in a commercial shipyard, the first requirement is to find a shipyard that will welcome them. For years now, Sound Experience has awarded the bid for ADVENTURESS's repairs to Haven Boatworks, which has been broad-minded about the approach.

Much of this work is not for amateurs. Between the schooner's most recent haulout in November 2012 and the end of January 2013, the entire port side had been reframed and the last of her sapele planks had been

**The Port Townsend Shipyard's 330-ton Travelift can haul ADVENTURESS out fully rigged, to be set up for work outdoors. Volunteers routinely help with a thousand chores involved in downrigging, organizing and storing gear, then refitting and putting it back together as the shipwrights and apprentices complete their hull work, all in time for a March relaunching.**

COURTESY OF JANE HOLLY

COURTESY OF JANE HOLLY

**Haven Boatworks, which specializes in traditional construction, recommended purpleheart for the schooner's new double-sawn frames, replacing the original white oak. As a National Historic Landmark, the schooner must meet a 50-year longevity standard for repairs.**

hung. It can be heavy work, and ADVENTURESS has to be back in the water and ready for crew training by the last week of March. The yard draws a line at the use of large machine tools, and for this work, only a few volunteers have roles alongside the professional shipwrights. They help to install and fair frames, manhandle 30′ planks for multiple passes through the planer or ship saw, hang planks, drive silicon-bronze fastenings, bung holes. Other volunteers come in as needed, but most worked on routine maintenance, down to bagging up planer shavings and sweeping the yard at the end of the day. Such help allowed skilled shipwrights to stay with the task at hand, rather than helping with work that required little expertise.

Haven Boatworks was founded by Ernie Baird, who sold the business to his employees more than a decade ago. Today, the yard is co-owned by Stephen Gale and Julia Maynard, both of whom used to work for Baird. Especially for ADVENTURESS, volunteer work has always been part of the project. "A lot of yards just don't want to do it," Gale said. "It doesn't strike us as being particularly odd. It really comes down to just exactly who you've got and what they can do."

The yard always had a reputation for working alongside boat owners, Gale said, and volunteers are "just kind of a grand extension of that idea." For Sound Experience, "I think it's become more important to them. It certainly is on these big projects, because there's quite a bit of money to be saved if you deploy volunteers effectively. You take somebody like Esther. They've got four shipwrights out there, and you've got Esther—essentially they just reduced their cost by 20 percent."

Esther Whitman (see sidebar, page 85) is a shipyard apprentice employed by Sound Experience but working alongside the professional shipwrights. For project leader Blaise Holly, volunteers like Whitman who come to the yard through ADVENTURESS remind him of himself. A Chesapeake Bay native, he went through the Williams-Mystic Maritime Studies Program in Connecticut with an emphasis on American literature, but he found shipyard work during the construction of the topsail schooner AMISTAD to be more appealing. He kicked around, working in Vermont as a timber-frame builder and then in Alaska repairing boats, after which he decided to enroll at the Northwest School. He worked for Baird for a time, ran Freya Boat Works with friends for three years, then returned to Haven.

"The majority of owners that bring wooden boats to Haven end up working alongside of us on the project, so they're sort of de facto volunteers," Holly said. "That's one way in which I kind of got used to working with a nonprofessional in a professional environment." But with the numbers of ADVENTURESS volunteers around, he saw a need for limits. "We talked about how the volunteer aspect might be truly more useful to the shipwrights. The part that I've really come to cherish is the idea of, look, just pick one volunteer and attach him to the shipwright crew. It's tricky work—you get up on the scaffolding, the balance is tough, fingers can get crushed—you know, the day can go south pretty quickly a number of ways. And it was tough when you didn't recognize the face at the other end of the board. But I remember how much it meant to be asked, 'Hey you, grab this or grab that.' To be part of it was hugely important to me. I tried to keep that in mind, but at the same time my hands are my mortgage. I do have a limited willingness to basically put myself in the way of somebody who's excited but unskilled. So that's a fine line I walk with volunteers."

By bringing principal volunteers into the crew, with others brought in as needed, the shipyard crew gets to know the volunteer's skills thoroughly. Two of the three

COURTESY OF HAVEN BOATWORKS

**Blaise Holly, working alongside then-apprentice Jennifer Grod on a 2011 project to replace the schooner's horn timber, was among those advocating bringing in a limited number of apprentices to work with the Haven shipwrights, while having Sound Experience assign others to more routine maintenance.**

who have done this so far have gone on to work full-time in the yard. "Jen Grod (see sidebar at right) was the first attached volunteer, and she was incredible," Holly said. "She worked so hard, was there later than almost anybody, every night, just digging for it. She was just a sponge for knowledge. I'd love to snag Esther and employ her in the yard. It's great for me because we get to train them to do things the way we want them to do them. It's truly the closest thing I've come across to an apprenticeship out here—right down to the indentured part of it.

"This particular crew, this year, is just A-1," Holly said. "They're excited about the work that's going on, and they're always happy to just drop what they're doing and pop down. I guess when I keep it in mind that their being there is probably enabling the whole organization to dredge up the money to pay the professionals to do the starboard side next year, it makes me love them all the more."

New wooden boat construction is rare here—though the Haven yard and the shipwrights hunger for the chance—and rebuilding ADVENTURESS gives some of them the closest thing they've had to building a large schooner from the keel up. Along the way, Holly and his crew have been able to work with Sound Experience to set many problems aright. Over her lifetime, the schooner has been through many changes. "The prime example is that 14 of the futtocks we ripped out this fall were just pressure-treated hemlock landscape timbers that were slid into the topsides back aft at some point in the past 20 or 30 years," Holly said. "It's certainly not the sort of repair that I can imagine somebody being that excited about—it's more like desperate times, limited funds." With each major project, the boat is improved.

Traditional construction is the yard's specialty. "When you've worked on a boat whose keel was laid in the 19th century that works up in the Bering Sea," Gale said, "and is good for another 50 years up in the Bering Sea, and you could eat your lunch off the fish-hold, you've got to ask: 'Well, what's exactly wrong with that structure?'"

By Saturday, with the stationary planer and ship saw quiet as the shipwrights were off for the weekend, ADVENTURESS was cleared for a different kind of work: basic but intense maintenance. Forty-six fresh faces joined the morning meeting, coffee once more in hand. They came from all over Puget Sound, and some beyond. Assigned to various crews, they built scaffolding, scraped and repainted the starboard bottom and topsides, sanded spars, prepared brightwork for varnishing, overhauled dozens of blocks, stripped and painted the interior, rebuilt bunks, moved heavy equipment, carried newly refinished deck boxes and hatches back aboard, and a hundred other seasonal tasks.

Most were in their 20s. Fifteen of them were men and women from a Washington Conservation Corps trail maintenance crew on the Olympic Peninsula who had heard about the schooner project. Others were spending their long weekend joining in on the work, having done so many times before. Here was Clara Hard,

## *TRANSITIONS:*
## Jennifer Grod

JANE HOLLY

**A visit intended to last for a few days of volunteer work ended up lasting years for Jennifer Grod, who became a full-timer at Haven Boatworks after serving an apprenticeship.**

Grod is a Californian educated in geography and scuba, but working aboard a schooner changed her course. "It was kind of a magical experience, to be honest," she said.

Interested in sailmaking and boatbuilding, she met former ADVENTURESS captain Wayne Chementi during a boat haulout in her home state. "I was interested in what they were doing, and it sounded like there were a lot of things happening up here," she said. "A friend of mine happened to be volunteering on ADVENTURESS, so I helped out for a couple of days, and met everybody, and stayed most of the season.

"I came back for the winter with the idea that I could just come in and ask a bunch of questions and look over their shoulders and try to figure things out." Sound Experience designated her to be the volunteer working with the shipwrights, and when Haven Boatworks offered her a full-time job, she seized it. "There's a lifetime of learning here. Each piece is like a sculpture. There's a lot of beauty and brains that go into every piece. I like the complexity of it. It's never boring. It's hard work, but it's super satisfying." *—TJ*


ELIZABETH BECKER

**Major hull restoration work, quite literally from stem to stern, has been done on ADVENTURESS in phases since 2010, constituting her most extensive refit since her launching in 1913. Further reconstruction on the starboard side is expected next year, and a deck replacement later. Through it all, she has not missed a day of her April-through-October sailing seasons.**

a volunteer since 2007, working with a state shellfish monitoring program in Olympia, scraping and painting topsides. Here was Megan Addison, who started volunteering because of the environmental education program and eventually went on the staff as the education and outreach coordinator, still volunteering for hands-on work. But not all were young. Here was Pat Pielage, a Boeing Company engineer, a Sound Experience board member who has been volunteering for eight years. One of the volunteers that Alaythea Dolstad assigned a task was her own mother, who came up from Vashon Island. Here were Tom and Linda Weiner, formerly restaurateurs of Searsport, Maine, transplanted to Port Townsend and doing most of the cooking. Here was Will Patric, doing the "unromantic basics" for the third year, with memories still fresh of the time his own kids spent on board as schoolchildren.

"I fell in love with the boat, the sailing, and the community," Addison said, "so I couldn't see myself being anywhere else." "I keep coming back because I love the boat, I love the community, I love being here," Hard said. "I have never worked for an organization that's quite like this one," said Whitman, who led a crew in overhauling all the blocks: "It's run well, the people are great, it's a really supportive community."

When you hear the word "community" again and again, it's a safe bet that no one is just making it up. There is no better way to get to know someone than by working side by side, and judging by many warm reunions, this crew plainly has many people who have sailed together in the rain, been covered head to toe in red dust from scraping the bottom, and have reunited year after year. Riggers, sailmakers, mechanics, and shipwrights have shared their expertise and advice, too, and their own kids have sailed aboard. Farmers' markets have provided organic produce in return for compost and sailing time. Former captain Wayne Chimenti turned an old deckhouse into a cabin on his land for itinerant crew. For some, the schooner has changed the course of lives. For all, friendships made here will last.

Capt. Joshua Berger sees that sense of community as more important than anything else. "It's a true public boat in that it doesn't leave anybody out," he said. "The work that these folks do is absolutely integral, certainly in supporting the shipwrights in the restoration projects that we're doing for the overall health and maintenance of the boat. They work incredible hours in tough conditions. We feed them, we give them a place to stay. But what we're doing at the same time is building community. I love the boat. This boat's in my blood, in my heart. But the community that surrounds it, that supports it, that is interested in it being a platform for learning and engaging people, just allows it to be so much more than what I've seen elsewhere. The volunteers are here because of the community, and the programs are fantastic because of the culture of the ship and the organization. As a tall-ship captain, as an environmental educator with a master's degree in sustainability planning—there is no place else I'd rather be, because of the organization, the mission, and the lives that the boat and the community touch."

From the children who come aboard to the young deckhands who have set their caps on sailing, to the apprentices who are deep into restoration, to those who dedicate their lives to understanding man and nature, the schooner seems to be an introduction, early or late, to the fine art of the possible.

*Tom Jackson is* WoodenBoat*'s senior editor. As he has done on a number of other occasions, he worked alongside the shipwrights and volunteers to research this article.*

*Sound Experience, P.O. Box 1390, Port Townsend, WA 98368; 360–379–0439. Haven Boatworks LLC, at P.O. Box 1430, Port Townsend, WA 98368; 360–385–5727; www.havenboatworks.com.*


# Ghosts of Chesapeake and Delaware Bays

## Photographs and captions by Jay Fleming

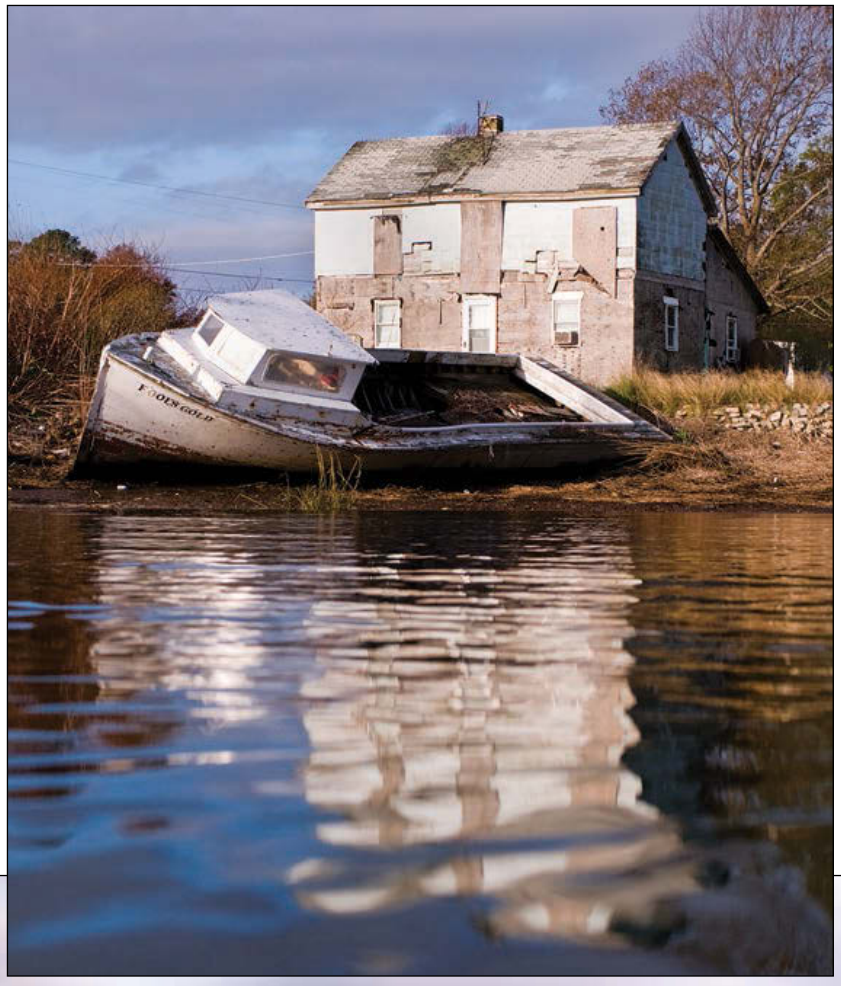
Jay Fleming grew up in Annapolis, Maryland, where he fished, kayaked, and nurtured a deep passion for photography. "Spending a lot of time on Maryland's Eastern Shore," he recalls, "I developed a fascination with old wooden boats. They represent a way of life that sustained people for a long time."

In fact, people, boats, and the environment are at the heart of Jay's subjects. He has an intense interest in conservation—both of the natural world, and of traditional ways of life. "The two go hand in hand," says Jay. "The health of the bay supports the waterman's lifestyle."

Jay's visual talents come honestly, for his father was a *National Geographic* staff photographer who traveled the globe on assignment for the magazine. He is a 2009 graduate of St. Mary's College in Maryland, and spends much of his time on the water. In fact, he's currently at work on an assignment for *WoodenBoat*, shooting the last of the working skipjacks for an article to be published late this year. "This year there's been a great oyster harvest, and I've never seen so many boats on the bay. Boats are landing 100 bushels a day. It's very promising.

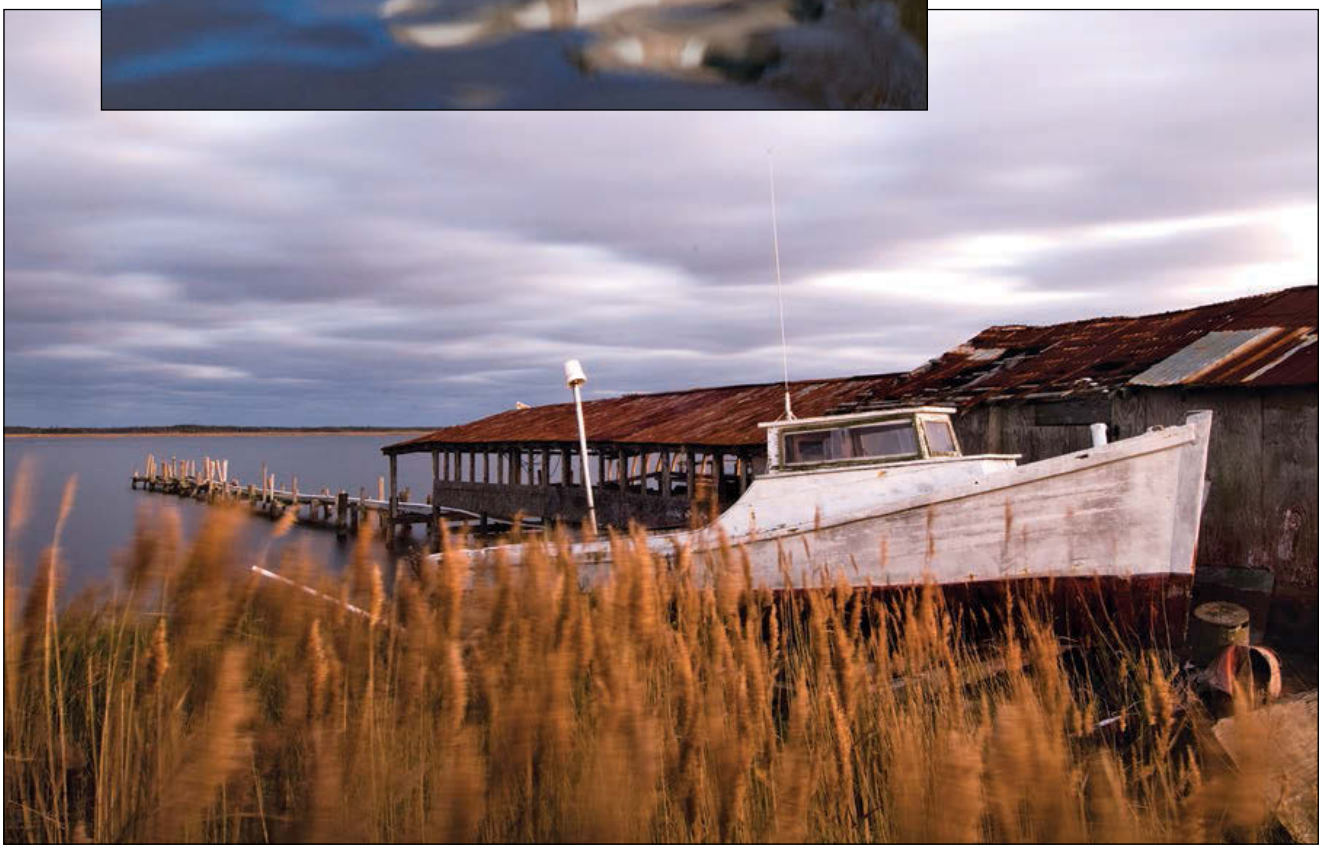
"My conservation interests bridge the environment and culture," says Jay, who hopes to pursue an advanced degree in resource economics or fisheries management in the near future. "Right now my photography is full time. Soon, I'd like to have a job in the fisheries field. I'd like to use my photography to promote conservation." *–Eds*

**Hurricane Sandy uncovered a graveyard on the north end of Tangier Island, Virginia. This portion of the island was abandoned in the 1930s after a series of hurricanes hit the Chesapeake Bay region. Rising sea level and erosion have since taken a toll on the "uppards."**



***Left*—FOOLS GOLD, an abandoned workboat in Oyster, Virginia, photographed from a kayak. This area was a prolific commercial-fishing community through the 1970s but was hit hard by the oyster diseases Q and Dermo.**

***Below*—A workboat brought up on rollers for the winter in front of a crab shedding house in Saxis, Virginia, on Pocomoke Sound. This boat still scrapes for soft crabs in a method that has been used for 150 years. (A crab scrape resembles a small hockey goal, and is dragged along the bottom.)**



**This image was taken from the deck of the CITY OF CRISFIELD, a working skipjack, during the Annual Skipjack Race near Deal Island, Maryland.**

**An abandoned workboat slowly melts back into the land in the town of Rhodes Point, Smith Island, Maryland.**

**Delaware's Tall Ship, the replica KALMAR NYCKEL, sails past the East End Lighthouse at the mouth of Delaware Bay in Lewes.**

**Artist and waterman Dan Holden prepares his boat for the spring season at Tall Timbers Marina in Tall Timbers, Maryland. A full-time oil painter and retired Coast Guardsman, Dan also has a commercial rockfish license. Many great wooden boats make their home at this marina, which has been in the same family for 150 years.**

*View Jay's portfolio at www.jayfleming photography.com*

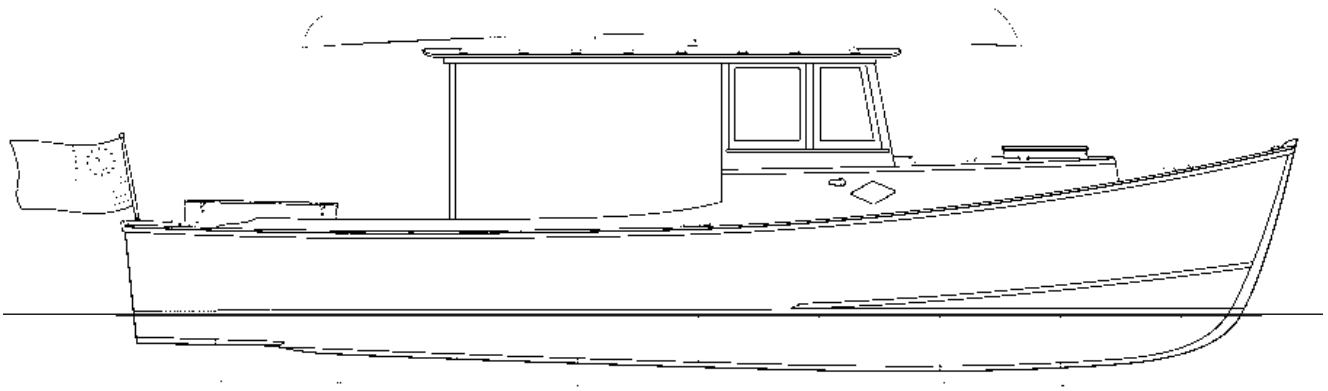
# Marsh Hen

## *An efficient 29' outboard cruiser*

Design by D.N. Hylan

Commentary by
Robert W. Stephens

| Marsh Hen Particulars | |
|---|---|
| LOA | 29′2″ |
| LWL | 27′6″ |
| Beam | 8′6″ |
| Draft | 1′5″ |
| Displacement | 5,200 lbs |
| Power | 90 hp |



One of our biggest problems as boaters is deciding how much boat we want—and then sticking to our guns. Despite our protestations that we crave the simple life when we go cruising, we often end up dragging about all the amenities of home, along with all the accompanying headaches. Hot and cold running water seems a terrific idea—who would want to live without it? But ease of use inevitably leads to overuse, and then the batteries are flat and the water tank empty, and cruising stops being fun. In addition, all that gear costs money and adds weight—so we end up with a yacht that costs too much for most of us, burns more fuel than the rest of us can afford, and breaks down more frequently than anyone would like.

The trick, I believe, is to restrain our impulses toward the complex and luxurious, and put our limited resources into the important areas of a boat: roomy space to enjoy the outdoors; comfortable sitting, dining, and sleeping areas; and efficient, satisfying performance. If that means we need to rough it a bit, so much the better: Don't we really get out on the water to "get away from it all?" And can we really succeed with that goal if we bring it all with us?

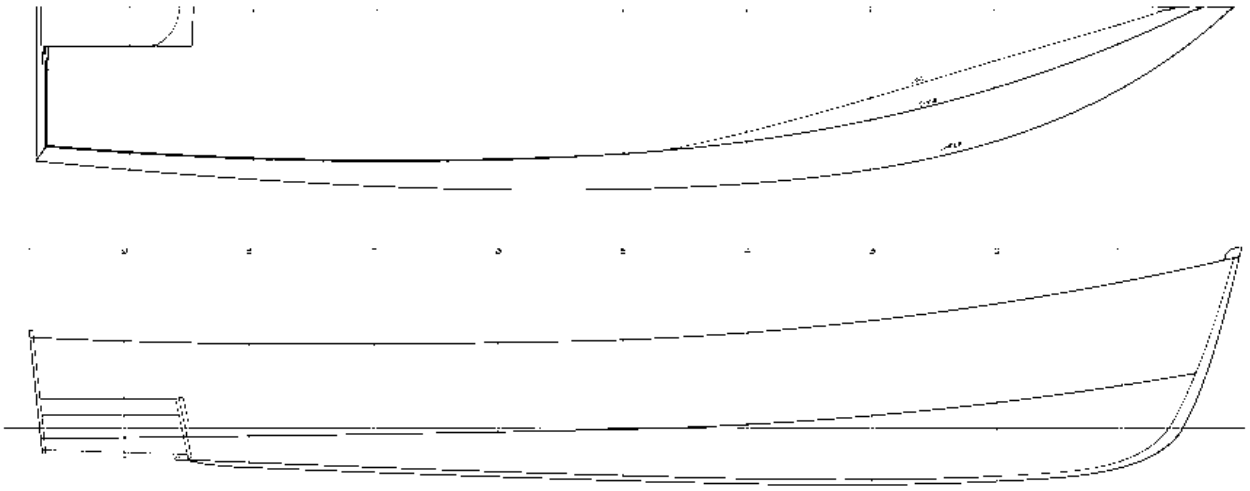
Doug Hylan's Marsh Hen allows us to stick to that philosophy and yet live in, if not luxury, supreme comfort. It's hard for me to imagine a better pocket cruiser for a family or group of hunting buddies. Big enough for real security on exposed waters, light enough for speedy and efficient propulsion with a small motor, roomy enough to handle a crowd as well as provide "alone time" in a cozy cabin, and affordable for most families (especially for those handy enough to put her together themselves)—Marsh Hen has her priorities in the right places.

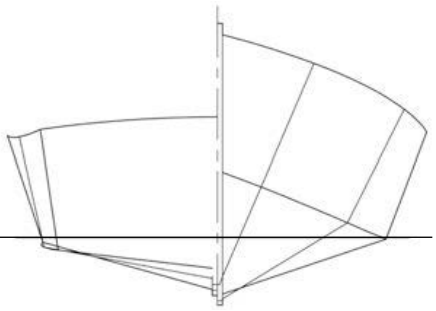
Hylan designed Marsh Hen for a gentleman from the Low Country of the U.S. southeast coast—the lovely marshlands inside the barrier islands of the Carolinas and Georgia. A longtime kayaker, the client wanted a "mother hen" for his paddling expeditions, to extend the range and allow a group of up to four to travel together.

Hylan drafted a craft whose lineage appears to be equal parts Jonesport lobsterboat and Chesapeake deadrise skiff. Her profile shows the strong sweeping sheer and raked, curving stem of the Jonesporter, and her no-nonsense superstructure with whimsical diamond-shaped window each side and severe pilothouse is all Downeast. The hull sections, however, are straight from the Chesapeake: hard chine with flaring topsides, and a bottom that twists voluptuously from nearly flat at the transom to a very sharp entry.

Looking at the body plan, we might at first think that with its dead-straight sections, the shape is perfectly suited for sheet-plywood construction. We would be mistaken. With its twist, moderate in the topsides and substantial in the


D.N. HYLAN & ASSOC.



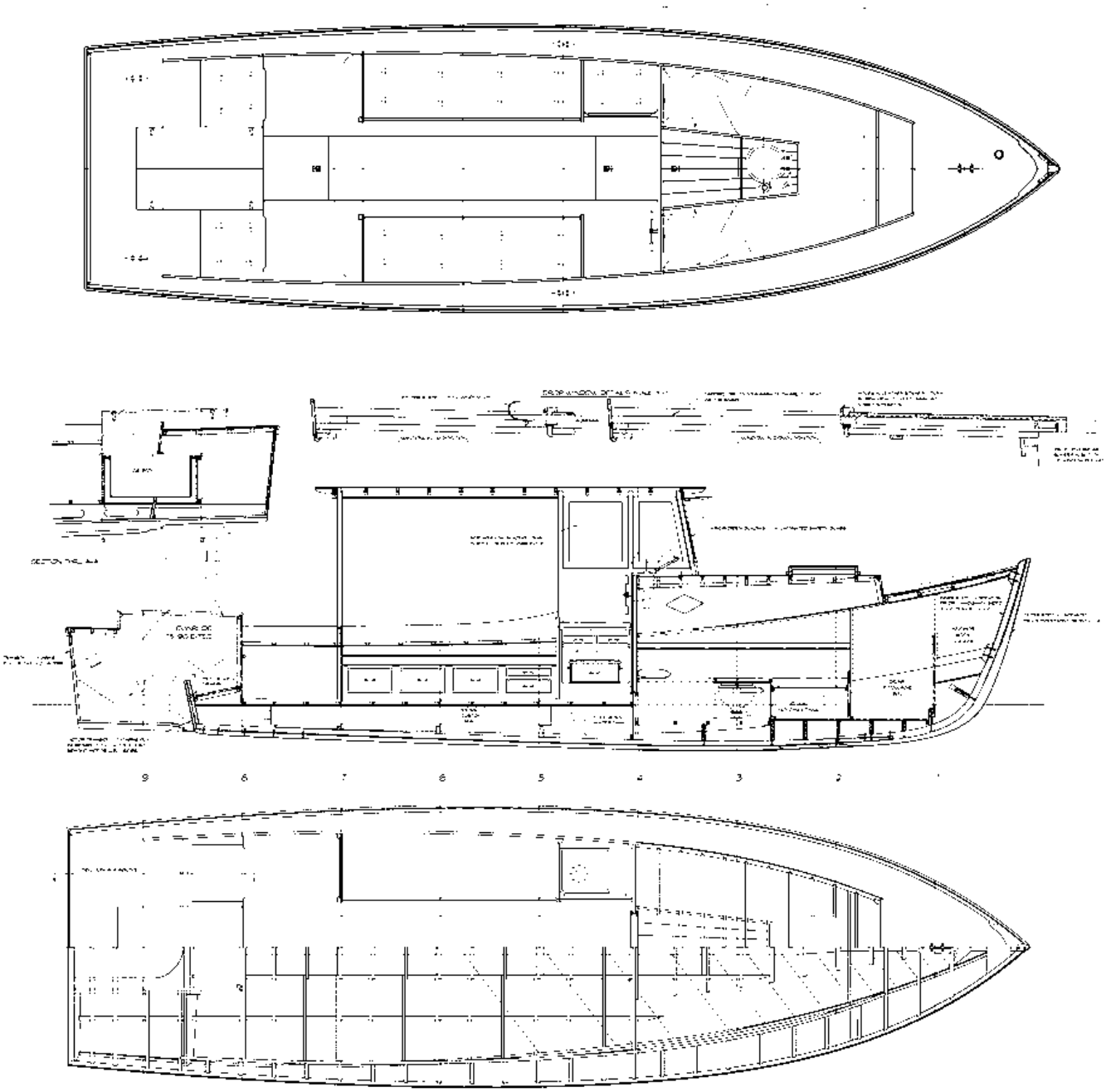


**Influenced by early William Hand designs and by traditional Maine lobsterboats, Doug Hylan drew this efficient hull. Marsh Hen runs easily at 17 knots pushed by a 90-hp outboard motor.**

bottom and forefoot, the hull will defy attempts to pull a rigid sheet material to the straight frames, and if we persist in the attempt, we'll end up with a terribly puckered mess. In a thorough instructional CD that accompanies the plans, Hylan explains his approach to construction. The topsides are best built by scarfing together a single panel some 30′ long for each side, and bending that panel around the chine log and sheer clamp, allowing it to sweep clear of the straight frames in the forward sections where the majority of the twist is concentrated. The panel will assume a fair, slightly conical shape of its own accord, if we don't force it to comply with the frames, which are there as guides and to support the longitudinals.

The bottom panels have so much twist that no amount of cajoling will allow us to use full sheets of plywood. Instead, Hylan has us use a standard cold-molded construction technique, employing two layers of plywood strips laid in opposing diagonal directions. He advises that the strips can get wider and wider as we approach the flatter sections of the stern, and gives good instructions for assuring a proper bond between layers. The resulting bottom shape is well documented in photos of the prototype going together (also included in the CD); the fine and hollow entry promises a clean bow wave and excellent spray suppression.

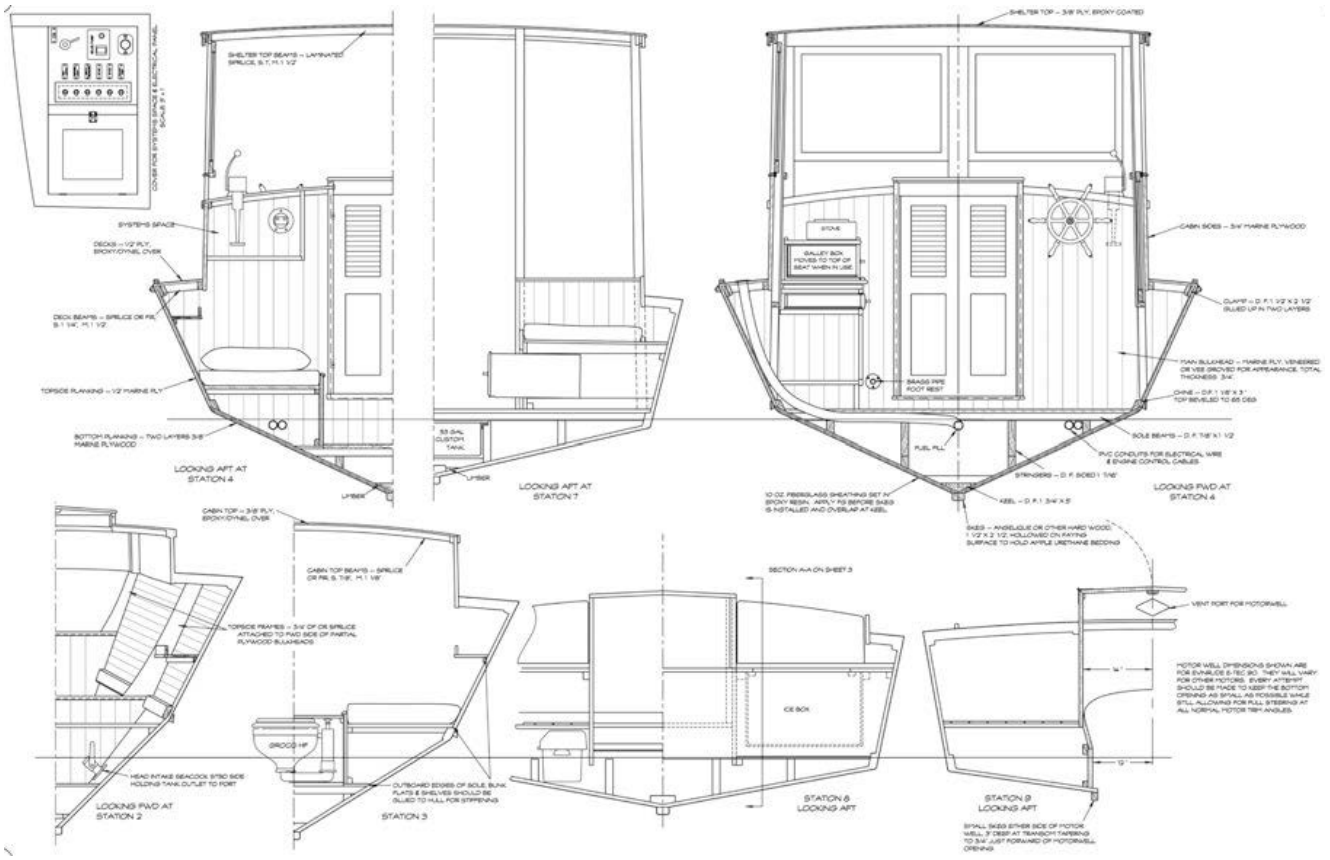
Accommodations are delightful for up to four. Hylan has elegantly combined the cockpit, dining saloon, and second sleeping cabin in a single space by the careful use of a long, overhanging roof on the



**Airy accommodations, provided by an "open pilothouse," will keep a crew of four happy through a variety of weather. Cloth, mesh screens, and plastic windows afford protection as needed. The engine sits far aft—well out of the way.**

pilothouse. A more typical approach would have involved enclosing the pilothouse to form a weathertight saloon—but this would have created a claustrophobic space and cramped the cockpit tremendously. Bench seats on each side of the cockpit double as bunks (the outboard power plant means there's no engine box to contend with), and shelter from weather and bugs is provided when necessary by well-fitting canvas work that shrouds the overhanging roof with cloth, mesh screens, and plastic windows. On fine days, or for day use (the primary service to which we all put our boats, even the inveterate cruisers among us), the cockpit is capacious and airy. As night approaches, it's a simple matter to rig for mosquitoes.

Forward of the benches are a helm station to starboard, and a raised passenger seat to port, which doubles as a galley by shifting the cushion and shipping the cooking box from its stowed position beneath the seat.



**The sections above show some of the fine detail given in these plans. Designer Hylan, also an experienced boatbuilder, intends that the plywood Marsh Hen should be a suitable project for amateurs.**

Inside is a single-burner stove and necessary utensils. Below are standard V-berths with a marine head between.

At 5,200 lbs displacement, Marsh Hen is a lightweight. Hylan designed the boat around a 90-hp outboard motor: this modest power will drive her at a maximum speed of 17 knots. This is a very civilized speed: you can cover ground at a good clip (especially compared to kayaking) without the mental exhaustion of overrunning your navigating abilities. Fuel consumption remains modest also. Hylan estimates about 9 gallons per hour at full throttle, and about half that at a cruising speed of 14 knots. Speeds like this make a 50-mile day a very comfortable proposition, with time at each end for leisure. The outboard motor is out of sight and earshot inside its shroud in the well. If the urge to explore a remote beach proves irresistible, we can easily ground out without fearing damage to delicate fixed drivetrain components. We'll want to keep an eye on the tide, though—even a lightweight 29-footer is a handful to shift off a sandbar if we linger too long.

For those who would measure our cruising grounds in thousands of miles, Marsh Hen presents a tremendous opportunity. While trailering her is not to be lightly undertaken, it is definitely possible with the right equipment. Hylan himself delivered her by road from Maine to Georgia with a standard half-ton pickup truck with towing package; a well-equipped full-sized SUV would do as well. With this ability, the 50-mile day can easily become a 500-mile day, and the coasts open up. Between launching ramps, she will serve as an excellent camper also. Ever fancied Michigan's Upper Peninsula? How about the Sea of Cortez? A run down the Mississippi? Get yourself a Marsh Hen, round up the family, and go....

*Bob Stephens is a principal at Stephens Waring Yacht Design in Belfast, Maine. He loves using, dreaming about, and writing about boats like this.*

Plans and completed boats from D.N. Hylan & Associates Boatbuilders, 53 Benjamin River Dr., Brooklin, ME 04616; 207–359–9807; www.dhylanboats.com; Doug@dhylanboats.com.

## Edited by Robin Jettinghoff

*These pages and the Boat Launchings section of www.woodenboat.com are dedicated to sharing news about recently launched boats built or restored by our readers. If you've just launched a wooden boat, please write us at Launchings, WoodenBoat, P.O. Box 78, Brooklin, ME 04616 or email us at launchings@woodenboat.com.*

*Please include the following information: (1) the boat's length and beam; (2) the name of its design class or type; (3) the names of the designer, builder, owner, and photographer; (4) your mailing address along with an email address or phone number; (5) the port or place of intended use; (6) date of launching; (7) a few sentences describing the construction or restoration process. We prefer digital jpeg images at 300dpi. Please send no more than five photographs and enclose a SASE if you want anything returned.*


ART PETROSEMOLO

*Above*—Inspired by a design review of GYPSY in WB No. 188, Bob Pulsch of Port Monmouth, New Jersey, built this lovely 22′4″ Crowninshield daysailer (design no. 149) using traditional construction methods. ROBERTA P has cedar planking on oak frames, and Sitka-spruce spars. Since her launch, ROBERTA P has won several awards at boat shows. Contact Bob at pulsch.nj@comcast.net for more information.

*Below*—Doug Halacre, who lives in Noord-Holland, The Netherlands, created this paddleboat for his young grandson. Doug built the 5′ × 3′ CHIPPER from okoume plywood, using stitch-and-glue construction. Two hand-crank paddles controlled by the boy propel the 20-lb boat. For more information, see wwwdoughalacre.com.

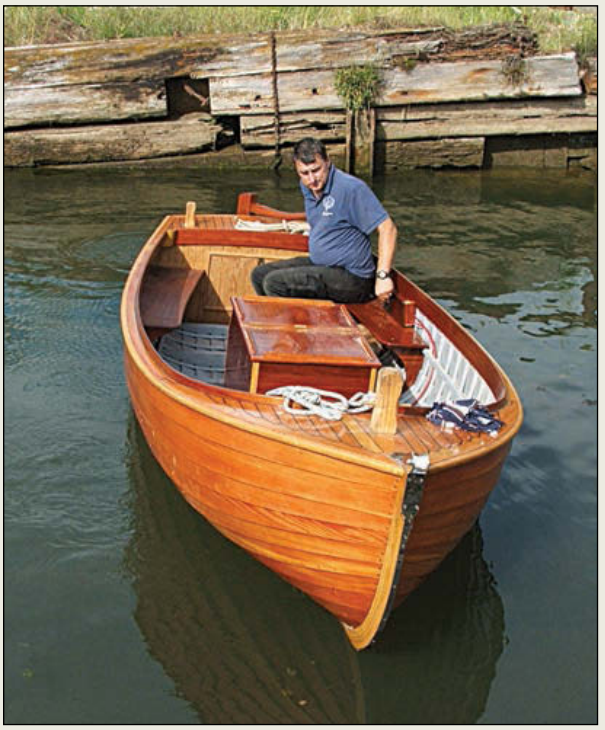
RONALD DOOLAARD

*Below*—MADERE is a 19′9″ Albury Runabout built by Steve Scott at his summer cottage in northern Minnesota. He built her from plans by Doug Hylan (www.dhylanboats.com) of white oak, Douglas-fir, white cedar, and marine plywood. Powered by a 115-hp outboard, MADERE will be cruising the ICW from her homeport in Pirates Cove, Alabama—Steve's winter home.


CAROLYN WAGNER


DORENE PHILLIPS

*Left*—Bill Phillips led the Technology Education class at Tiverton High School in the construction of this 16′ work skiff, designed by Mel Sanford, a Tiverton boatbuilder. The students built the flat-bottomed hull with marine plywood on white oak frames. Launched last summer, the boat is used for quahogging and recreation. For more information, contact Bill at wphillips@tivertonschools.org.



GILL WILSON

*Above*—DEJE is a 16′ launch built by students at the International Boatbuilding Training College (www.ibtc.co.uk) in Lowestoft, England. Her owner took the lines off a local yard launch while an IBTC student, then later groups of students, completed her. She has carvel larch planking on oak frames, and is powered by an inboard Yanmar GM10.

AARON BALDWIN

*Above*—Aaron Baldwin of McClellanville, South Carolina, designed this plywood-and-epoxy 12′ "biyak," SKIMMER. A biyak is built from two enclosed hulls connected by a deck between them. The beam, adjustable while afloat, is either 30″, suitable for paddling from the chair, or 46″, stable enough for him to stand up and fish. Contact Aaron at aaronbaldwin8@gmail.com.

*Below*—After 13 years, Allan Salzman of Sharon, Massachusetts, finally finished his MacGregor sailing canoe, ANNABELLE. Iain Oughtred designed the 13′7″ hull, which Allan strip-planked with western red cedar. The deck has a herringbone pattern made with 1/16″ teak veneer and black epoxy to simulate a laid deck. Allan reports that the bird's-mouth mast weighs just 2 lbs. Plans are available at www.woodenboatstore.com.

RICHARD SALZMAN

*Below*—A cruise in Chesapeake Bay inspired Doug Hylan to design this plywood version of the traditional Chesapeake deadrise boat. The Point Comfort 18 is 18′ long, 5′6″ wide, and designed to be easy to build while giving good speed with minimum horsepower. The prototype carried three adults at 12 knots with a 9.9-hp motor. Contact www.dhylanboats.com for plans or finished boats.

D.N. HYLAN & ASSOCIATES

*Below*—Some 25 students from the Ilen School and Network for Wooden Boat Building launched five new 19′6″ gandelows last summer on the River Shannon in Limerick City, Ireland. Gandelows are traditional Irish fishing and workboats unique to that area. Built with pine planks on oak frames and iroko transoms, the boats will be used for community racing and education. Find out more at www.ilen.ie.

GARY MacMAHON

DEBBIE MOORE

*Above*—Justin and Sophie Moore of Roswell, Georgia, got a wonderful Christmas present from their grandfather: an Acorn dinghy named JUST SO. Dick Muise of Fair Haven, New Jersey, built the 8′ Iain Oughtred design with marine plywood planking veneered in teak. The transom, stem, and rails are mahogany; frames, thwarts, and floorboards are oak. Plans are available at www.woodenboatstore.com.

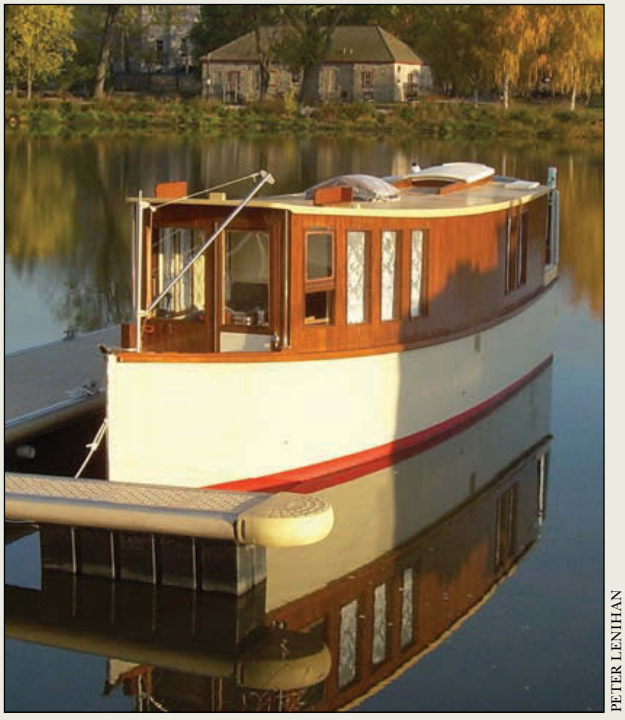
RYAN ECKERT

*Above*—Brothers Mike and Jim Eckert built this 16′6″ Rangeley Lake boat for Jim to peacefully explore the small lakes and ponds near his home in Sterling Heights, Michigan. The hull is strip-planked, vertical-grain, old-growth redwood recycled from greenhouses, with mahogany transom, seats, and rails. Plans are available at www.newfoundwoodworks.com.

LYNNE CARUSO

*Above*—Joseph Caruso, age 17, built this 13′ Glen-L Fisherman (www.boatdesigns.com), C AND SON, with his father, also Joe, over 22 months. The pair built the hull with mahogany frames, marine plywood, and silicon-bronze fastenings. Next they added the foredeck, a custom-curved windshield, and a mahogany dashboard. They launched the boat last summer on the Annisquam River in Gloucester, Massachusetts.

*Below*—TURTLE BAY, a Phil Bolger 30′8″ Windermere design, (No. 633), was built by Peter Lenihan of Montréal, Québec. He spent nine years of dedicated part-time labor on her composite plywood construction. Peter has enjoyed cruising with TURTLE BAY on the waters near his home. Plans are available from Phil Bolger & Friends, Inc., P.O. Box 1209, 66 Atlantic St., Gloucester, MA 01930.



PETER LENIHAN

*Below*—Seeking a small boat that he could easily transport on his motor home, Bjorn Magnusson of Slite, Sweden, designed and built this 29-lb mini-kayak. He strip-planked the 10′10″ hull in red and white cedar, then covered it with epoxy and 'glass. Bjorn and FRISCO-MINI have visited Denmark, Finland, and Sweden's many archipelagos. Contact Bjorn at bjmag@telia.com.


BJORN MAGNUSSON

CYNDE SMITH

*Above*—In Lake George, New York, Reuben Smith and his crew have restored a matched pair of 1926 Sound Inter Club–class sloops, GHOST (right) and CAPRICE. Reuben started the work at Hall's Boat Corporation and completed it at his new yard, Tumblehome Boatshop. Both boats required extensive structural rebuilds. Launched last summer, the 8′9″ Charles Mower–designed boats will be raced and sailed on Lake George. See more at www.tumblehomeboats.com.

PATRICK DAWSON

*Above*—Frank Ellis, who summers near Lyndhurst, Ontario, has two 16′ St. Lawrence skiffs that were built in Delta, Ontario, in the 1940s. After years of frequent use, they were in need of some TLC. Frank's friend Patrick Dawson volunteered to refurbish them. So far, Patrick replaced one rotten stem, and fixed the decking and fittings of the first hull. He has not yet finished the second skiff.

*Below*—After this 1924 Herreshoff 12½ received an extensive rebuild by Wood and Canvas (www.woodandcanvas.com) in Vineyard Haven, Massachusetts, Frank Duncan launched the boat in Oquossoc, Maine. Among other things, the crew from Wood and Canvas replaced the frames, keelson, floor timbers, and fastenings. They also replaced the transom and the aft deck, then recanvased the deck and refinished the hull.

FRANK DUNCAN

*Below*—PAN II is a 37′ One-Ton-Cup Racer designed by Alan Buchanan and built by Cantiere Apollonia in Trieste, Italy, in 1968. A few years ago, Sid Mattison purchased her and had her completely restored by C.N. Tecnomar yard in Fiumicino, near Rome. After 15 months, PAN II was relaunched, and she now is moored on the west coast of Sardinia.

SID MATTISON

### *Hints for taking good photos of your boat:*

1. Please shoot to the highest resolution and largest size possible. Send no more than five unretouched images on a CD, and include rough prints of all images. We also accept transparencies and high-quality prints.
2. Clean the boat. Stow fenders and extraneous gear below. Properly ship or stow oars, and give the sails a good harbor furl if you're at anchor.
3. Schedule the photo session for early, or late, in the day to take advantage of low-angle sunlight. Avoid shooting at high noon and on overcast days.
4. Be certain that the horizon appears level in your viewfinder.
5. Keep the background simple and/or scenic. On a flat page, objects in the middle distance can appear to become part of your boat. Take care that it doesn't sprout trees, flagpoles, smokestacks, or additional masts and crew members.
6. Take many photos, and send us several. Include some action shots and some of the boat at rest. For a few of the pictures, turn the camera on its side to create a vertical format.

*We enjoy learning of your work—it affirms the vitality of the wooden boat community. Unfortunately, a lack of space prevents our publishing all the material submitted. If you wish to have your photos returned, please include appropriate postage.*

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## WoodenBoat Pocket T's

All cotton T-shirts, with arched WoodenBoat across the logo. Pick from three classic colors: Navy Blue, Red, and Dark Green. Small thru XL **$18.95** (XXL is **$20.95**) #502-000 (Please specify size/color)

**SIZES:**
**unless otherwise noted, sizing for all garments:**
**S (34-36), M (38-40)**
**L (42-44), XL (46-48)**
**XXL (50-52)**

## WoodenBoat T-shirts

A plethora of colors for your clothing palette, each of these six shirts are sure to brighten your comportment and inspire hanging planks and varnishing transoms. All cotton, pigment-dyed, garment washed. You get to pick from Seafoam Green, Navy, Yam, Salmon, Pepper, and Purple. Small thru XL **$17.95**
(XXL is **$19.95**) #500-000 (Please specify size/color)

The WoodenBoat Store, Naskeag Road, PO Box 78, Brooklin, Maine 04616


Wicked popular, this shirt has Cobalt Blue ink on the front, with the viking proverb "bound is boatless man" in Dark Red ink on the back. Small thru XL **$18.95** (XXL is **$21.95**) SuperVike (XXXXL 58-60 is **$26.95**) #500-VK1 (Please specify size)

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Pigment-dyed garment washed, and silkscreened with Wh water-based inked logo. And, they come in three mighty f colors: Watermelon, Melon, and Seafoam.
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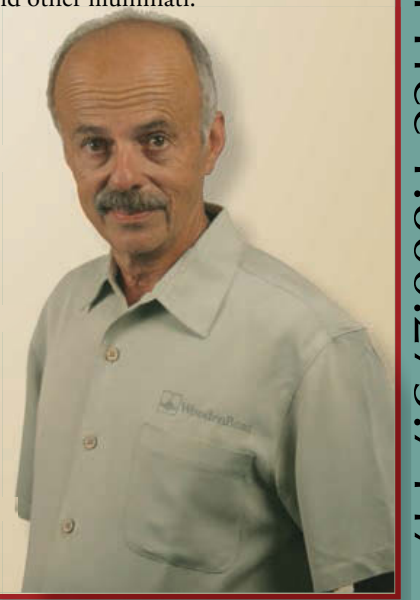

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# Confronting Brown Rot with an Alkaline Sword

**by Richard Jagels**

RICHARD JAGELS

**Brown-rot fungi thrive in relatively wet wood within just-right temperature ranges, and the damaged cellulose of such wood forms characteristic crack patterns upon drying. One way to combat the so-called "dry rot" is to increase pH to reduce the acidity that brown-rot spores require.**

The sheer joy of shaping wood with simple hand or power tools is the lure that draws us all to crafting boats from tree corpses. Although we may not say we are "butchering recently demised trees," that truth should remind us that as a product of once-living organisms, wood must eventually "return to dust." If this were not true, our planet would be skyscraper-high in downed woody debris. Wood decay is the rejuvenating force that maintains continued forest growth.

Although decay is inevitable, delaying deterioration ought to be a preoccupation of responsible wooden boat owners. Doing battle against wood rot not only makes good personal economic sense, but in a more cosmic view it can also be seen as a way of conserving natural resources and even slowing climate warming (by delaying fungal metabolic $CO_2$ production).

A number of organisms can attack and digest wood substance. I have even observed termites and other wood-boring insects in boats. Of course, marine borers can be devastating in certain waters. But clearly, the most ubiquitous and serious boat deteriorating agents are *basidiomycete* fungi. These fungi also are the most important deteriorating agents in land-based wooden structures.

The two major components of wood are cellulose and lignin. One group of *basidiomycete* fungi are designed to digest lignin (white-rot fungi) and another to digest cellulose (brown-rot fungi). Either kind of decay leads to a loss of wood strength—but brown-rotters can produce more dramatic strength loss with very little loss of wood weight.

Unfortunately, brown-rot fungi are more prevalent than white-rotters. It is estimated that about 80 percent of all wood decay is brown rot. And in boats, this is more likely to be 95 percent or higher. Advanced brown rot appears as softened wood with a dark-brown color. If this wood is dried, it develops cracks that produce "cubical" and friable segments, as shown in the accompanying photo. This is often, but erroneously, called "dry rot"—a term that is very misleading, since the wood had to be wet when the rot occurred. Because of its critical importance, our discussion will focus on brown rot.

## Goldilocks Rules

In order for wood to be attacked by decay fungi, the wood must be wet but not too wet. We can think of this as the Goldilocks Rule. If wood has a moisture content (MC) of less than 20 percent, decay will not occur; and if wood is completely saturated so that oxygen is mostly excluded, decay will also be thwarted. The Goldilocks "just right" MC is generally between 40 percent and 80 percent. At this MC, decay is most rapid.

Temperature is also critical for rapid decay. The "just right" temperature range is between 50°F (10°C) and 95°F (35°C). At the upper and lower temperatures in this range, decay is significantly slowed or halted. Many tropical decay fungi are halted or slowed by temperatures below 82°F (28°C).

The position on the acid/base scale, or pH, can affect the growth of microorganisms in wood. While bacteria generally prefer a neutral pH (±7.0), decay fungi grow best in acidic (pH 3 to 6) conditions. Brown-rot fungi have an especially acidic optimum growth pH of around 3.

Although often not considered, controlling the pH of wood can be a significant way of reducing decay in boats. The pH of seawater ranges between 7.5 and 8.4. Although we generally attribute the fungal inhibitory properties of seawater to be a function of sea salts, high pH may be equally important in thwarting brown rot.

Unpolluted rainwater has a pH of about 5.6, but pollutants—such as sulfur oxides and nitrogen oxides from coal-fired power plants, vehicle exhaust, etc.—can lower the pH of rainwater to 3 or below. When this acidic rainwater soaks into wooden boats, it enhances the environment for brown-rot establishment. With global climate change, more $CO_2$ is being absorbed in our oceans, increasing its acidity and therefore reducing its ability to retard brown-rot decay.

Control of decay in open boats is often easier than in boats with enclosed spaces where moisture evaporation is retarded. Closed spaces also reduce light intensity and enhance

$CO_2$ concentrations. Growth of brown-rot fungi is favored by low light intensities and high $CO_2$ concentrations. Any means of increasing ventilation and light intensity (especially ultraviolet light) will retard the growth of decay fungi.

## Incipient Decay

Long before we can see any visible signs of decay, brown-rot fungi may have invaded the wood and spread a considerable distance. Although the exact mechanism of brown-rot decay is not fully understood, the early invasion of these fungi produces oxalic acid that begins to degrade hemicelluloses in order to produce the simple sugars that the fungus feeds on. Oxalic acid also initiates a depolymerization, or unraveling, of cellulose. This early stage of brown rot is known as incipient decay and can produce significant loss of wood strength with less than 1 percent loss of wood weight.

Since acid depolymerization is key to this early process, wood that is already acidic stands a greater chance of incipient decay initiation and rapid spread.

Seawater saturation of wood is a traditional way of helping to stave off brown rot. But NaCl is also highly corrosive, and by itself it has no effect on pH. Magnesium and calcium bicarbonates in seawater are the primary salts that increase pH in seawater.

One simple base chemical that can increase pH is sodium bicarbonate. It is often used to raise pH in swimming pools. However, an even stronger base is borax ($Na_2B_4O_7$). Borax is generally in a hydrous form, $Na_2B_4O_7 \cdot 5H_2O$ (sodium tetraborate pentahydrate) or $Na_2B_4O_7 \cdot 10H_2O$ (sodium tetraborate decahydrate). A 4-lb box of 20 Mule Team borax should raise the pH in 1,000 gallons of water by at least 4 units, say from pH 3.5 to pH 8.5.

Longtime readers may recall that on several occasions I have recommended borate as a wood preservative for boats (WB Nos. 110, 149, and 152). Is the antifungal action of borate due to toxicity of boron or because the high pH that is created in the wood is repellent to brown-rot fungi? We don't know for certain. Quite possibly the action is twofold.

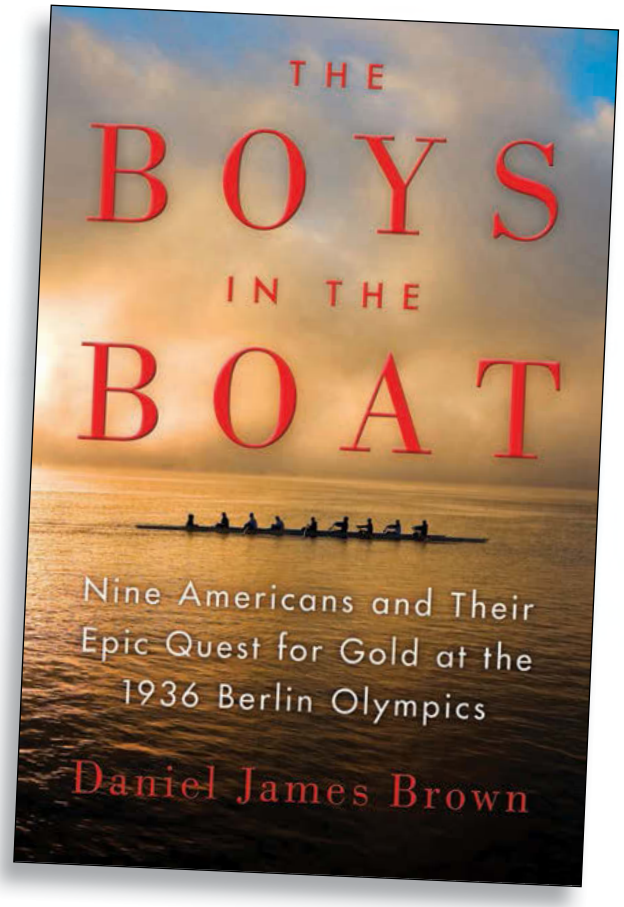
Whatever the actual mechanism of action, borax is such an inexpensive and readily available chemical that periodic application of a 5- to 10-percent solution to wet wood areas of a boat is prudent insurance—especially as our rain and ocean waters become more acidic with time. Application with a sprayer at haulout is particularly effective as the borate is drawn into the wood as it gradually dries.

*Dr. Richard Jagels is an emeritus professor of forest biology at the University of Maine, Orono. Please send correspondence to Dr. Jagels by mail to the care of* WoodenBoat*, or via e-mail to Assistant Editor Robin Jettinghoff, robin@woodenboat.com.*

# *The Boys in the Boat*

***The Boys in the Boat: Nine Americans and their epic quest for gold at the 1936 Berlin Olympics***, by Daniel James Brown. Viking, www.us.penguingroup.com. 416 pp, $27.95. On sale June 4, 2013. Available from The WoodenBoat Store, www.woodenboatstore.com.

## Reviewed by Christopher Cunningham




I knew what *The Boys in the Boat* was going to be about, rather what it *had* to be about, before I turned to the first page. Author Daniel James Brown could, and did, gracefully weave together a biography of oarsman Joe Rantz; a brief history of the Great Depression, the Dust Bowl, and the rise of the Third Reich; the story of wooden racing shells and of an American crew that rowed to a gold medal in the 1936 Olympic games in Germany. But a book about rowing in the first half of the 20th century would have to do more than that. Competitive rowing then had at its apex something more than an Olympic gold medal, something transcendent. I can't claim to know of this nearly mystical element of rowing through personal experience, but it's something my father, Frank, spoke of often. He devoted 75 years of his life to rowing as an oarsman and a coach and knew the magic that happened when a crew approached perfection. Brown's challenge would be to put this into words.

In the prologue Brown writes of his 2007 meeting with Joe Rantz, the seventh man in America's 1936 men's eight. Rantz, then 93, was dying. I began *The Boys in the Boat* by reading it aloud at my father's bedside a week before he died at 91 years old. The parallels I saw between the two men were inescapable. They came from very different backgrounds, Rantz from poverty, my father from privilege, but they both discovered who they were and what they were capable of in an eight-oared, red-cedar racing shell.

Rantz was born in 1914 and lost his mother to illness before he was four years old. In 1929, Wall Street crashed and the country entered the decade of the Great Depression. Joe's father, Harry, left the home in search of work. He took his second wife and their two sons with him, but left Joe, 15, behind to fend for himself.

In 1933 Rantz enrolled in the University of Washington, turned out for crew, and earned a seat in the freshman eight. The nine young men in that boat were all from working-class families, and none were strangers to hard work and adversity. Their coach, Tom Bolles, saw something special in the freshman eight and worked

them hard. The young oarsmen were erratic but often performed brilliantly. The crew was kept intact during their sophomore year and put under the watchful eye of head coach Al Ulbrickson. (Tom Bolles would continue to coach Washington freshman crews until his move to Harvard, where he coached heavyweight crews, including the 1947 national champion crew stroked by my father.) Under Ulbrickson, Rantz's crew continued to perform well and was named as the first varsity crew.

Above the shellhouse at the university was the shop where George Pocock, born in England in 1891, built racing shells (see WB No. 21). (Brown follows convention in referring to George Pocock in his text as "Pocock." Growing up as I did, it has to be "Mr. Pocock" here.) Both of his grandfathers were boatbuilders as was his father, Aaron, who taught him the trade. He watched Thames watermen and adapted their rowing technique for racing. Impressed by his son's rowing ability, Aaron entered him in his first professional race and told young George to build his own boat for the event, saying: "No one will ask you *how long* it took to build; they will only ask who built it." Mr. Pocock and his brother Dick immigrated to British Columbia in 1911 to earn their living in the lumber trade. He later worked in a shipyard. The work was dangerous, and he paid for the higher wages there with the loss of two fingers on his right hand. (I still recall the strong grip of that hand on mine when I met him several years before his death in 1976.) The Pocock brothers were commissioned to build two single sculls for the Vancouver Rowing Club. In 1913, Hiram Conibear, then the UW coach, lured the pair to Seattle with the promise of more work building racing shells.

Mr. Pocock opted not to use power tools when they became widely available in the 1930s. "He believed that hand tools gave him more precise control over the fine details of the work [and] he wanted to feel the life in the wood with his hands, and in turn impart some of himself, his own life, his pride and his caring, into the shell." In 1927 he tried using western red cedar in lieu of Spanish cedar (a variety of mahogany) for planking. The old-growth forests of the Northwest provided ample supplies of knot-free, fragrant wood that could be molded into smooth lightweight hulls. Four gallons of varnish on a 60′-long eight-oared shell were laid on in thin coats and hand-rubbed with pumice to produce a gleaming and fast finish. Mr. Pocock built shells for UW and other crews across the continent. His advice on rowing technique was as eagerly sought after as his shells. His words appear throughout the book: "When you're rowing well, why it's nearing perfection. And when you're near to perfection, you're touching the Divine. It touches the you of yous. Which is your soul." And: "When you start really trusting those other boys [in the boat] you will feel a power at work within yourself that is far beyond anything you've ever imagined. Sometimes, you will feel as though you have rowed right off the planet and are rowing among the stars." It may seem that this reverence for rowing is merely an early version of the hyperbole that permeates today's sports, but the balance and the harmony required of a crew and the almost unimaginable mental and physical pain

racing shells exact from those aboard sets rowing apart. Even after coaching rowing for half a century my father, too, had to resort to metaphor and poetry to explain it.

Rantz and two of his freshman and sophomore crewmates went on to row in the varsity crew. Their races drew tens of thousands of spectators to the shores along the courses. Countless more listened in on the radio. Rowing was then front-page news. UW had a heated rivalry with the University of California–Berkeley and fought for the privilege of representing the U.S. in the 1936 Olympics. At the Olympic trials in Princeton, New Jersey, Washington's varsity got off to a flawed start but won handily, "swinging into the last few hundred meters with extraordinary grace and power."

The Washington crew loaded their Pocock-built shell aboard the SS MANHATTAN and headed across the Atlantic to Germany. While underway they struck up a friendship with Jesse Owens, the track-and-field athlete whose name would remain bound to the Berlin Olympic games.

Washington's crew had the odds stacked against them in the finals. They'd won their heat and should have had the best lane, but German race officials had created an unorthodox system of lane assignments that put Germany in lane one where the best water would be, their ally Italy in lane two, and Britain and the U.S. in lanes five and six, well out of the lee and in much rougher water. Stroke Don Hume had taken ill aboard the MANHATTAN and had lost 14 lbs. At the start English and American coxswains weren't able to see or hear the starting command and got off a stroke-and-a-half behind the four other crews. Brown's account of the final, like that of all of the races in the book, is gripping, and it's easy to imagine listening intently to the race as it would have been called on the radio in 1936. The Americans came from behind and won the race by a slim margin.

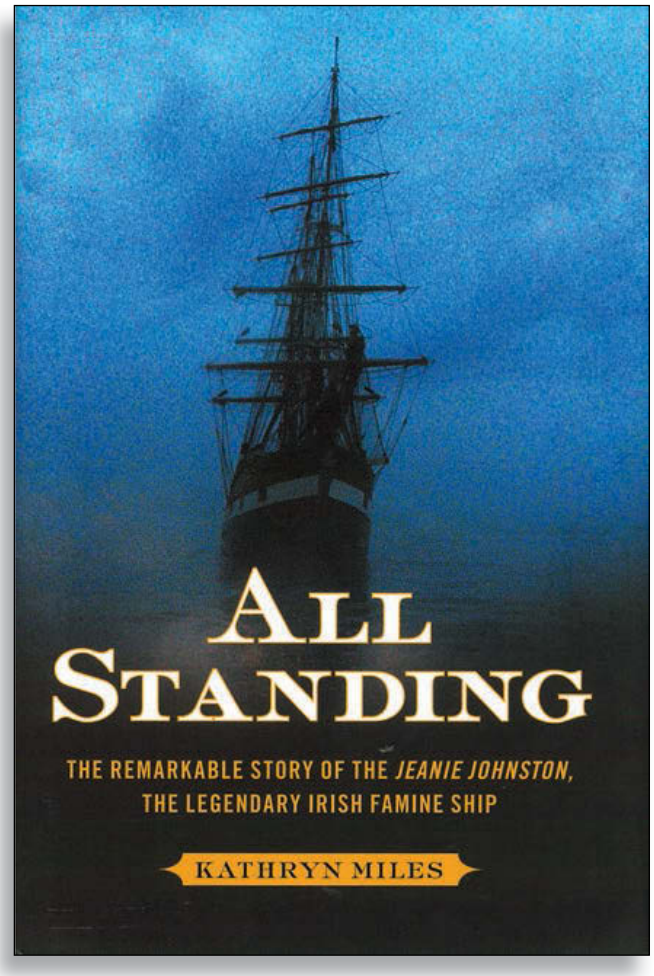
Unfortunately, that remarkable victory slipped into obscurity, remembered by an ever-diminishing number of elders in the rowing community. Joe Rantz and his crew were inducted into the U.S. National Rowing Hall of Fame in 1971. (My father and his Harvard '47 crew followed four years later.) The story deserves a more visible place in history, and Brown has brought it to light in a way that will appeal to readers regardless of their knowledge of or interest in rowing or wooden boats. It's a story about universal human values: striving for excellence and the triumph of teamwork.

The day my father died, I talked with him again about the book and the 1936 crew. For hour upon hour he had been laboring to breathe, but as he listed the oarsmen from memory—seat by seat, from bow to stroke and coxswain—he was taken back in time and his breath came deep and easy: "Morris, Day, Adam, White, McMillin, Hunt, Rantz, Hume, and Moch. They were the nonpareil."

*Christopher Cunningham is editor of* Sea Kayaker *magazine.*

The Boys in the Boat *will be available after June 4. You can order copies in advance from the publisher, or from The WoodenBoat Store, 800-273-7447; www.woodenboatstore.com.*

*The next issue of* WoodenBoat *will include an article by Daniel Brown on HUSKY CLIPPER and her 1936 Olympic win.*




# *All Standing*

***All Standing: The Remarkable Story of the JEANIE JOHNSTON, the Legendary Irish Famine Ship,*** by Kathryn Miles. Free Press, A Division of Simon & Schuster Inc., 2013. Hardcover, map, source notes, index, 238 pp, $26.

## Reviewed by John Summers

Ireland's Great Famine, which lasted from 1845 to 1852, was not the first famine resulting from Ireland's overdependence on the potato as a staple food crop, but it may have been the most significant. The potato blight's drastic effects, which were exacerbated by Anglo–Irish political tensions, absentee landlords, and the invidious system of cottier subsistence farming, caused the outright death of more than a million people from starvation and disease. More significant for this story, the tragedy also resulted in at least a million more Irish leaving their devastated country in a vast diaspora that significantly affected the history of both Ireland and the countries to which they emigrated. Kathryn Miles's new book *All Standing: The Remarkable Story of the JEANIE JOHNSTON, the Legendary*

*Irish Famine Ship*, chronicles the history of one of the many vessels that took them on their one-way journey away from their native land.

Her narrative merges together several strands of story: the famine itself; the building of the ship and the story of the Irish merchant who owned her; her 12 emigrant voyages to North America; the doctors who served as physicians on the so-called "coffin ships," and those who traveled aboard them to escape the famine and seek a new life.

In a cruel irony, *Phytophthora infestans*, the fungus-like microorganism that causes the blight, first traveled from North America to Europe aboard a ship, the same track that famine refugees would later follow in reverse as they sought to escape its effects. In the tales of those affected by the famine that Miles recounts, that of Dr. Richard Blennerhasset, who tended emigrants aboard the JEANIE JOHNSTON as ship's physician and later succumbed to cholera in 1854 aboard another famine vessel, is movingly told. Perhaps the most poignant of all, however, save that of the countless famine victims themselves, is the story of George Mellis Douglas, superintendent of the Grosse Île quarantine station located in the St. Lawrence River off Québec City. Against almost insuperable odds, and surrounded every day by indescribable suffering, he labored in vain to impose quarantine on the ships arriving from the U.K. and prevent their deadly cargoes of disease coming ashore.

The story of the Reilly family is another thread, beginning with their harrowing transatlantic voyage and the birth of their son Nicholas aboard the ship. The book follows their fortunes in North America after they come ashore and chronicles their struggles to re-establish their lives. When Nicholas Reilly died in Minneapolis in 1904, his death certificate listed his place of birth as "the Atlantic Ocean."

The JEANIE JOHNSTON was taken out of the emigrant trade when she was sold in England in 1856, and was lost in 1858 when her cargo of timber shifted en route from Québec to England. In 1993 work began on a sailing replica of the ship. Launched in 2002, she completed a transatlantic voyage in 2003 and was later used for coastal excursions and short passages in Europe. She is currently berthed in Dublin and operated as a dockside attraction and entertainment venue, interpreting the history of the Irish Famine and the emigrant ships (www.jeaniejohnston.ie).

As attested by extensive endnotes, Miles conducted thorough research in preparing this volume. While the facts of her story are clear and well presented, there are some odd usages and turns of phrase. When speaking of John Munn, who built the JEANIE JOHNSTON in Québec in 1846–47, she repeatedly calls him a "wright" (page 28 and thereafter). While it is true that "wright" refers to a maker of objects, particularly in wood, it is more common to append to the word a specific trade, such as "wheelwright," "cartwright," or in this case "shipwright." She refers to the "brokers who lured sailors out of their contracts only to force them into indentured work at shipyards" as "crimpers," and yet the typical usage in a maritime context is to refer to

them as "crimps" and their dubious trade as "crimping" (page 26).

In talking of the characteristics of barks (three or more masts, square rigged except for the fore-and-aft mizzen) like the JEANIE JOHNSTON, Miles is perhaps a little too hard on the type. At least some of the characteristics she attributes to it ("wide hulls, flat bottoms, nubby bows," page 96) are as much a reflection of a vessel's origin in the timber trade as they are of vessels rigged as barks. "Nubby" might be more conventionally rendered as "bluff." Bark-rigged vessels were notable for their weatherliness, offered more deep-sea ability than schooners and sloops, and required smaller crews than full-rigged ships. The motion of a sailing vessel in a storm that Miles describes on page 97 ("filled with violent dips and corkscrews, bucking bows, and the disorienting sensation of pitching from side to side") is certainly not unique to one rigged as a bark.

None of these comments should detract from what is, for the most part, a compelling and well-written story that captures in vivid detail a shameful and tragic episode in human history which had consequences that were literally world-changing.

*John Summers is a boatbuilder and maritime historian whose day job is managing the Canadian Canoe Museum in Peterborough, Ontario.*

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# A Traditional Dome Light with a Contemporary Heart

## Reviewed by Jon Wilson

In the interest of full disclosure, I really can't afford the semi-custom cast-bronze dome light I'll discuss here. At $350, it costs serious money. On the other hand, I am so taken with the beauty of this light that I am wrestling hard with the temptation of adding it to FREE SPIRIT's cabin. It's not only the light's classic beauty that grabs me. There is also the seductive quality of hidden modernity—in this case, the utterly compact and low-amperage brilliance of LEDs that combine white and red lights (red for preserving night vision while below).

In this beautiful dome light, Peter Cassidy of Buzzards Bay Yacht Services of Rochester, Massachusetts, has teamed up with one of his clients to create something uniquely beautiful, functional, and extremely tempting. "I searched for years," says Cassidy, "to find a dome light that was appropriate for the interior of SIREN, but could not find one." SIREN (NY 20) is Cassidy's own Sparkman & Stephens–designed New York 32, and his careful rebuilding, stewardship, and racing of that boat over more than a decade have brought the owners of other New York 32s to his shop door. Last year, he and his crew

MATTHEW P. MURPHY

installed a new interior in GENTIAN (NY 18), and a few years before that they rebuilt ISLA (NY 10). GENTIAN needed a dome light, and so her owner teamed up with Cassidy to create this near-replica of a Perko model of the 1930s, basing it on an original that was onboard ISLA.

The growth of the LED side of the marine lighting industry has been fascinating me for years. Constantly searching for beautiful lighting—whether navigational lights or decorative lights—I've been on the lookout for increasingly imaginative blends of the traditional aesthetic with the brightness and battery-saving capacity of LED illumination. Unfortunately, such blends haven't been easy to find. Most new LED fixtures have been spare and ultra-modern, with no place at all on a boat with a traditional aesthetic. And this has required some weird adaptations of gear, such as the beloved old brass kerosene anchor light I've had for decades being converted at no little expense to hold a modern, dark-actuated 2-mile-visibility LED. But times are changing, and what I call back-to-the-future opportunities are appearing with exciting and gratifying frequency.

Cassidy's Perko-inspired dome light is a perfect example. The impressive casting, fabrication, and finish were done by Edson Inc. of New Bedford, Massachusetts. Marine-systems manufacturer Imtra supplied the LED red-and-white driver. Moreover, the lens is cast in glass in an attractive, traditional, highly diffusing pattern. This is especially gratifying, because lenses have been a weak point of modern "classic" dome lights; sometimes they're of crude design and have coarse diffusion patterns.

The whole fixture provides something pleasing to the eye from any direction and in any light. Although the fixture itself, at 5″, is somewhat smaller in diameter than the above-mentioned modern classic dome lights, the brightness of this dome light is pretty astonishing. Not only are the LEDs themselves bright, but there is a highly polished interior reflector that seems to amplify the power of the illumination considerably. This is especially important to me while sailing at night, when the light must be switched to red. The need for the kind of lighting that allows us to go below to take care of a task, but not ruin our all-essential night vision when we return again on deck, is obviously critical. The problem

is, the effects of traditional red night lighting are such that it can sometimes be hard to find—or to read—what we need below. (Or is it that I'm getting old?) And while the white light is bright, it is not the "cold" bright light so often associated with LEDs. It's plenty warm, to my eye.

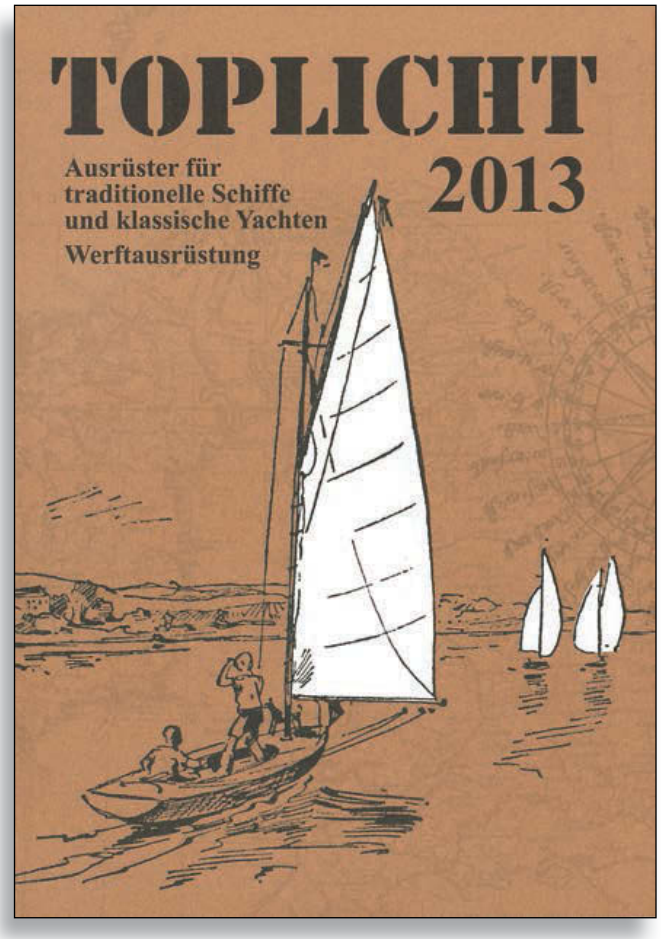
To be sure, this light is nothing like the ones that are offered in the chandleries and mail-order catalogs. It is an entirely different creature. In the first place, the dome light housing is fabricated from cast bronze. Virtually every modern dome light in metal is formed from sheet material, which means that any decorative touches cannot possibly be as elaborate as something like this. And the fixture is also considerably heavier—being cast, as opposed to stamped—which is very evocative of the older yacht and boat traditions. In fact, although some owners mount those modern dome lights on vertical bulkhead surfaces for other practical reasons, they always appear awkward to me in that orientation. With the Cassidy-Perko dome light, however, the combined size and shape seems to lend itself perfectly to either horizontal or vertical mounting, and in that respect it feels more versatile. And the dome light is different in the access to the interior of the light. That access to the LEDs themselves is made easier by being able to remove the threaded bezel that holds the lens. There's no need to remove the entire fixture, as is the case with some of the modern stamped dome lights.

And so we come to the crux of the matter: the price. These days, a good stamped-brass combination white-and-red dome light with a relatively nicely cast glass lens will run about $60. The Cassidy dome light will run just under six times that price. On the one hand, that is undeniably a lot of money. On the other hand, there is absolutely no comparison. The care and workmanship that go into the design and fabrication of the Cassidy dome light are an order of magnitude beyond what we could buy off the shelf in the chandlery. The look and feel of this light is so deeply evocative of traditional yachts that there is really no comparing. But we know that they're not building these lights for a mass market. Instead, they're offering something uniquely distinctive for a uniquely distinct segment of traditional yacht and boat owners, and I, for one, am glad they are.

There are other ways to achieve modern objectives within traditional fixtures. Adapters are available to convert bayonet-type sockets to LED. But the beauty of the Cassidy dome light offers something at once uniquely modern and traditional. And for choosing to go out on a limb to make this dome light available, they deserve applause and support. As I wrestle with the decision of whether to make this investment, it occurs to me: I really want two of them.

*Jon Wilson, WoodenBoat's chairman and editor-in-chief, founded this magazine in a cabin in the woods in 1974. He has owned and sailed the 33′ Concordia sloop FREE SPIRIT for more than 30 years.*

*The price of Peter Cassidy's Perko-inspired dome light is $350. Please e-mail inquiries to Peter at peter@buzzardsbayyachtservices.com.*




# Toplicht

## Reviewed by Erdmann Braschos

On the site of a former marzipan factory in a western district of Hamburg, Germany, there stands a two-story brick building housing the ship chandler Toplicht. Upon passing through the store's unassuming entrance, the visitor is welcomed by the aroma of tar and oakum. As the heavy wooden door closes gently behind, the visitor leaves the busy city of 1.8 million behind, and is transported to a world of vintage vessels. All around are blocks with cheeks of ash, elm, or beech on display; bronze turnbuckles and galvanized rigging screws; old-fashioned bollards, cleats, bitts, fairleads, and mooring pipes. In short, the lover of old ships, vessels, and boats can find anything here, from adze to zinc.

Nearly all of the company's 14,000 products are displayed in its catalog of over 400 pages, and each item is in stock and ready for inspection on site, or to be shipped immediately anywhere in the world. In fact, shipping on the day of the order is one of Toplicht's promises. The store's catalog, with its hallmark brown cover and charming sketches of products, is practically an encyclopedia of hardware and supplies.

Toplicht keeps 25 employees busy, and earns revenues of nearly US$5 million per year. In contrast to the shaky situation in the mainstream yachting industry, its business is rising steadily. "We are within a niche of yachting, but one with a continuous demand," says Michael Thoennessen as he gives a tour through the well-organized and tidy storage aisles. This tidiness may seem surprising for a ship chandler, but this level of order is utterly necessary for quick delivery. "This makes the client happy, and we save time by avoiding customer requests regarding the status of shipments," says Thoennessen.

Thoennessen is one of the six founders of Museumshafen Oevelgoenne, a visionary society established in 1976 to preserve traditional vessels of the region. He took care of the Dutch tjalk FORTUNA, a 30-ton flat-bottomed vessel launched 1914. He knew then, before it was fashionable, where to get tar and the linseed oil. He had the right blocks in his garage. His dealings in traditional-vessel hardware and supplies became the foundation of Toplicht, which was established 1981. Since then, Thoennessen has simply kept to his course by adding meaningful products or relaunching nearly forgotten ones, enlarging his crew, and shipping items all over Europe, to the U.S., and worldwide.

Toplicht sells to the private boat owner via telephone and the Internet. While its main site is in German, it has an English-language website (www.toplicht.de/en) too. The company also acts as wholesaler for yards, be it for boat restorations or new construction. Virtually every traditional yard in Scandinavia, the U.K., The Netherlands, France, Spain, Italy, and the German-speaking countries is supplied by Toplicht.

At times, if boat owners seek products that are no longer commonly available, Toplicht arranges a relaunch of an item. One good example of this is Ettan sealant plank wax, a traditional Swedish compound used for sealing splits in underwater planking. The compound, according to Toplicht's description, "adheres like the devil." Responding to customer demand for this stuff, Toplicht has arranged to be its sole distributor. Likewise, the chandlery manufactures and sells its own line of high-quality caulking irons and mallets in response to customer demand; the production of these tools is subcontracted to a blacksmith in Denmark.

If you'd like to sheet-in your sails with the same hardware used by the legendary bluewater sailing couple Susan and Eric Hiscock, you'll appreciate that Toplicht stocks bronze winches made by the New Zealand manufacturer Murray. You'll also find replicas of the once-famous U.S.-manufactured Merriman winches—the so-called halyard brake, which eliminates a coil of line on deck by capturing the wire (or, often, Spectra today) halyard entirely on the winch drum. (These winches are not only for halyards, but are also good choice for handling the leeboards on flat-bottomed boats.)

Regarding brass ship's bells, Toplicht found a German supplier whose traditionally cast bells have a vessel's name cast-in instead of being engraved. And should you need to replace your ordinary stainless-steel running lights to match the traditional hardware complement of the rest of your boat, Toplicht carries ones made of sheet copper by Peters & Bey.

**Gaffelbeschlag** *gaff fittings*

① Gaffelschuh und Gaffelendbeschlag. Gaffelschuh Stahl feuerverzinkt, mit Takellieder sauber benäht. Gaffelendbeschlag aus Marinebronze gegossen, handpoliert. Klaufallbeschlag mit Ring für die Segelklau, aus Bronze geschweißt, poliert. Diese kompletten Sets sind in Größe und Finish auf unsere Mast-/Baumbeschläge abgestimmt.
Das Maß D2 soll ca. das 1,15-fache des größten Mastdurchmessers betragen. Andere Größen und Kombinationen sind auf Anfrage lieferbar.

| Art-Nr. | Mast ca. ø mm | D2 mm | D1 außen | D1 innen | L mm | H mm | Preis €/Set |
|---|---|---|---|---|---|---|---|
| 1393-075 | 75 | 90 | 44 | 30 | 265 | 115 | 278,00 |
| 1393-105 | 105 | 120 | 44 | 30 | 280 | 125 | 313,00 |
| 1393-120 | 120 | 142 | 51 | 39 | 360 | 140 | 370,00 |
| 1393-140 | 140 | 165 | 62 | 51 | 410 | 160 | 435,00 |
| 1393-180 | 180 | 211 | 100 | 77 | 490 | 210 | 637,00 |

**Lümmelbeschlag** *bronze sliding gooseneck*

② Bronze matt gerollt, Kastenprofil-Schiene zum Anschrauben, Rutscher mit Feststellschraube sowie Vierkant-Dorn zum Einstecken in einen Holz oder Aluminiumbaum. Der Beschlag ermöglicht das Reffen des Großsegels durch Drehen des Baumes.
Kastenschiene: L: 300 mm, B: 22 mm. Dorn: 10 x 10 mm x 100 mm.

| Art-Nr. | | €/Stk |
|---|---|---|
| 1588-001 | Bronze Lümmelbeschlag | 62,00 |

**Baum-Reffbeschlag DAVEY** *bronze reefing gear*

Dieser traditionelle dreiteilige Beschlag aus handpolierter Gussbronze erlaubt das Reffen des Segels durch Aufrollen um den Baum.
Der komplette Beschlag setzt sich zusammen aus:
③ Baumbeschlag vorn für Baumdurchmesser 50 mm mit passender Vierkantaufnahme für den Lümmelbeschlag ②;
④ Baumnockbeschlag achtern mit doppeltem Wirbelbügel für Dirk und Schot;
⑤ Lümmelbeschlag mit Vierkantdorn für verschiedene Mast-ø 50 bis 87 mm.
Gewicht komplett nach Größe ca. 1400-1700 g.

| Art-Nr. | | Ausführung | D1 mm | D2 mm | €/Stk |
|---|---|---|---|---|---|
| 1599-001 | ③ | Baumbeschlag vorn | 50 | --- | 48,50 |
| 1599-002 | ④ | Baumbeschlag achtern | 50 | --- | 72,50 |
| 1599-050 | ⑤ | Lümmelbeschlag / Dorn | --- | 50 | 89,00 |
| 1599-062 | ⑤ | Lümmelbeschlag / Dorn | --- | 62 | 92,00 |
| 1599-075 | ⑤ | Lümmelbeschlag / Dorn | --- | 75 | 99,00 |
| 1599-087 | ⑤ | Lümmelbeschlag / Dorn | --- | 87 | 122,00 |

**Baumbeschlagsatz** *bronze mast fittings*

⑥ Klassischer Mastbeschlagsatz für runde Masten und runde oder ovale Bäume, aus hochfester Marinebronze. In England gefertigt. Der Mastbeschlag besteht aus zwei kräftigen verschraubten Ringen aus Bronzeguss, poliert, und dem eingeschraubten Lümmelstift. Die Baumgabel (ungebohrt) ist in einem Stück gegossen und wird wahlweise in den Baum eingelassen oder aufgesetzt. Der verbindende Lümmelbeschlag ist ebenfalls ein sauber gefertigtes Gussteil. Wir bieten diesen Beschlag fertig montiert als kompletten Satz mit geschweißtem Reffhaken-Beschlag (für zwei Reffs) an. Maß D2 ist der Mastdurchmesser. Dieser Beschlag ist in handwerklicher Ausführung und Finish sehr gut mit unserem Gaffelbeschlag / Gaffelschuh kombinierbar.
Andere Größen und Kombinationen sind auf Anfrage lieferbar.

| Art-Nr. | D2 mm | D1 außen | D1 innen | L mm | H mm | Preis €/Set |
|---|---|---|---|---|---|---|
| 1392-575 | 75 | 44 | 30 | 260 | 55 | 254,00 |
| 1392-500 | 100 | 51 | 39 | 375 | 75 | 349,00 |
| 1392-640 | 140 | 75 | 61 | 420 | 92 | 729,00 |
| 1392-680 | 180 | 100 | 77 | 510 | 110 | 999,00 |

**Schotring** *brass reefing claw*

Messing poliert, mit 4 Nylonrollen. Aus dem Verbindungssteg und zwei Schotringen lässt sich ein Schotwagen bauen.

| Art-Nr. | | Ausführung | passend für Baum | €/Stk |
|---|---|---|---|---|
| 1319-085 | ⑦ | ø = 90 mm | ø = 85 mm | 49,50 |
| 1319-100 | ⑦ | ø = 125 mm | ø = 100 mm | 195,00 |
| 1319-000 | ⑧ | Verbindungssteg L= 300 mm | | 53,90 |

**Großbaumbeschlag** *bronze boom fitting*

⑨ Bronze poliert, mit weitem Bügel für den Großschotblock.

| Art-Nr. | D mm | L mm | D3 mm | A mm | Gewicht | €/Stk |
|---|---|---|---|---|---|---|
| 1477-048 | 48 | 64 | 13 | 19 | 0,8 kg | 72,50 |
| 1477-064 | 64 | 75 | 13 | 21 | 1,3 kg | 126,00 |

**Großbaumbeschlag** *bronze boom fittings*

⑩ Aus Bronzeguss, mit kräftigem Bügel für den Großschotblock. Oberfläche: feinmatt getrommelt, europäische Fertigung.

| Art-Nr. | D mm | L mm | D3 mm | A mm | Gewicht | €/Stk |
|---|---|---|---|---|---|---|
| 1477-095 | 96 | 42 | 18 | 15 | 1.400 g | 197,00 |

*Prices in Euro including 19 % VAT*

MAST-, BAUM-, DECKSBESCHLÄGE **85**

For the power boater, Toplicht has relaunched the nearly forgotten folding helmsman seat. So you can either stand with the seat flipped up or sit comfortably with the same view across the bridge and bow. The patented folding mechanism is made of cast bronze. It's a small-run item, with only about 10 sold annually. But that's Toplicht's specialty: providing a massive inventory of rare and hard-to-find hardware to the traditional-boat aficionado.

*Freelance journalist Erdmann Braschos wrote about the Square Meter classes in WB No. 114. He is the author of the book* Riva Tritone No. 258 *(see Books Received, page 116).*

*Toplicht GmbH, Friesenweg 4, D 22763 Hamburg, Germany, (49) (0) 40 88 90 100; www.toplicht.de/en.*

## BOOKS RECEIVED

***Head, Heart, Hand: A Boatbuilder's Story***, by Colin Henwood. Published by Henwood and Dean Boatbuilders Ltd., Greenlands Farm, Dairy Lane, Hambledon, Henley-on-Thames, Oxfordshire RG9 3AS, U.K. 132 pp., hardcover, £45. ISBN: 978–0–9572874–0–2. *Michael English's fascinating and beautiful photographs fill the pages of this elegant book that tells the story of Colin and Lucie Henwood, and Henwood & Dean Boatbuilders in Henley-on-Thames, England.*

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***Maine & the Sea: 50 Years of Collecting at Maine Maritime Museum***, by Charles E. Burden and Nathan R. Lipfert. Published by the Maine Maritime Museum, 243 Washington St., Bath, ME 04530, www.mainemaritimemuseum.org. 144 pp., hardcover, $24.95. ISBN: 978–0–937410–16–5. *A catalog of about 100 of the 21,500 items in the collections of the Maine Maritime Museum in Bath, Maine.*

***Wooden Ships on Winyah Bay***, by Robert McAlister. Published by The History Press, 18 Percy St., Charleston, SC 29403. 128 pp, $19.99. ISBN: 978–1–60949–353-0. *A history of wooden shipping of Georgetown, South Carolina, from pre-Revolutionary days up to the present.*

****Vintage Outboard Motorboat Racing: An Illustrated History 1927–1959***, by Bernie Van Osdale. Published by Iconografix, P.O. Box 446, Hudson, WI 54016. 128 pp., softcover, $34.95. ISBN: 978–1–58388–298–6. *This racing history is full of interesting photographs including some from the Rosenfeld Collection at Mystic Seaport.*

***More Fuselage Frame Boats: A Guide to Building Skin Boats***, by S. Jeff Horton. Published by the author in Guntersville, Alabama, www.kudzucraft.com. 132 pp., softcover, $18.95. ISBN: 978–1–48000–760–4. *A companion to his first book,* Fuselage Frame Boats, *this book explains how to build five different skin-on-frame boats.*

***The Life and Times of Georgetown Sea Captain Abram Jones Slocum 1861–1914***, by Robert McAlister. Published by The History Press, 18 Percy St., Charleston, SC 29403. 128 pp, $19.99. ISBN: 978–1–60949–787-3. *A story of a different Slocum; he was born at sea and became part of the last generation to command America's commercial wooden sailing ships.*

***A Call to Arms***, by William C. Hammond. Published by the Naval Institute Press, 291 Wood Rd., Annapolis, MD 21402, www.usni.org. 256 pp., hardcover, $29.95. ISBN: 978–1–61251–144–3. *The fourth novel in Hammond's series of historic novels in the vein of C.S. Forester and Patrick O'Brian, this book blends fact and fiction, telling the adventures of the Cutler family of Hingham, Massachusetts, during the First Barbary War from 1801 to 1805.*

***Riva Tritone No. 258***, by Erdmann Braschos. Photographs by Nicole Werner. Published by Authentic Treasures Publications KG, Am Treptower Park 75, 12435 Berlin, Germany, www.tritone258.de. 224 pp., hardcover w/slipcase, €225. *A lavish and opulent photographic essay of the 18-month all-out restoration of the Riva Tritone No. 258 by Riva restorer Jürgen Renken of Bahrenfeld, Hamburg, Germany.*

***Baggywrinkles No. 3***, by Lucy Bellwood. Published by the author in Portland, Oregon. See nauticry.wordpress.com for information. 16 pp., paperback. *A nautical comic book that blends humor and instruction.*

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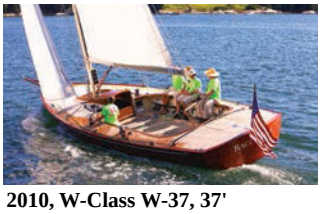

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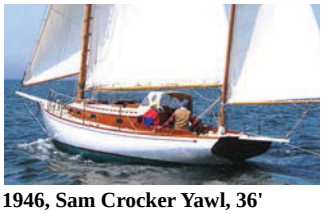
**1996, Center Harbor 31, 31'**
Joel White design built by Brooklin Boat Yard
Located: Brooklin, ME. Asking: $140,000

**2007, Ultimate Daysailer, 50'**
Built by Brooklin Boat Yard
Located: Brooklin, ME. Asking: $375,000



**1946, Sam Crocker Yawl, 36'**
Complete Restoration 2002–2003
Located: Brooklin, ME. Asking $124,000

**2008, Spirit of Tradition Knockabout, 28'**
Design by Brooklin Boat Yard
Located: Martha's Vineyard. Asking: $70,000

**1964, Derecktor K/CB Cutter, 45'**
Designed and built by Bob Derecktor
Located: Brooklin, ME. Asking: $70,000

**1996, Herreshoff Buzzards Bay 25, 33'**
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Located: Mystic, CT. Asking: $159,000

**1964, Albury Brothers Runabout, 19'**
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**2006, Haven 12½ w/trailer** (ME) Asking $32,000
**1970, Crocker Cutter, 33'** (ME) Asking $15,000
**1971, Crocker Ketch, 36'** (MA) Asking $100,000
**1948, Aage Nielsen Sloop, 18'** (ME) Asking $12,000
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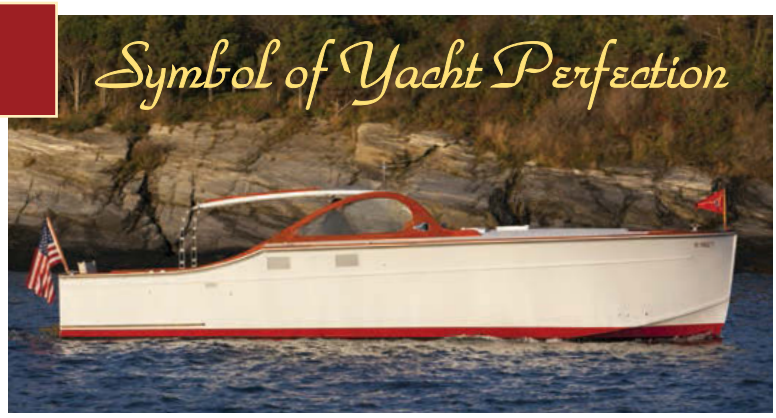

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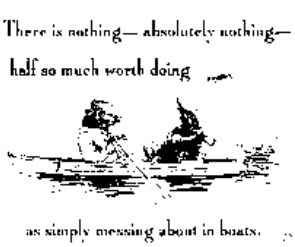


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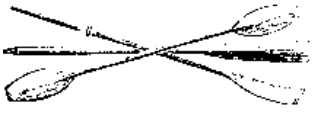

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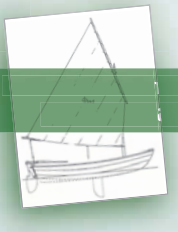

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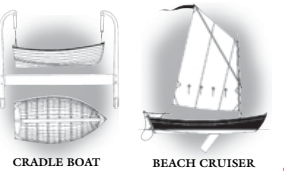

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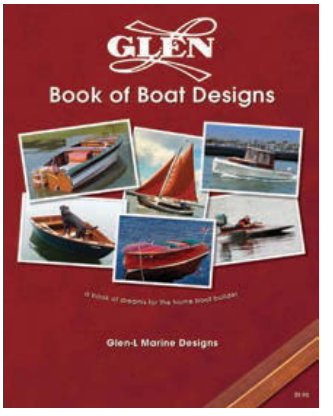


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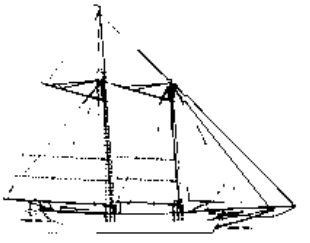

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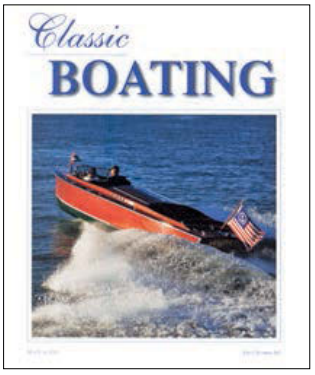


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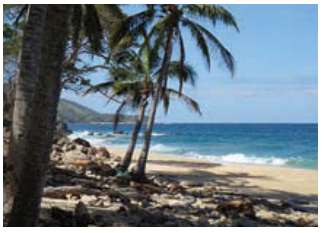

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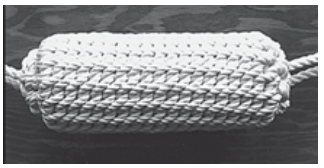

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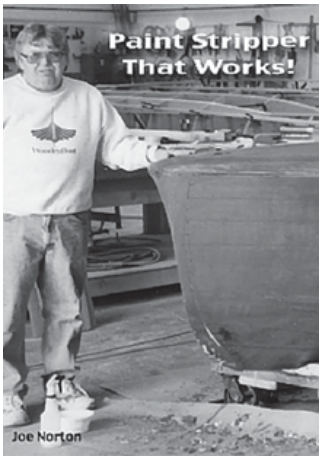


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18′ GREENLAND SEA KAYAK—Varnished okoume, epoxy, fiberglass, durable, lightweight, 42 lbs! Built one year ago, WoodenBoat School. Sealed bulkheads, custom seat, rigging provide comfort, versatility. Garaged. $2,800. NY, ralphsz46@gmail.com.

26′ FIRST LIGHT #05, 2011—Yamaha 115 four-stroke, overnight option, electronics, ready to go. $90,000. Additional pictures and info at www.peaseboatworks.com.



42′ "CLASSIC" MAINE HARDTOP cruiser—Built by Goudy and Stevens in 1928. Maintained in top condition. Has won at least 10 awards in last 12 years. Unsurpassed elegance. $69,000. www.grayandgrayyachts.com, 207–363–7997.

1983 BELKOV RE-CREATION OF a traditional Chesapeake Bay Hooper Island Draketail workboat as a contemporary yacht. Professionally restored, updated, and maintained by present owner since 1996. New Cummins 4BT diesel, more major upgrades in 2011. Berthed in Annapolis, MD. Priced at $30,000. Jay Baldwin, 410–263–5315; 443–994–0215; kbaldwin516@gmail.com.


HAVEN 12½, 2005—Cold-molded mahogany, with trailer, sails, full cover, safety gear. Like-new condition. $14,995 or best offer. For pictures, specs, email harrytorno@telus.net.

30′ SAILBOAT FRAME—Deck, bow to stern 30′; beam 10′. Great project start. Stored inside. ronnyweems@sbcglobal.net, 316–655–5320

30′ ELDRED-COOPER CUSTOM runabout, 2009—White cedar planking, varnished teak trim, V-berth forward with a Porta-Potti, 4-cycle Yanmar diesel, very well built and maintained. $185,000, Ballentine's Boat Shop, MA, Amy_bbs@cape.com, 508–563–2800.

16′ OLD WHARF DORY—Beam 4′6″, okoume marine ply, locust, bronze, 8′ oars. $6,000. 508–349–2383, or walter@oldwharf.com, www.oldwharf.com.

$4,900!!! 21′ MARLIN-CLASS Herreshoff Sloop—Sound boat. Fish-class hull with two-berth cruising cabin, good sails, and proper galvanized trailer. 207–322–7070.

HERRESHOFF H28 SLOOP—Carvel built 1956, J.T. Taylor, Vancouver, BC. Treated red cedar on white oak. Atomic Four inboard, 9.9 outboard (for close-quarters maneuvering). Propane stove, Seaward locker. Main, two jibs, stormsail, drifter, boat cover, dinghy. Beam 9′, draft 4′. DOT registered. Survey 2012. Email: jim colgan@shaw.ca, or 250–477–2244. Located Sidney, BC. $10,000.

ICONIC 1932 STEPHENS 55′ Motoryacht—Total rebuild 2009. New engines, genset, electronics, mechanical, electrical, etc. Lying Seattle area. Price negotiable. See photos, history, complete details, and contact information at www.seadog.yachtflyers.com.

1970 EGG HARBOUR 36′—All wood. All inside wood refinished; needs work outside. Call 423–331–2974.

HAVEN 12½—CEDAR HULL, WHITE oak ribs, vertical-grain fir spars, lead keel, mahogany transom, seats, trailer, covers. Used three summers in Montana. $22,000. anorris@norriswoodworking.com.

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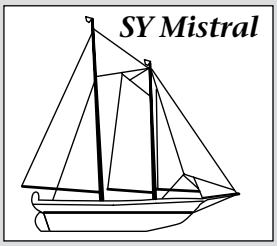


***L. Francis Herreshoff Design***
*No. 73, built by Britt Brothers, Saugus, MA in 1938. After two major refits and additions for safety, as perfect and sturdy as a vessel can be. 81.5′/63.5′/8.2′. Berthing place Flensburg, Northern Germany.*

***Asking price €1.100.000***

*For further information please contact: mistral38@gmx.de*

16′, 2010 CHIPELLA CANOE—Original off-center design. Fast and stable, 67 lbs. Tested on Lake Chelan. 1,000 lbs capacity. Materials: rare Alaskan cedar and walnut. 1½ years of construction. $23,000, negotiable. 425–582–2593.

HARRY BRYAN'S LOVELY 20′ Pocket Cruiser—Featured in *Small Boats* 2010; now under construction at Great Lakes Boat Building School. Cypress on oak frames; all bronze fastened. Available Summer 2014. Price to be determined. Follow its progress on www.glbbs.org. 906–484–1081.

**See Us at the WoodenBoat Show**

1946 CHRIS-CRAFT CUSTOM Runabout 20′—Dual cockpit, Correct engine, completely restored professionally four years ago. Includes trailer. An exquisite boat to look at, and drive. Asking $32,000. NJ, 201–965–2092. Hydro Hoist dry-dock also available.

VAN DAM–DESIGNED 26.5′ Runabout—Completed 2012. West System epoxy/wood construction of finest materials. 300-hp MerCruiser to 49 mph. Rough-water-tested. Very stable and dry. $95,000 or fair offer. www.glbbs.org 906–484–1081.

**See Us at the WoodenBoat Show**

40′ CHARLES WITTHOLZ 1971 Trawler/Tug—Single engine, built at Rice Marine Railway in Reedville, VA. Extensive six-year restoration, including fiberglass application by experienced restoration experts. $139,900. Call for complete specs/photos or e-mail for on-line link. 904–759–2413, lindar@masseyyacht.com.

1937 CHRIS-CRAFT, 17′ DELUXE Runabout—Model 720, model "B" engine. New Zenith carburetor, includes trailer. Very good condition, spent most of its life inside. Originally shipped to Lake Ariel, PA, June 21, 1937. Re-chromed by Custom Chrome Plating. Offers over $20,000. Contact reynold@schenketool.net.

1973, 32′ GRAND BANKS, SINGLE Lehman 120—Wood hull in good condition. Needs cabin work. $3,950. Contact Bill 954–931–2011.

17′ WITTHOLZ CATBOAT WITH trailer and outboard engine. In excellent condition. $9,000. Located Brooklin, ME. NJ, 201–569–3787 or 201–568–1441.

"DOLCE" ($125,000 USD) is an excellent example of the highly reputable Concordia Yawl design. Completed in 1957, she was built by the German shipyard Abeking & Rasmussen, and sold/commissioned by Concordia Company, South Dartmouth, MA. She has been lovingly cared for, and is in ship shape condition. Visit www.dolce1957 for complete listing, and contact information.

20′ CENTURY RESORTER 1954—Restored classic wooden speedboat. Original Graymarine engine. West System bottom. Varnished mahogany deck. The ultimate lake boat. Can deliver. Asking $17,500. 610–787–2968, wpworth@comcast.net.

DARK HARBOR 17, 1914—Completely restored, 26′ gaff-rigged knockabout sloop, $19,500. maine traditionalboat.com, 207–322–0157, traditionalboat@uninets.net.

"SUVA," 1925 STAYSAIL SCHOONER designed by Ted Geary. A gorgeous and sound classic yacht, teak on oak. $139,000. Port Townsend, 360–643–3840. See specs www.schoonerforsale.com. E-mail schoonersuva@gmail.com.

PAUL GARTSIDE–DESIGNED 19′ Cutter—Traditionally built cedar planking on steam-bent oak ribs; completed 2012. Full keel with 3′6″ draft. Gaff-rigged; sails beautifully. Very stable, and seaworthy Cornish Coaster design. New Yanmar 1 GM 10-hp diesel. Dacron sails. $39,500 or fair offer. www.glbbs.org, 906–484–1081.

**See Us at the WoodenBoat Show**

OUGHTRED 18′2″ "ARCTIC TERN"—This boat has everything! A stunning, Oughtred-designed, lapstrake double-ender. Traditional lug sail by Nathaniel Wilson. All bronze hardware. Okoume marine ply with white ash, oak and walnut trim. Bristol finished. Northern white cedar floorboards. Custom boat cover. Motor well for a new Honda 4-cycle 2-hp outboard, with motor storage compartment, retaining the handsome sheerline when sailing. Custom galvanized trailer with shocks. Traditional spun Dacron running rigging from Classic Marine. Positive flotation. Two rowing positions complete with 10′ Douglas-fir oars. Kirby traditional paints, colonial cream, with accents of bronze green. This is one beautiful boat! Asking $16,900. taras@hbci.com.

ROYAL LOWELL 30′ Wooden Lobster Yacht—Cedar on oak, bronze fastened. Available at present stage of completion or with option for completion. $75,000. Traditional Boat, LLC, 207–322–0157, www.mainetraditionalboat.com.


14′ NORTH HAVEN DINGHY 1912—95% original. Excellent condition, sailed 2012, trailer. Asking $6,500. Brooklin, ME, 207–359–2203.

15′6″ SKIFF—NEW, QUALITY Construction. Cedar-on-oak, mahogany deck, fiberglass/epoxy, 25-hp Yamaha, trailer. $12,500. Green Bay, WI. 920–468–6865.

1940, 15′ CHRIS-CRAFT DELUXE runabout—Meticulously restored Philippine mahogany Deluxe Runabout #52391 with original B engine completely rebuilt. Correct 1940 Stewart Warner gauges. Replacement hardware by Maine Classics. This boat has exceptional jointer-work, with 90% new wood, and a 5200 bottom. Restored at IYRS, Newport. Custom trailer with fold-away tongue. Custom Sunbrella boat cover. ~~$38,500~~, $35,000 Firm. Cape Cod, MA, 617–966–2194.

"ANANDA," 45′ PILOTHOUSE Ketch—Charles Davies designed, 1979. Professionally owned, upgraded and maintained. More pictures at peaseboatworks.com. $110,000. kells.dave@gmail.com.

"FROG," HERRESHOFF 12½—BUILT in 2007 by Artisan Boatworks in Rockport, ME. Builder maintained. Check "Frog" on builder's website for photos (www.artisanboatworks.com). Can be seen in Boothbay Harbor, ME. Asking $44,000 with sail/cockpit covers, and trailer. Contact Ed Riley, 207–415–4282.

1930s PENN YAN DINGHY—8′, 57 lbs. Incredibly original. Canvas over cedar, and mahogany. Bronze hardware. Original oars. Gunwale guard. Original paint, 1951 5-hp Johnson. $1,950. 203–545–2784. Coastal Connecticut.

SOLID TEAK HULL AND DECK—Laminated mast (1995), two headsails on furling, two electric motors, road trailer included. Quality construction, built by professional. Very nice to sail. Clean, and always well maintained. jacoulombe@hotmail.com, 418–875–3061.

26′ PARECE BASS BOAT—Fully restored. Cedar-on-oak, cuddy cabin, bimini, GM 350, Monel tanks. $20,000. Mattapoisett, MA, 508–728–0009.

WORKING ANTIQUE 23′ MacKenzie, 1951—Restored over 37-year single ownership. 150-hp gas inboard. VHF, fish/depth-finder, GPS. hdrinker@comcast.net, 413–219–9416.

LUDERS 16, LOA 26′—COMPLETE restoration. New deck. Refaired and AwlGripped to your color preference if commitment by May 7th. New "Egyptian cotton" Dacron sails by Douglas Fowler. Original spruce mast and boom, bronze hardware, removable custom bronze outboard motor bracket. New Torqeedo electric engine, trailer, and new autopilot. $24,500. Located Montgomery, NY. 845–457–4271, fischer112@hotmail.com.

14′ SPIRIT WHITEHALL—JOHN Gardner design. Built 1970. Cedar-on-oak, and mahogany. Sails, spars, rigging, two pairs oars all store inside boat. Includes trailer. Restored 2012 and see write-up at www.village boatshop.com. $9,400. Pittsburgh, PA, 412–965–1372.

ALDEN TRIANGLE 1927—28.5 × 7.5 × 4.75. Cold-molded over 1990. Main, jib, genoa three years old. New sail cover, mahogany hatch, electrical system. Sleeps two, sitting headroom, 3-hp outboard in well. Beautiful, fast, fun. Call 914–393–0295. Located NY. $17,500 or best offer.


37′ ROBERT RICH LOBSTER BOAT—Bass Harbor Boat Shop, launched December 1981. 3116 CAT, total rebuild 2005, many recent upgrades. Call 781–834–9330, or e-mail noyes130@verizon.net.

12′6″ DORY SKIFF—LAPSTRAKE with sail, oars, trailer, 2-hp outboard. Located RI. $2,600. 401–295–4683.

1985 BENFORD 19 GAFF YAWL—One GM, Yanmar, cedar on oak, teak trim. Bronze hardware. One skin of fiberglass over entire boat. Excellent condition. $14,500. 218–879–2662.

CONCORDIA YAWL #103, "IRENE," 1966—Excellent condition with continual high level of maintenance. Dynel decks and cabin top. Recent sail inventory. Sea Frost reefer. Low-time diesel. Full winter covers. Current owner 28 years. WA. $149,500. Douglascole7@comcast.net, 360–676–0119, 360–961–6101.

1940 CHESAPEAKE 20—WELL maintained. Varnished wood spars, trailer, ready to sail. $11,500. 410–544–4854.

1961 KROGEN MOTORSAILER 42′, 13.5′beam—Teak on ipol, 140-hp Deutz, A/C. Passagemaker. One of three built. $79,000. 941–232–6066, jonnywaz@yahoo.com.

# Boats For Sale
## continued

1969, 19′ LYMAN—COMPLETELY refinished, 318 Chrysler with 40 hours, and trailer. Asking $20,000. Call 508–951–0072 or contact Jeffand sons2003@yahoo.com.

BUZZARDS BAY BB25—"PRIDE," owned by Stuart Duncan, and built 1993 at Brooklin Boat Yard, Maine, in the original gaff-rigged sloop configuration. Steve White delivered it to me in Ottawa that summer. Sistership to BB25 "High Cotton," now owned by Jimmy Buffett (pictured). Boat is sound, complete, and lying in Ottawa, Canada. Has not sailed since 1998, and sits in dry storage on a Triad trailer with new tires (can be trailered anywhere). Sailed four months a year each summer from 1993 to 1998 at Nepean Sailing Club in Ottawa. Excellent fast boat for someone who appreciates fine boats. Contact stu@5d.com, or 613–867–4092, or 818–601–1133.

16′ WOODEN SAILBOAT built by Edwin Long Boat Company, Rochester, NY, 1928. Cedar planking over oak, Honduras mahogany cockpit with tiller, centerboard ballast. Two sets of sail, main and jib. Call 585–749–1868.

GEORGE LAWLEY 12′4″ TENDER—Completed 2013. Traditionally built cedar planking on steam-bent oak frames; very fine design. Brand-new (bought in its original crate) 1914 Dubrie 5-hp motor. $12,000 with motor; $10,000 without, or fair offer. www.glbbs.org, 906–484–1081.

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1962, 36′ PACEMAKER—Restoration finished in 2002. 327 engines with 350 hours. Includes all cruising, and safety gear, storage cover, and cradle. $22,000. Pittsburgh, 724–335–5307.

1936, 32′ RHODES DESIGNED Sloop—Quincy Adams Boatyard built. One of two custom hulls based upon Rhodes "Jingle Shell Sloop" described in *Rudder Magazine* (Dec. 1934) as one of the best single-handing yachts. Near original condition, top-notch construction, fantastic sailing. $25,000. In water, Narragansett Bay. 32rhodes1936@gmail.com, or 401–203–4832.

1953, 27′ SHEPHERD—Completely rebuilt in 2006. Chrysler M47Ss, freshwater cooled, bronze-rubber impeller water pumps, electronic ignition. Low hours since rebuild. Varnish stripped, recoated, 15 coats hi-gloss. Hardware rechromed. Bimini top enclosure, isinglass panels. Full boat storage cover. Jupiter, FL $118,750. Doug, 954–303–4349, gdougieg@aol.com, www.photobucket.com/babalu_photoshoot.

16′ STAPLELESS CEDAR STRIP Canoe—Caned seats, weights 45 lbs. $2,000. For more info/pictures contact watkin@gctel.net, 320–763–1758.

BLUENOSE SCHOONER, "Mischief"—William J. Roué design #187, launched 1982. Overall length 42′, beam 9′6″; mahogany planks over laminated apitong frames, bronze fastened, Fiberglass deck over ply. Recent rigging, and Ullman sails. Volvo MD2 engine. $34,500. Motivated seller, all reasonable offers considered. Mischief.SanDiego@gmail.com, 858–509–1820.

TRIMARAN: EXQUISITE MARPLES CC35A—$40,000 worth of brand-new parts; mast, six new sails, five new winches, etc. Center hull/amas almost done. Currently trailerable. 775–827–2786. multihuler@aol.com for pictures.


CLINKER BUILT DECKED Canoe—Hull built with marine plywood, yellow cedar, mahogany, gumwood. Ash frames seats laced with rawhide babiche. Foot-operated rudder, and inlaid brass name plates. Lovingly detailed, and in excellent condition. Includes lateen sailing rig and leeboards. Price $6,900 includes delivery anywhere in the U.S. or Canada. 604–339–5025, or e-mail georgevancouver@hotmail.com.

40′ KINNEY CUTTER, 1986—Jespersen-built, cold-molded cedar and mahogany. Great offshore capability. $125,000 CAD. Victoria, BC, Canada. Visit www.celeste2.com for detailed info, or call 250–592–0726.

1962 PENN YAN—Boat is in great shape. Has a 50-hp Evinrude outboard, trailer included. $5,000 or best offer. Call Randy, 301–283–5390.

1908 RICE BROS. 27′ LAUNCH. See picture at www.farrinsboatshop.com, or call 207–563–5510.

GLOUCESTER GULL ROWING dory—Mahogany/red cedar. Oars, locks, aluminum trailer, cover. Coast Guard inspected/registered. $2,500. 440–821–7119.

9′ OLD TOWN CLASSIC ANTIQUE Dinghy—Ready to row. Cape Cod, MA, $750. 508–428–9733, pricew123@msn.com.

# Boats For Free

1956 CHRIS-CRAFT DAY CRUISER 26′—Needs work. 6-cyl. Graymarine. All hardware included. 401–423–8920, shelamac@aol.com.

PROJECT BOAT—GLEN-L DESIGN, 36′ Granada/Sorrento cabin cruiser, partial build, hull 95% complete. Builder passed before completion. Located north of Seattle, WA. Original plans and manual. Email for details: katherinequillinan@comcast.net, or 425–361–5551.

NORDIC FOLKBOAT. ABBOTT, 1962—Deks Olje finish on mahogany/oak, bronze bolt fastening. Needs keelbolts, and completion of bottom planking bolt replacement. In slip, Shady Side, MD. Contact elkenong@yahoo.com.

1947 HAGERTY SEASHELL 8′ Pram—Boat needs considerable work. Contact captainseaweed1948@comcast.net or call 508–966–2179.

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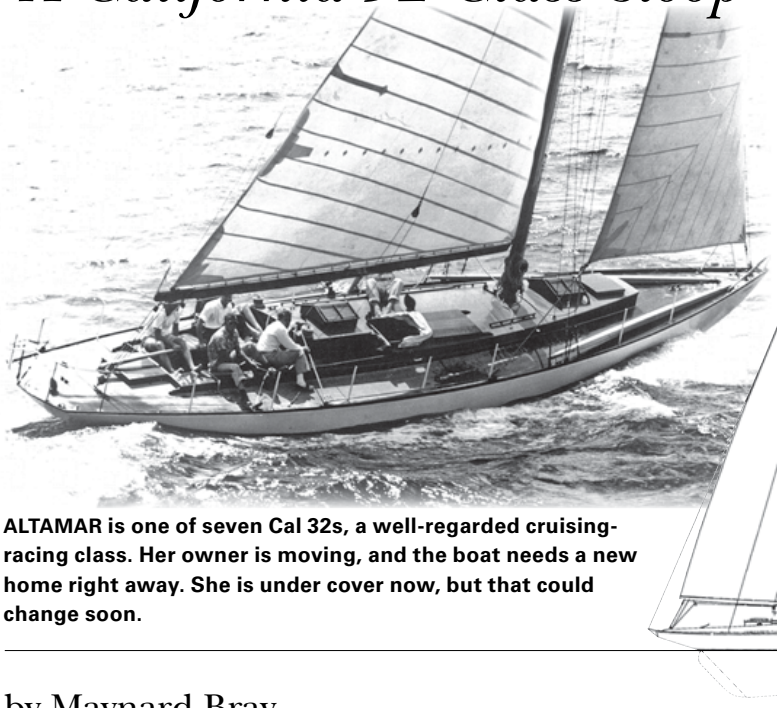
# ALTAMAR

## *A California 32-Class Sloop*



**ALTAMAR is one of seven Cal 32s, a well-regarded cruising-racing class. Her owner is moving, and the boat needs a new home right away. She is under cover now, but that could change soon.**

**ALTAMAR Particulars**

| | |
|---|---|
| LOA | 46′ |
| LWL | 32′ |
| Beam | 10′9″ |
| Draft | 6′9″ |
| Sail area | 857 sq ft |

Designed by Nicholas S. Potter

Built by Fellows & Stewart, Terminal Island, California, 1937 as hull No. 2

DOUGLAS JONES

by Maynard Bray

Only a glance at ALTAMAR's stripped-out hull, and you'll see that getting her fixed up and sailing again will be a major job—so major that one might question why in the world anyone would undertake such a project. In truth, ALTAMAR's needs are not that different from most 75-year-old boats; it's just that here they're more apparent. She needs new transverse framing (steam-bent frames, floor timbers, and deckbeams), along with a new deck, interior, and rig. There's a fair amount to start with, even though there's a long road ahead: the ballast keel of cast lead, backbone timbers of teak, and most of the planking of Douglas-fir can be reused.

ALTAMAR is a rescue boat. With designer Doug Peterson's encouragement, Doug Jones of Traditional Boatworks in San Diego saved her from the chainsaw several years ago and has stored her in one of his sheds ever since—waiting for a savior. Given the Cal 32's Southern California heritage and outstanding racing record, it's hard to believe she's languished this long. Now it's crisis time again because Doug is moving his shop to Port Townsend and will be leaving ALTAMAR behind—outside the shed in all probability.

A few years ago in Saint-Tropez I had a chance to study CHOLITA, the first boat of this seven-boat racing/cruising class, and marveled at her elegant simplicity. (She was also burning up the Mediterranean race-course that year.) She had wide, uncluttered decks; an unusually long trunk cabin that gives headroom in the galley and fo'c's'le; a footwell-type cockpit; and tiller steering. There were only three deck winches—a pair for the headsail and backstays, and a single winch on the cabintop for the mainsheet. These boats have a private stateroom aft, so the main companionway is offset—to starboard and forward, by means of a jog in the trunk cabin—which brings the ladder into the main saloon instead of the stateroom. Like the similar New York 32s, the Cal 32s were laid out for a paid crew, so the galley and crew's quarters are located forward of the mast.

Five Cal 32s were built together in 1937, and two more came from the South Coast Co. after World War II. You can read more about Cal 32s, and the designer and builder, in Tom Skahill's well-researched articles in WB Nos. 83 and 173. And you can speculate, as I have, at the genesis of the design. I see a goodly amount of the Fishers Island 31s in their profile and midsection, which may be the result of Nick Potter's visiting the Herreshoff plant where he got his training while those boats were a-building.

Lately, both the Fishers Island 31s and the New York 32s are being rediscovered for the fine yachts they are—with several restorations completed or ongoing. I hope this Cal 32 likewise can enjoy a renaissance.

*Maynard Bray is* WoodenBoat*'s technical editor.*

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*Send candidates for Save a Classic to Maynard Bray, WoodenBoat, P.O. Box 78, Brooklin, ME 04616.*

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