

GOOD OLD BOAT

Still sailing after all these years!



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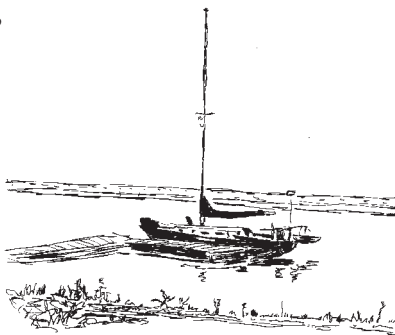
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About the cover...



Photographer and writer Pat Vojtech sent the lovely
slides that grace our cover and inside spread on Page
38. Pat and her husband, George, sail on the
Chesapeake Bay and along the Mid-Atlantic Coast on a
34-foot Hunter, *Athena*. Pat has been writing and
taking photos professionally since landing her first
after-school job at the local newspaper at age 16. She
has produced two coffee table books: *Lighting the Bay:
Tales of Chesapeake Lighthouses* and *Chesapeake Bay
Skipjacks*. Look for more on Skipjacks (by Pat, of
course) in an upcoming issue of *Good Old Boat*.

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Voices from everywhere

Home ports for good old sailors in this issue



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Confession time

Perhaps you've noticed: Jerry and I are a couple of good old folks with a good old boat — exactly the profile of many of our readers. We have not circumnavigated the globe. (Jerry does take credit for several long-distance cruises, courtesy of Uncle Sam, on *The USS Newport News*, but at 20-something, he was hardly in command of the vessel.) We sail in fresh water, which counts for little to nothing with many of our friends on both coasts, but they've never seen the size of our lake! They don't call our inland seas *Great Lakes* for nothing!

Those who sail in our cruising ground — Lake Superior's Apostle Islands, near Bayfield, Wis. — can attest to this: we are mere mortals. We admit it. They've probably caught us with our jib down on occasion. It's hard to live up to the

by Karen Larson

image we've accidentally created for ourselves. But they know the truth: sometimes we're a bit over-cannvassed; sometimes

we're a bit undercannvassed. It's hard to make these calls correctly every time. Sometimes they've seen us motoring the last mile or two toward home only to have the wind come up and catch us powering. Sometimes they've wondered what the heck we were doing out there flogging around in no wind at all with the sails up (that was last summer when we had no engine). We've beaten a few of them in impromptu races down the channel, but then we've lost a few races, too.

The point is: while we have become publishers, we are not capable of walking on water and will not try to convince our readers of our superior sailing skills and perfect seamanship. Like everyone else, we're learning new tricks with each weekend or vacation cruise. We buy ink by the barrel these days, as the saying goes, but we use it to print the accumulated wisdom and experience of good old boaters everywhere. We are the catalysts perhaps, the orchestra conductor, the means of pulling the voices of experience together. Nothing more.

As a group, the good old boaters are an awesome force with much to contribute to the sailing community as a whole. Jerry and I are here to let your voices be heard. Thanks for being a part of our community of good old folks with good old boats. Like you, we are simply tickled to be a part of it.



The view from here

Help!

I recently purchased a good old 1971 Ericson 32 with a recently installed Universal Diesel to replace an Atomic 4. In reverse she goes immediately hard to port. This makes it impossible to back out of the slip, even with the tiller hard over. Once you have momentum, most boats are maneuverable, but not this lady. Is this characteristic of the boat?

**Bill Shane
Bellingham, Wash.**

Sometimes another owner will have a technique that works. We'll welcome suggestions in future Mail Buoy columns. I looked your boat up, and she looks like a fin keel with (perhaps) a skeg rudder. Questions:

Is the prop shaft angled to one side to miss the skeg (if there is a skeg)? Does the prop shaft rotate in the same direction it did before you changed engines? Did you recently change the prop?

I ask because some Universal engines are made from the Kubota diesel short block and have the flywheel at the transmission end of the engine. The Atomic 4 had the transmission at the other end of the engine. (Kubota was designed as a tractor engine, and the A4 was designed as a true marine engine.) In some cases an engine swap results in a prop shaft that turns in the opposite direction.

*It is then necessary to change props or run in reverse to go forward. This is not the best option. Some transmission manufacturers say it's hard on the transmission. I asked ZF Marine (Hurth), and they said **not** to do that.*

If the shaft is angled to miss the skeg, it's likely that it was angled so the prop P factor tended to be canceled by the off angle of the prop going forward. The P factor business can be complicated. Think of the prop as digging into a solid at the bottom of the arc. Then you can predict the direction of the prop walk. In your case, the boat backs to port from prop walk. If the shaft is also angled that way, the new rotation direction in reverse will aggravate that tendency.

In some cases this improves backing; in others it makes it worse. The technique I like best when confronted with a boat that has a lot of prop walk is to gun the engine in reverse to get some speed on and then put the gear in neutral while steering in the direction I really want to go. If I figure I'll need to gun the engine again, I'll oversteer a bit so when the prop walks again, things will line up. It may also help to snub on a dock post with a mooring line while

leaving the slip to force the boat to twist or even go straight.

Bill responds:

The engine was changed before I bought the boat. I'm hauling the boat for bottom paint and other work April 10, so I will have more info then. The engine turns clockwise when facing the front of the engine. It's a Universal Atomic, designed to replace the old Atomic 4.

Oops! One important correction

Larry Hawkins points out that in our March 2000 issue the "Is your Boat Stable?" article incorrectly states that the capsize screening formula is the maximum beam divided by the cube root of the displacement in pounds.

The correct formula is the maximum beam divided by the cube root of the displacement in cubic feet. To find the displacement in cubic feet, divide the displacement in pounds by 64. The intent of this formula is that boats with calculated screening numbers less than 2.0 are considered safe for offshore voyaging.

This screening formula was developed by the Joint Committee on Safety from Capsizing of the Society of Naval Architects and Marine Engineers and the United States Yacht Racing Union. It is somewhat simplistic and may not reflect all the attributes of a particular boat. It favors narrower, heavier boats, and considers recovery from a capsize to be a completely inverted position.

Getting a loan

In the March 2000 Mail Buoy, Dennis Lancaster wrote about the problems of securing a loan for an old boat. This is not rocket science, but if you own your home, you can get an equity loan. If you've owned the home for a while, you probably can get a sizable amount of equity without a bank appraisal. You should be able to get 50K with no problem. We have done this for years, and the interest is tax-deductible. We have bought cars, and the interest is usually about equal to other loans, when you consider the tax break, and normally a lot lower than a loan for recreational homes, boats, etc.

To all you good old boaters, my wife and I

are managing Bucks Harbor Marine at Bucks Harbor in South Brooksville, Maine, on beautiful Penobscot Bay. (Not the Bucks Harbor Down East). If you are up our way, please come and see us. We love good old boats, and we will take very good care of you. Check out our website: <<http://www.bucksharbor.com>>.

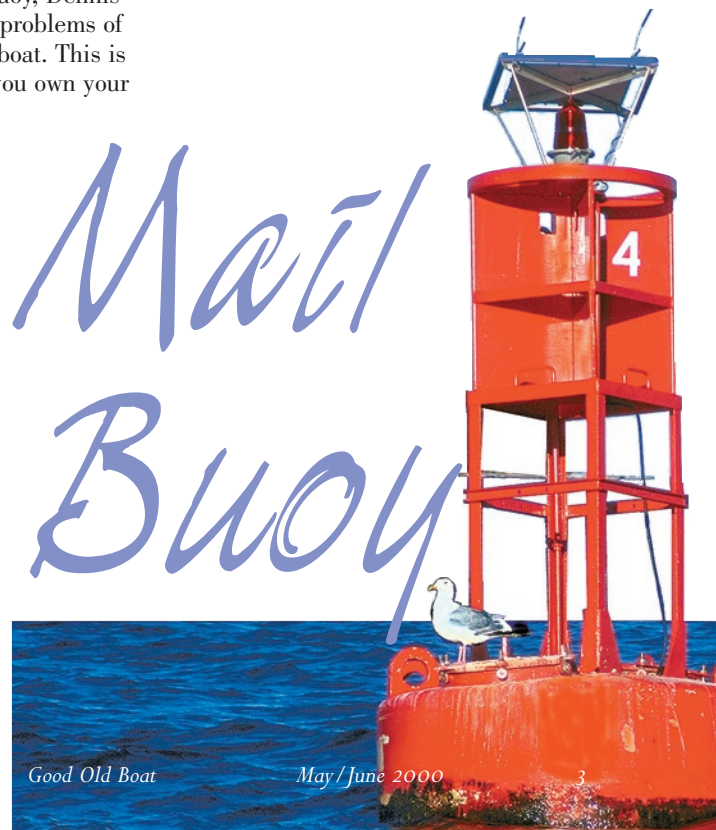
**Jerry and Hope Bates
South Brooksville, Maine**

Mizzen riding sails

Responding to the January 2000 riding sails article, Bill Hess of New York wrote to say that he has a slightly different way to keep his Pearson Vanguard yawl from "horsing around" at anchor: a "wedge" riding sail. This is a small square sail, folded diagonally, with the fold becoming the luff, the top corner of the fold the head, and the bottom corner the tack. The other two corners become clews. If you hoist the sail aloft and sheet the clews aft to opposite quarters, you get a riding sail that is even better than a single flat sail at keeping your boat head-to-wind, without the need for a pole or batten to stiffen the sail.

This is a great design for use in front of the mizzen mast on ketches and yawls. Bill rigs his by running a line from the mizzen spreaders to the head of the wedge, attaching the tack to a fitting just in front of the mast, and running sheets from the clews aft to the corners of the stern pulpit. You can then

Continued on 64



It's a

It was also fortunate that Judy and Dick were accomplished sailors, well able to cope with the situation. Judy learned as an adult, but Dick, a manufacturer's rep in power transmission and material handling, has sailed all his life.

"For the first 19 years of my life my grandparents had a cottage on Lake Chautauqua in New York. For my first 17 years, I would get out of school in June and go away to stay with my grandparents for the summer. I played on boats from the time I was a little kid," Dick says.

Joint ownership

Dick's first boat-owning venture was a partnership with a friend, Wes Holland. Wes owned the boat — a hydroplane he'd made himself — and Dick owned the motor — a 7.5-hp outboard. Later, Wes graduated to a Comet, but had to give it up when he married. Dick bought his friend's Comet in 1961 and took the boat with him when he moved to the Boston area.

As Judy remembers it, Dick had bought the Comet shortly after they met.

"He had just bought a little wooden boat. He said to me, 'C'mon out. You'll enjoy this.'" Judy had never been sailing. She loved it.

Not only did she pass the sailing test, she also quickly discerned that Dick did not enjoy navigating, so she took on that shipboard task. A computer systems analyst, she enjoys the game.

After they married, they kept on sailing. A Tradition 23 — one of eight built by Ray Gaffey in Hyannis, Mass. — took the place of the Comet in 1968.

Meanwhile, the Kilroy family grew from two to three in 1964 (Karen), to four in 1966 (Kathleen), to five in 1969 (David). In 1973, they bought a Pearson Wanderer.

By the late 1970s, the Kilroy children were growing ever larger and so were the sizes of the boats their sailing friends were buying. Dick and Judy started the hunt for their own bigger, better boat.



They tore out of Red Brook Harbor and flew across Buzzards Bay under sail in 50-knot winds, picking up their mooring in Marion, Mass., while the boat was doing at least 12 knots.

That was the wind-up of Dick and Judy Kilroy's first weekend with their brand-new Morgan 38, in July 1978. The transmission failed, but they had to hustle home in time to get to work.

"Morgan had put the transmission in at the wrong angle," Dick recalls. "It never should have happened. A good friend had taken delivery of a Morgan in June, and he had a transmission failure, so I told them I didn't want that happening. They said it wouldn't. Then, when we got out, the thing would only go in reverse!"

Twenty-two years later, *Vixen* is still a member of the family and, better yet, placed third in class in the 1999 Marion-Bermuda Cruising Yacht Race.

"We looked, and looked, and looked," Dick says, remembering their hunt for the perfect boat in 1978. "We felt the Morgan 38 offered the most boat for the money."

That homeward flight across Buzzards Bay on the first weekend was too brutal to forget, but even then, transmission problems or no, *Vixen* performed nobly.

"I was afraid I would jibe it, and I didn't know what the boat would do at those speeds," Judy recalls. "I thought we'd lose the rudder and steerage, but it didn't happen, thank God!"

by Gail Scott

wonderful life

The result was their decision to buy the Ted Brewer-designed Morgan 38 (or 382).

Charlie Morgan drew the lines of the first 38, a centerboard racer produced between 1969 and 1971. Seventy of these boats were built. During the 1970s, as the company looked for an entry into the fast-growing midsize market, Ted Brewer was called upon to design the model that became the 38-2 (or 382). This boat went into production in 1977 with 400 produced through 1981.

The 383 was introduced in 1982. It incorporated a taller rig with a shortened boom and lightened weather helm. The next year Morgan introduced the 384, a dressed-up version with lots of topsides teak. About 100 of each of the latter two models were produced before the line ended in 1985.

"It was a modern design," Dick says of the 382, "with a modified keel with a skeg and attached rudder and a cut-away forefoot, as opposed to a fin or full keel. I felt the fin keel/spade rudder was too new. I didn't feel confident about it. A full keel with attached rudder with no cut-away forefoot I felt would be a much slower boat. The Morgan 38 was a good compromise of the things available at the time."

"And I liked the downstairs," says Judy, an effervescent sailing lover with no time for salty terms. "The Morgan 38 was advertised as sleeping eight, so we figured each child could bring a friend."

They also liked the galley. Coming from a smaller boat, it looked like heaven. The Morgan 38 had a two-burner stove, an oven, a huge ice chest, a double stainless sink, and pressurized water — not to mention hot-and-cold running water in a stall shower. "All that was new to us," Judy says, the delight of that long-ago discovery animating her voice.

"It had good ventilation, wood paneling, and low maintenance," Dick adds. "The other boats we'd owned

Dick and Judy Kilroy spend many happy hours cruising and racing their Morgan 38, Vixen

were glass but had Formica inside. The Tradition 23 was a great boat with two quarterberths and two V-berths, a sink, an ice chest, and a stove. There was no enclosed head. I could sit on the toilet and brush my teeth and turn the bacon at the same time."

Pure heaven

"When we saw the Morgan — a head with a door — it was pure heaven," Judy says. "And now that the children have grown, the boat is perfect for two and comfortable for the times we invite another couple to cruise with us."

The children, now 35, 33, and 30, still spend summer holidays with their parents on *Vixen* and have crewed on the Kilroys' five races to Bermuda.

"They all sailed before they were born," Judy says.

The Kilroys are among the lucky few who have a mooring in Sippican Harbor, in Marion, where the waiting list is now in the decades. When they bought the Tradition 23, one of Judy's college roommates recommended Marion as a nice place to keep a boat. Dick approached the harbormaster, Bill Coulson, who supplied a rental mooring immediately. No problem. As time went by, the Kilroys decided they'd like to own the mooring. For several years running, Dick tried to buy the mooring, but each year Bill would simply not respond to the request. Finally, in 1972, Dick says he pushed.

"Coulson said, 'I can't sell you the mooring. It's a rock,'" Dick chuckles.

Dick and Judy Kilroy, at right, spend all available weekends cruising on Vixen and race each year in the Marion-Bermuda Cruising Yacht race.

"So I said, 'Put in a mooring and give me space.' I went to Bliss, bought a mush-room, and we've been sitting here ever since."

Since 1995, the mooring has actually been a helix, mandated by the town for the crowded harbor following the multi-million-dollar disaster of Hurricane Bob, which flung yachts everywhere.

The Kilroys have made the most of their location. Virtually every weekend during the season they sail, preferring to cruise, although they have raced and placed well in five Marion-Bermuda Cruising Yacht Races.

"This is our first choice of activities. We use the boat every weekend barring other social commitments (weddings and funerals only). We come down Friday night, raft up with friends, and depart for somewhere on Saturday, where we meet more friends and raft up.



We spend virtually every weekend somewhere — Quisset, Hadley's, Vineyard Haven," Dick says, naming lovely local harbors, popular among cruising-boat owners. "On longer weekends, we go to Chatham, Nantucket, Newport."

"We love Gardiner's Bay at the fork of Long Island, and Shelter Island, and Montauk," Judy adds, naming more harbors in Connecticut and New York.

For years, the Kilroys traveled to Marion from their Holliston home to go sailing. A few years ago, they bought a house in Marion and now call Marion home. Judy has been intrigued to find that the residents of Marion are not necessarily aware of the activity in their harbor, and vice versa.

"There is a subculture of people who just float in the harbor. We know the boats which weekend and cruise and have no shore attachment. We all share things, help each other out. We'll take someone somewhere if they don't have a car. It's a whole sub-community that uses the town dock but doesn't know anyone ashore," Judy muses.

A community of sailors

Members of the sailing community look after each other, she continues. "If a boat hasn't been used for six weeks, we call and ask. In another case, a husband racing with friends died on the return race. His wife knew we were here and called, asking us to turn off the battery on their boat. We were glad to be able to help."

The Kilroy children, growing up in this sailing world, learned to swim early on. "We told them if they wanted to be on deck without life jackets in the harbor they had to be able to swim around the boat twice while the boat was anchored or at the mooring. Then, if they wanted to sail without a jacket, they had to be able to swim from the boat to shore — a distance of about 300 yards," Dick says. "Those were our rules."



The brand-new Vixen at the dock in 1978. Son David, 11 at the time, watches Dick prepare the new boat.

The Kilroys made a point of making friends with people who had children the same ages as the Kilroy youngsters, Judy says, "so our kids would look forward to sailing. That has paid off. We have a second generation coming along now. One grandchild — seven-year-old Heather — loves sailing."

"Meeting people and having fun — that's what it's all about," Judy adds, and then, watching Dick stroll down the dock in deep conversation with a couple he's just helped tie up at the Marion town landing, "Dick is a dock talker, too. It's the whole thing."

If there is a high point of their many adventures with *Vixen*, it might be the time they sailed down the East River and through the Hell's Gate to New York Harbor to see the Statue of Liberty.

"Dick didn't want to do it, and I thought it would be the cat's meow. He finally said, 'OK, and you steer.' So I read up on the harbor. I picked the perfect time. There were tugs coming up the East River at the end of the flood (tide). Hell's Gate was as serene as Sippican Harbor on a windless day. We went under the Triborough Bridge and by La Guardia (airport), Riker's Island, Roosevelt Island, the UN buildings, and the Guggenheim (art museum in New York City). He was saying, 'How are you going to find the Statue of Liberty in this big harbor?' I looked around, and *there* it was! It was so neat!"

The Kilroys have been incredibly lucky through all the hurricanes that have struck Sippican Harbor over the years. Just before Hurricane Bob hit the harbor, they had been sailing with Judy's sister and her husband. They had

heard a hurricane was on the way, but they were in a hurry to put the boat to bed and get home on that Sunday night. They stripped the sails and the dodger and went home after putting out an extra anchor.

But, once home, they began to worry. Judy was charting the

progress of the hurricane, and it looked worse and worse. Deciding they had to haul *Vixen*, they jumped in the car and headed back to Marion, calling the boatyard on the car phone as they sped south.

"They hauled us at 1:30 a.m. and put us up at the bandstand (on a playing field by the Marion town landing). We tied the dinghy to a tree, and that was it. We went home," Judy recalls. The entire field was covered with other hauled boats, *Vixen* in their midst.

Left standing

The next afternoon, the Kilroys headed back to Marion after the hurricane had passed.

"All the businesses were closed. They wouldn't let you drive on Front Street (which leads to the town landing). We started walking down Front Street. We saw the Beverly Yacht Club committee boat stuck in the front door of one of the Tabor Academy buildings off Front Street. There were more boats on Tabor's lawn. We were walking down the street, hand in hand. I'm crying," says Judy, reliving the scene with a shudder. "We see there are still some masts standing — six of them. Ours was one of the six (out of more than 100) that didn't get knocked over."

"We went sailing the following weekend," Judy added. "We left very cautiously and felt guilty because boats were still strewn everywhere, and we got just one scratch. The powerboats all floated into the stands and the sailboats (on the field) fell over like dominoes."


Since *Vixen* was in the middle, it didn't topple."

During Hurricane Gloria — another multimillion-dollar disaster in New England — the Kilroys left *Vixen* on the mooring and put out another anchor. Incredibly, no other boats in the crowded harbor crashed into the Morgan, and the gear held. The Kilroys — watching anxiously — could see *Vixen* was burying the rail on each wind-driven tack. Dick attributed the boat's survival to reinforced chafe gear, and a more powerful anchor cleat and stemhead fitting he had installed.

During the most recent hurricane scare, they hauled *Vixen* to a boatyard in a cove off Sippican Harbor. Safely stowed 20 feet above high water, *Vixen* came through the storm without a scratch.

"Over the years, we really haven't had a lot of calamities or gear failure.

bill of requirements and was ready when they were.

"*Vixen* will be our northern boat and the new one will be the southern boat — God and the bank account willing," Dick says. "It's a wonderful life." 

Gail has been a freelance writer and photographer — primarily in the boating field — for 22 years and has been published in most of the major boating magazines (now including Good Old Boat, of course!). She is founding a stock photo company with another photographer.



Vixen's interior is warm and homey. Judy, below, in one of her favorite roles: ship's navigator. Recently the Kilroys bought a Catalina 38 for winter cruising in the Caribbean. Although they looked, they were unable to find another Morgan 38 quite as nice as Vixen.

We've had no disasters. Not even near-misses," says Dick. "And we're not horribly cautious. We go out in anything."

Now that they have a little more time to themselves, the Kilroys have bought a Catalina 38 for winter cruising to Puerto Rico and around the Caribbean.

"A lot of people we know bring boats up and down (the East Coast). That's tough on you and the boat. So instead of spending extra money to get a bigger boat to do that, we just got another boat," he says.

They looked for another Morgan 38 but were unable to find one for sale in decent condition. The Catalina fit their





Vixen:

Over the years, Dick and Judy Kilroy have made many changes to *Vixen*, but the motor is the original.

"The motor is fabulous," Dick says. "It's a Yanmar 3QM30 diesel, and it has been phenomenal. It was new with the boat, and it still runs like a top. We put between 100 and 125 hours a year on the engine."

"I do all kinds of treatments with the fuel," Dick continues. "Basically, I use four things: Marvel Mystery Oil, cetane booster, sulfur replacement since they changed the diesel fuel, and Stor-N-Start stabilizer, which I put in with every bit of fuel. You use so many ounces per hundred gallons. I keep a calculator on hand to do it right."

"We've never had a plugged filter. We change the Racor filter annually."

Dick has also cleaned out the heat exchanger, removed the manifold, and had it completely cleaned.

Sail inventory

The sails are all heading toward 10 years old — and this was in the year the Kilroys placed third in class in the biennial Marion-Bermuda Race, despite a broken boom topping lift (replaced with the spinnaker halyard).

"The animal on the forestay is a 1991 Thurston Mylar double-laminated 140, which was recently rebuilt by local sailmaker, Sperry Sails," Dick says. "The existing main is a 1989 Thurston, of Dacron. A sail the boat loves is a Hard 90-percent full luff blade, to which Sperry has added a sun shield. *Vixen* likes smaller sails. Morgan 38s like to sail on their bottoms, and we have big winds in Buzzards Bay."

Vixen also has a Shore RDR (reacher-drifter-runner), a cruising spinnaker, of Dacron. The Kilroys have never been tempted by Spectra.

"I prefer to stay with Dacron," Dick says. "If I buy another headsail I'll go back to Dacron and get away from Mylar. Dacron is friendlier and has more longevity. With new developments in Dacron you can get better, stronger sails."

Because it is required of all boats racing in the Marion-Bermuda, *Vixen* has a storm trysail and storm jib.

Race gear

In fact, the Marion-Bermuda has had a major impact on the equipment they carry. The Kilroys bought an offshore life raft last year. The raft is another thing which is required

in the race, but in their four previous races they had rented one, "So, in essence," Dick says, "we paid for it twice."

"We went in the first race with a friend," Dick remembers. "Judy was the cook."

"There were seven of us on the boat," Judy recalls. "Dick and I were the only ones who didn't get sick. We loved it. We thought it was fun. So we took the kids off to Maine offshore and said, 'Do you like this?' They said, 'Yes,' so we said, 'Let's do it,' and there we were." They raced *Vixen* in the 1989

Marion-Bermuda with their children, then in their early 20s, as crew.

"We paid more money to do that," Dick says, pretending to be grumpy. "We could have taken the five of us to Europe for three weeks for what we spent. All the stuff you have to buy! Flares, storm sails, a heavy weather jib, and all at once that first year. Another \$2,500 bucks for a life raft seemed like just one thing too much, so instead of buying, I rented. Dumb, dumb."

They raced every subsequent Marion-Bermuda. "We never had an offshore gear failure to amount to anything," Judy says, but the winds of the 1991 race were a sobering experience.

by Gail Scott

Dick, above, replaced the ports after a sobering knockdown experience in the Marion-Bermuda Race. One neat innovation on Vixen is the swing-out radar screen which can be viewed from the helm.



Like “new”

“We were under once. We broached and slid down the face of a wave which landed on top of us. I was lying on the bunk with one of the plastic ports leaking in my face so I thought I’d do something with those,” Dick recalls. He replaced them when they got back.

The Kilroys also installed a cutter rig after that race. “We had hurricane-force winds and 40-foot seas,” Dick says.

“I estimated them at 25 feet,” Judy remarks. “The wind speed was pegged at 60 knots for eight hours. You can’t sleep when it’s like that. It’s like trying to sleep in a washing machine. Even though *Vixen* has a cored hull, it makes a lot of noise. It’s like a train — there’s water hitting the hull, stuff on the mast is banging around, the wood is creaking, and water is slapping the hull.” A cutter rig, they decided after safely landing in Bermuda, would be a more controllable rig.

Other gear

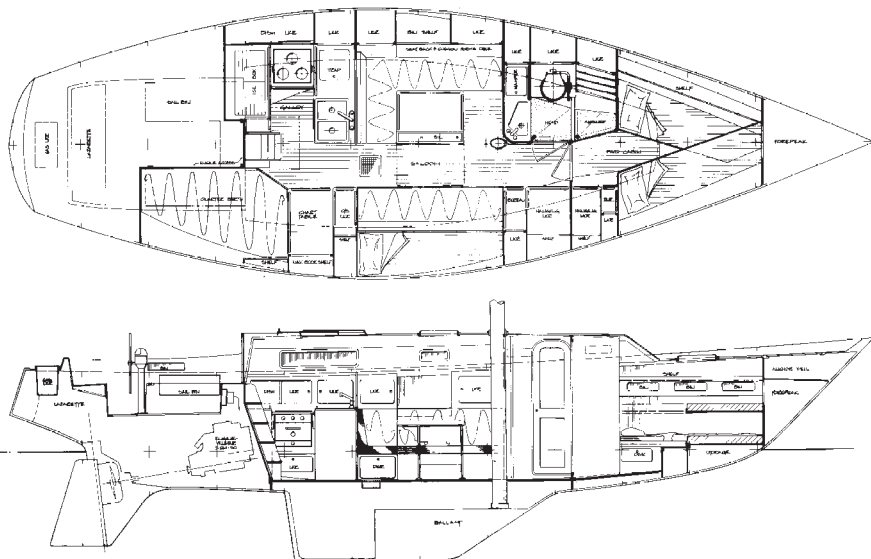
A year after they bought *Vixen* the Kilroys replaced the kerosene stove with a compressed natural gas (CNG) stove made by Shipmate. “With the kerosene stove, you needed kerosene and alcohol to start it. If you ran out of alcohol, you didn’t have the stove,” Dick says.

“And the kerosene was filthy on the bottoms of the pans,” Judy adds.

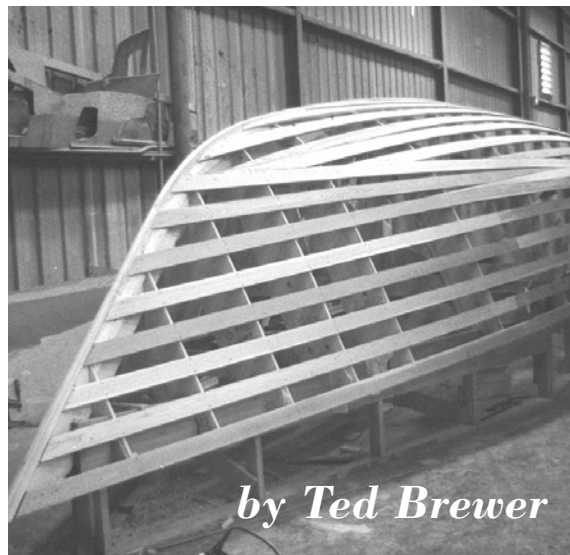
The boat didn’t have a propane locker so they went with CNG which the Kilroys feel is safer since it’s lighter than air.

They replaced the 44-size winches with three-speed Lewmar 48s in 1979, too. The 44s were undersized for the winds on Buzzards Bay. In the early 1990s, when they bought the reacher-drifter-runner, they added two-speed 25s as secondary winches. The 25s also serve to secure the headsail when it’s reefed.

They added a console for instruments at the head of the companionway when the boat was



Ted Brewer



Charlie Morgan had sold his interest in Morgan Yachts when we (Brewer, Wallstrom, and Associates) were approached by them in 1976 to design a 36- to 38-foot fast cruiser; there was no mention of its being a cruiser/racer, and that was never the intention at the time. I got hard at work at the drawing board and submitted several preliminary sketches showing possible layouts, outboard profiles, and sail plans. Morgan's brass picked out the one they liked, and then I was told they wanted to use an existing 36-foot, One-Ton Class, IOR racer hull, an old Charlie Morgan design, as the basis for the hull of the new yacht.

It had the typical faults of an IOR yacht of its era, with extremely pinched ends and a deck plan shaped like the ace of diamonds. This made no sense for a cruiser, so I was able to argue for a big change of shape. I fattened her up from midships aft, and then I fattened her up again, so that the 38's transom wound up being more than twice as wide as the One-Tonner's and with considerably more "beef" all the way down from sheer to centerline. Then I pulled out the bow, lengthening her to 38 feet. There was not much left of the original hull after that.

The powers that be insisted on a draft of 5 feet to please their clients in Florida and the Bahamas, so we gave her a new fin, a fat NACA section, in order to get the ballast as low as possible. At the same time, I persuaded Morgan to offer a 6-foot-draft version for skippers who were not concerned with shoal draft and wanted more performance. Then Morgan decided they wanted to investigate a super-shoal-draft keel shape patented by Henry Scheel, so I sent Henry the hull lines, and he drew up a keel to suit. Finally, to our relief, Morgan could not make a decision and decided to tank-test the hull using both keels.

The model was made with interchangeable fins and extensively tested at Stephens Institute. Jack

new. Dick and a friend who had bought a Morgan the same day created the console design and each had one constructed by a local craftsman named Brian Snow (*see photo on Page 8.*) The electronics are all analog, as opposed to digital. "We like pointers, which show history, better than numbers," Dick says.

They have an Autohelm 5000 that they use when motoring. "It will handle the boat under sail but I don't like to hammer the batteries," Dick remarks.

Having equipped the boat for offshore racing, they have a full complement of communications equipment, including a handheld VHF radio, handheld and hard-wired single-sideband receivers, and a 406 MHz EPIRB.

An Automac enables them to control the alternator's output. "It has a meter, so it tells you what it's done," Dick says.

The bilge pumps have been replaced quite a few times. Their Adler-Barber refrigeration was added "10 or 11 years ago." The clock, barometer, and oil lamp came from their previous boat.

The bunks have lee cloths "for offshore sailing, to keep you in your bunk," Judy says. "We spend a lot of time reading catalogues and thinking, 'Hmmm,'" she adds.

Dick also had the stemhead fitting rebuilt by Marine Fashion, of Guilford, Conn., to take 1 3/4-inch nylon tubing chafe gear on both sides — an important consideration in hurricane-prone New England waters. All too often, the cause of boats breaking loose during a hurricane in New England harbors is inadequate chafing gear.

They also added two mushroom vents when the boat was new.

In 1994 they installed a tricolor for running lights. "It's all your lights in one fitting with a 10-watt bulb so when you're sailing overnight the light won't hammer your batteries," Dick says. Since 1994, their batteries have been Sam's Club golf-cart 6-volt batteries, which they find work like a charm.

In the cabin they installed low-energy-demand Alpenglow lights, made by a company in Montana for people in the woods without electricity. "The guy found a way to hop up fluorescent bulbs big time," Dick says, "and if we're offshore at night we can turn on a red light so it won't blind people in the cockpit." (*See Alpenglow's ad on Page 72.*)

The Kilroys also added a deck wash so they can pump salt water to flush off the anchor and chain. They also have a fitting on the stanchions to hold a sailboard.

Maintenance

When the Kilroys took delivery on the Morgan 38, none of the wood surfaces had any kind of finish coat. The first season they put six coats of 626 Woolsey High Gloss varnish on the teak-and-holly cabin sole.

"We also did three coats of California satin varnish on all the other vertical teak below so it would look like it does this many years later," Judy says. "You need a sealer. Otherwise you get fingerprints all over the place. Sikkens Cetol Marine has been great on the toerail."

The Kilroys used Epifanes on the coamings and bridge deck. "It has held up well, but it's more work. We put eight coats on," Judy says.

The Kilroys have always done their own maintenance work, waxing the boat twice a year, among other things. After an initial winter in Barrington, R.I., for spreader repairs, *Vixen* was stored at Barden's Boatyard in Marion until 1985 when the Kilroys started having it hauled home — first to Holliston and now to their house in Marion — where *Vixen* is handy for maintenance projects such as replacing the opening ports in the cabin.

Whatever the Kilroys are doing works. *Vixen* looks like a new boat, inside and out. No wonder they couldn't find another 1978 Morgan 38 to suit them when they decided to purchase a second Kilroy cruising yacht for Caribbean adventures.



recalls the origin of the 382

Corey, head of Morgan's design staff, and I watched over the tests and were quite pleased to see that the chunky NACA fin was definitely superior in every respect, as we had both argued strongly for it.

Once we had the hull settled, I went back to Maine to complete the design of the interior layout, deck, and rig. At the same time, Jack concentrated on construction, coming up with an ingenious inner module that combined the water tanks with the basic furniture, all tabbed into the hull. He also worked out the engine installation and such details as chainplates and other fittings based on the builder's standard practice. There was no use re-inventing the wheel when Morgan yachts had been successfully building boats for many years, and Jack was one of the best men I'd ever seen at mechanical design and problem solving.

Finally, the great day arrived, and we were to take #1 on a trial sail. Jack Baratelli, the president of Morgan was there, along with Jack Corey, other Morgan luminaries, and yours truly. The 38 was skimming along. It was a great

| | Morgan 382 | C&C Landfall 38 |
|------------------------|-------------|-----------------|
| LOA | 38' 4" | 37' 7" |
| LWL | 30' 6" | 30' 2" |
| Beam | 12' | 12' |
| Draft | 5' or 6' | 4' 10" |
| Displacement | 17,200# | 16,700# |
| Ballast | 6,800# | 6,500# |
| Ballast Ratio | 39.5% | 38.9% |
| Sail Area | 668 sq. ft. | 648.5 sq. ft. |
| Displ/LWL Ratio | 270.6 | 271.6 |
| SA/Displ. Ratio | 16.0 | 15.9 |

day for a sail until it clouded over, as black as ink, and we found ourselves in the middle of a ferocious lightning storm! Morgan did not believe in lightning protection on their boats, and we had bolts hitting the water 50 yards from us. Being sensible people, we all hurried below and left Jack Corey at the helm until the storm blew over! Fortunately, he survived.

That was how the Morgan 382 started life. Eventually, we found that the boat was stiffer than we anticipated and could carry more sail, so the 383 came into being. I consulted over the phone on the changes, and Jack Corey did the actual work, giving her a taller mast and slightly greater sail area. The added sail was negated to some extent, though, as they also increased tankage and raised the displacement, so the 383 has a slightly lower sail area/displacement ratio.

However, any of the 38s will have had so much equipment added, so many changes and personal touches made by the owners, that none of the original figures will be correct today in any case. Their displacement/length ratios will be higher and displacement/sail area ratios lower than indicated in the table above.

I added the C&C Landfall 38 specs for comparison purposes, and I was very surprised at the similarity all down the line. I don't think I've ever seen two yachts so close in all their major particulars. I know that C&C were a great team of designers, so all I can say is that we must have done something

right to have the 38 come out so close in every respect. 

Lenny Reich of the Morgan 38 Owners' Group (see resources at left) adds this note: "Despite its being intended as a cruiser, tank tests of Brewer's hull at the Stephens Institute revealed a surprisingly fast shape, and the boat has competed successfully around the buoys and offshore since its introduction. Early M-382s came equipped with the Yanmar mentioned by the Kilroys; later ones came with the Perkins 4-108. The hull is solid glass below the waterline, foam-cored above. Storage is exceptional for a boat of its size. Substantial bulwarks around the deck add beauty and safety and, as with other Morgans, the M-38 is built like a tank. Many M-38 owners recount that they have kept their vessels year after year as sailing friends traded around. Even after they've looked carefully, most find it's difficult to replace an M-38 with anything that fits their needs better for less than \$100K."



Morgan 38 Owners' Group

Lenny Reich
RR2, Box 4440
Belgrade, ME 04917
LSREICH@colby.edu
<<http://www.colby.edu/personal/lreich/morgan.html>>

Other Morgan resources

Informal Morgan Owners' Group

kklein@mail.fsu.edu
<<http://mailer.fsu.edu/~kklein/>>

Morgan Email Discussion List

<<http://www.sailnet.com/list/morgan/index.htm>>

Morgan 22 Webpage

kamenmi@mail.auburn.edu
<<http://www.auburn.edu/~kamenmi/>>

Morgan 27 Webpage

x92jablonski@umich.edu
<<http://www.geocities.com/Colosseum/Track/1072/mpage.html>>

Morgan 41 Webpage

timothym@pacifier.com
<<http://www.pacifier.com/~sailing>>

The construction of the plug, above left, and one of the first boats, at right.



We wanted

We're not alone in being unable to afford a new offshore cruising boat, or even a recently built one. We are a bit unusual, however, because the older boat we've chosen for our ocean voyaging is built of wood. That can be explained, in part, by the appeal of wooden boats generally and by ours, in particular; she's a pretty, graceful boat, and a terrific sailer. But there are other elements to our decision as well, such as the seakeeping qualities, purchase price, repairability, and livability of many wooden boats. If you are partial to older boats and are looking for something different, a classic woodie might just be the answer.

Wooden boats can be very long-lived — a life span of 75 years or more is not uncommon. In our Pacific cruising, the oldest boat we've seen sailing was a beautiful 104-year-old gaff cutter. She not only looked good but was a capable and fast cruising boat as well. It's rare to find boats that old, though. "Youngsters," 30 to 60 years old, are more common. They'll likely be in need of a significant refit or repairs, but there is no reason a wooden boat of that age cannot be a strong, sound cruising boat.

While today's racing craft are unlikely to find favor with many cruisers, between 1930 and the early 1960s ocean racers and cruisers had a lot in common. Designs were, by and large, conservative, avoiding extremes in any respect; they were and still are excellent sea boats. They're usually heavier than modern designs of equivalent length, and their extra weight, in combination with a V or

wineglass hull form, generally makes them more comfortable at sea than a modern, relatively flat-bottomed hull.

Safe sea boat

Older designs will typically have low freeboard and moderate beam, attributes that translate into reduced initial stability and limited interior volume. On the other hand, these features make for a safe sea boat. Disasters such as the 1979 Fastnet Race have led to a concerted effort to understand the mechanics of capsize and survival in storm conditions. The research indicates that "traditional" hull forms have a much greater range of positive stability than do beamy, high-sided, and flat-floored hulls, making them both more resistant to capsize in the first instance, and less likely to remain inverted should capsize occur.

Heavy, comfortable, and safe: if this sounds like a recipe for a slow boat, think again.

Nomad, our 35-foot Cheoy Lee Lion, was built in 1964 to a design by the late Arthur Robb.

She's a mere 25 feet on the waterline, and, with a loaded displacement of about 16,000 pounds, her displacement/length ratio is a whopping 450. Conventional wisdom has it that such a D/L ratio produces a boat that won't move out of its own way. Yet she sails like a witch, doing 7 knots and more to windward in sheltered waters, and

covering at least 120 miles per day on most ocean passages, achieving less only when winds are very light.

Why? Much of the answer lies with *Nomad's* slippery wineglass hull and cutaway keel. These result in a surprisingly small amount of underwater wetted surface, making her easily driven in light air. As the wind increases and she heels, her narrow hull remains well balanced, which minimizes drag.

Many other traditional designs will share some or all of these qualities. Although probably lacking the flat-water top speed or downwind surfing ability of a more modern design, these older boats will give an excellent account of themselves where and when it counts most: sailing at sea with a small crew.

How much?

So wooden boats can sail well, and some may be survivors out at sea. But what of

the bottom line: what do they cost? And, once bought, what does it take to repair and maintain them? Let me relate our experience with our own boat.

One of the reasons we bought *Nomad* was her low price: we paid \$18,500 in 1993. This was in Honolulu, and prices for similar boats in other parts of the country may have varied somewhat. But in our area we would have been hard pressed to buy a boat of similar sailing abilities, but built of fiberglass or steel, for that amount.

**by Mark Smaalders
art and photos by
Mark Smaalders and
Kim des Rochers**

wood

But she did need upgrading. Some of the work was typical for any older boat. She'd been rerigged; her wooden mast and boom had been replaced by a tapered alloy spar. Both her standing and running rigging needed replacement, however, and we chose to do this with reusable Sta-Lok fittings rather than swages. The spars also needed painting and rewiring. Other fairly routine projects included repainting and applying new non-skid to her deck and cabintop, replacing the head and related plumbing, and replumbing several bilge pumps. The engine was in fine running condition, but we replaced the prop shaft, coupling, and a few engine accessories.

Unfortunately, she also needed some structural repairs, repairs of the type that have most sailors rejecting the thought of a wooden boat out of hand. *Nomad* is a production boat built by Cheoy Lee Shipyards in Hong Kong. As such, she was built to a price, and some economies made in her original construction caused the problems we faced 30 years later. She is built of strip-planked mahogany over steam-bent frames. Her planks are nailed every three to four inches with 3-inch (75-mm) copper nails and fastened to the frames with copper rivets and bronze screws. So far so good, but then came the cost savings: iron strap floors, which were copper riveted to the frames, iron bolts through the stem and stern posts, and cast-iron ballast with iron keel bolts.

This mixture of metals was *Nomad's* Achilles heel: 30 years of exposure to moisture in the bilge had caused many of the iron floors to waste away to

Wooden boats can be a good choice for cost, comfort, and old-fashioned seaworthiness

almost nothing. What's more, the frames were chemically destroyed in the vicinity of the copper rivets holding the floors to the frames. In some instances, the wood was softened only in small areas surrounding each rivet, while in more extreme cases we found the entire frame that lay beneath the floor strap was soft and stringy. But what it meant was that two-thirds of the floors and lower frame ends had to be replaced.

Critical steps

These problems didn't sneak up on us: we discovered them in the course of surveying *Nomad* before we bought her. Yet we went ahead with the purchase, because on balance she still represented a good buy. A critical factor for us was that we were able to isolate the serious problems and determine their cause. We were also able to map out a reasonable repair strategy, and come up with estimates of the cost, before closing the deal. These steps are critical for anyone buying a used boat in less than perfect condition, no matter what she is built of.

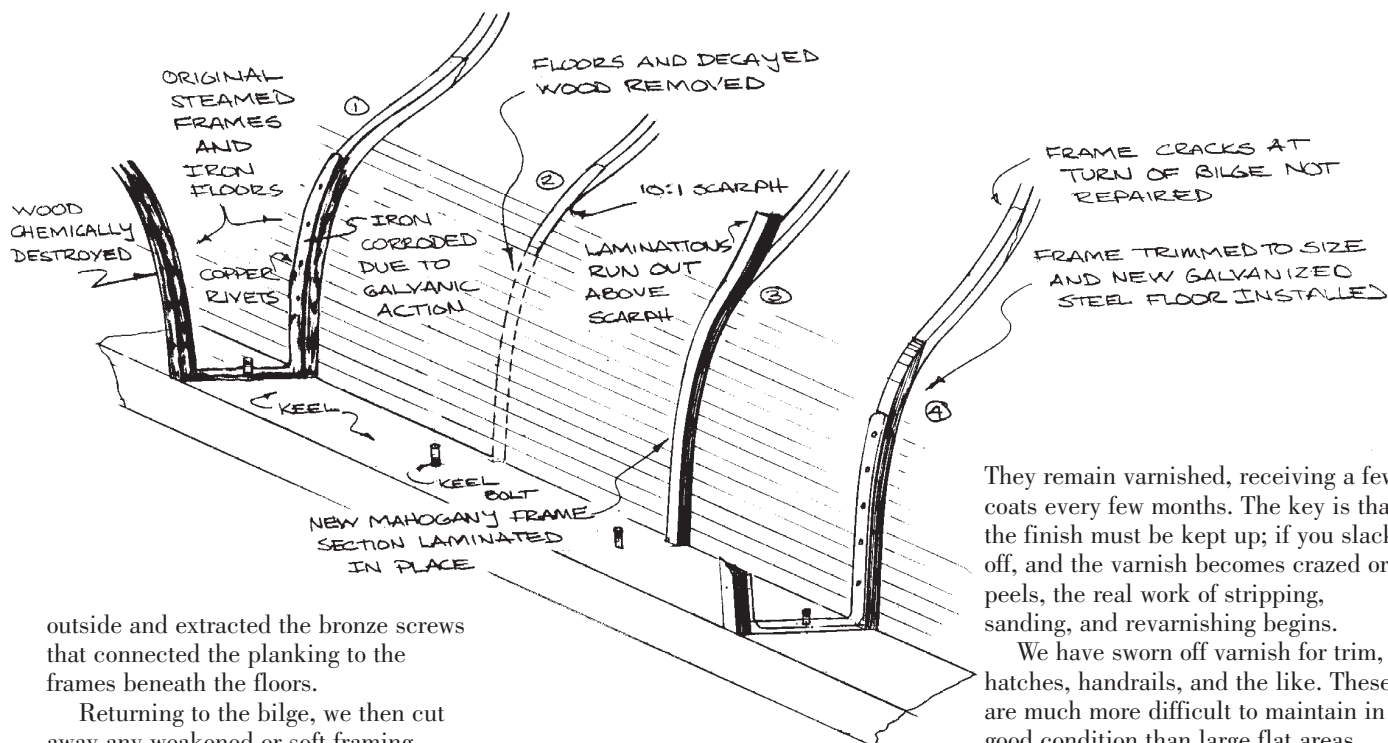
One of the biggest challenges in repairing an older boat is to keep the time and money invested in the project from getting out of hand. Approaches that are proper and cost-effective when building a new boat may not make sense if undertaken as repair work. This can

lead to a situation that we've seen repeatedly as we cruise the Pacific: sailors who have invested five or 10 times as much money in repairing and rebuilding their boats as their craft are worth, but who have not gained any advantages in terms of seaworthiness, comfort, or overall longevity compared with what a common-sense, well-thought-out repair would have achieved. How to avoid this? Always consider the problem and any proposed solution in the context of the overall boat, and be very mindful of practical difficulties and obstacles.

We faced a number of the latter. In our case, the work had to be accomplished as quickly as possible because of Hawaii's exorbitant haulout rates. Even so, they consumed about a third of the repair budget. We also had to plan the work so it could be done without reliance on specialized tools or skills; we lacked access to a workshop and had nothing but the simplest power tools. And finally, while we had a volunteer crew that was eager, our friends were essentially unskilled in boat-repair work.

Extracted screws

The approach we used to repair *Nomad* was chosen as a result of these limitations. After removing the remains of the original strap floors, we moved



outside and extracted the bronze screws that connected the planking to the frames beneath the floors.

Returning to the bilge, we then cut away any weakened or soft framing, beveling the ends to leave a 10-to-1 scarp that followed smoothly from the plank line to the inner frame edge (see illustration above). We then epoxied new frame sections directly to the hull, holding each subsequent laminate to the hull and/or preceding laminate with bronze ring-shank nails. As a result, we could laminate continuously, without waiting for the epoxy of a previous layer to cure; it also ensured that the fit was precise. The laminates were allowed to run out at the upper end, and when all were cured, we used an anglehead grinder to smooth and fair the frames.

The approach we chose was possible because *Nomad* is strip-planked. A strip-planked hull, particularly one in which each plank is glued to the adjacent plank, moves very little, and this allowed us to laminate new frames directly to the hull. If *Nomad* were carvel-planked, we would have been compelled to fit new frame sections without laminating them in place. This would have added significantly to the time and expense of our repairs. (See illustration on Page 16.)

With the lower frame sections fitted, we then installed the newly fabricated galvanized steel floors. These were cut, welded, and drilled by a local machine shop, using the original floors as patterns. After considering various possibilities, we chose to fasten them using stainless steel lag bolts, with both the bolts and the floors set in epoxy

resin. By bedding the floors and fastenings in epoxy, we sought to minimize their contact with the frames, thereby reducing galvanic action.

Regular maintenance

Structural repairs of this type are not needed often, fortunately; we expect our repairs to last as long as the original construction, or another 30 years. For many cruisers, it's the regular maintenance that spells trouble. We've found that the secret lies in being satisfied with a reasonable level of finish. Brightwork, the hallmark of many classic woodies, requires the most dedication, particularly if one is out cruising. Varnish that may require little attention in temperate latitudes will need frequent retouching in the tropics. The simplest and probably most sensible solution is not to have any, and although we've talked about it, to date we haven't painted *Nomad's* bright teak cabinsides.

They remain varnished, receiving a few coats every few months. The key is that the finish must be kept up; if you slack off, and the varnish becomes crazed or peels, the real work of stripping, sanding, and revarnishing begins.

We have sworn off varnish for trim, hatches, handrails, and the like. These are much more difficult to maintain in good condition than large flat areas such as cabinsides, due to the many corners and hard edges, where varnish typically wears and begins to lift. Our trim is all teak and suffers little from being left bare; most other woods should be kept painted or varnished.

We use one-part epoxy or enamel paint for topsides and deck. It's easy to apply and relatively long-wearing. The topsides receive two coats every year at haulout, and the deck gets a couple of coats every few years. This treatment keeps the boat looking smart with a minimum of upkeep and expense and frees us from agonizing over the fate of an expensive sprayed topside finish. Any delusions we had about maintaining a "boat show finish" disappeared when we began cruising in countries such as Papua New Guinea and the Solomon Islands, where the locals view their canoes — and your boat — as practical watercraft rather than objects of beauty. Dings and scrapes are inevitable.

Belowdecks in the finished Nomad, Mark studies a chart of possible cruising grounds.



Dry and quiet


Cruising aboard *Nomad* has also shown us how comfortable wooden boats can be to live on. They are quiet, inherently insulated against extremes of heat and cold and, if nicely finished, offer a soothing retreat. These may seem like minor points, but take on significance when your boat is your home. We've come away from dinner aboard friends' fiberglass boats amazed at the noise generated by waves slapping against the hull in only moderately choppy anchorages and thankful to return to *Nomad's* quiet cabin. Likewise, while even the relatively mild chill of spring or fall in New Zealand waters caused significant condensation for those on uninsulated glass or steel boats, we experienced no problems.

Wooden boats usually have less interior space than do fiberglass boats of similar length. The reason typically given is the wooden boat's structure, and it's true that the planking, frames, deck beams, and other structural members intrude on the interior to a greater degree than the structural features of a fiberglass boat. Much more important, however, are differences in hull

volume, which are a factor of the boat's basic design.

Nomad's planking is 1 inch thick, her frames are a bit under 1.5 inches, and she has a substantial keel and stem. A glass boat built to the same design would have a hull thickness of less than 1 inch, and no frames or internal keel. As a result, she would have slightly more room below. But either boat would have far less room than a 35 footer with a 12-foot beam, high freeboard, and a high cabin to boot. The amount of useable space on a boat is primarily one of basic design rather than construction material. There are older wooden boats on the market with considerably more freeboard and beam for their length than *Nomad* has, and their useable interior space is vast compared to ours, comparing much more favorably with that found on modern glass boats.

After the practical analysis is done, we feel wooden boats offer something extra — some very important tangibles. Boats built in the years we're discussing have character. Even if they are production boats, such as *Nomad*, they're built by hand, piece by piece. Thought and care went into the original design and construction of wooden boats. Their

lines are dictated by the dual requirements of the sea they sail on and the wood of which they are built. All of this produces character, and while that character can be imitated — countless fiberglass boats have been built that copy the look of a wooden boat, right down to the molded-in plank lines — it is never reproduced. We have yet to meet other wooden boat owners who don't recognize this spirit in their own boats. For most it is an important aspect of owning a boat. 

Mark started sailing at 10 on an 8-Ball dinghy his dad built. He studied boat design with the Yacht Design Institute and says any number of "next boats" sail across the drawing board. Since

buying Nomad in 1993, he and Kim des Rochers have been alternately sailing and repairing her in various parts of the South Pacific. They're currently in Australia.

Mark has a website which shows his recent designs and cruising philosophy at <http://smaalders.net/yacht_design/>.



Galvanic corrosion and wood


All metals suffer from electrochemical corrosion when they're immersed in an electrolyte such as salt water or wet wood. The corrosion rate varies; noble metals (such as copper and bronze) corrode more slowly than do less noble metals such as iron and steel. This explains why 90 percent of the iron stempost and sternpost bolts on *Nomad* needed replacing, whereas all the bronze and copper fastenings were in good condition.

In addition to the simple electrochemical corrosion that affects isolated metal fastenings and fittings, dissimilar metals that are in direct contact with each other and with an electrolyte will form a galvanic "cell." The resulting galvanic corrosion will result in an increased rate of wastage of the anode, or less noble metal, and a slower rate of corrosion of the cathode, or more noble metal. In our case, we found that the majority of the iron strap floors were severely corroded, some to the point where they fell apart while being removed, while the copper rivets that



secured the floors to the frames were in perfect condition.

Unfortunately, the effects of the galvanic cell are often not confined to the metals involved. The reaction between the anode and the cathode results in the

production of negatively charged hydroxyl ions in the electrolyte around the cathodes. In our situation, the cathodes consisted of the copper rivets holding floors to frames, while the wet wood of the frames themselves were the electrolyte. We thus had a buildup of hydroxyl ions within the frames, concentrated at the copper rivets piercing those frames; this resulted in a strong alkaline solution within the wet wood of the frames that attacked the lignin of the wood. 



Construction and repair

Wooden-boat construction methods include carvel, strip, double or triple planking, cold-molded veneers, and lapstrake. There are many variations to these general approaches, and the suitability of any repair technique must be carefully considered with regard to the nature of the damage, and the boat's construction. Carvel and strip planking are by far the most common for cruising boats of the vintage discussed here, and below is a closer look at what can be involved in a repair job with these types.

A damaged section of some 3 x 12 inches on a strip-planked hull can be repaired by cutting away any damaged wood, as well as any plank-to-plank fastenings that fall within the section. The sides of the resultant hole are then beveled, and a new plank section fashioned that matches the hole as closely as possible. If necessary, a backing block can also be made that is fastened to the inside of the planking. With the latter in place, a liberal coating of thickened epoxy is applied to all surfaces, and the new plank section

is drawn up tight against the backing block. Such a repair is simple to make and very strong; no special skills or materials are needed, with the exception of some epoxy.

On a carvel-planked hull, a damaged area of 3 x 12 inches would require replacement of a much longer plank section, as very short plank sections

lack adequate strength. The situation is

complicated further if the damage involves two or more adjacent planks, as joints in adjacent planks must be well staggered. A relatively small amount of damage may, therefore, necessitate the replacement of a sizeable amount of planking.

Conversely, carvel boats get my vote as being the simplest to repair if the repairs affect a large area, due to the ease with which a damaged plank can be removed. Anyone who's tried to remove the many nails that join strip planks to each other will have wished for the relative simplicity of carvel construction, where a damaged plank or

planks can be simply unscrewed from the frames. If the damaged plank can be used as a pattern, then the repair is further simplified, as the process of spiling (making a pattern for) a new plank is unnecessary.

Large repairs on a strip-planked boat are carried out in much the same way as the small repair already described. The primary difficulty lies in getting the damaged wood and fastenings out of the way, and appropriately beveling the resultant hole. Once this is done, fitting new planks is relatively simple.

Any repair job will depend on the availability of good-quality wood. Strip planking has the edge here, as the strips used for most boats won't exceed 1.5 inches square, while carvel planking stock may need to be 6 or 8 inches wide. Furthermore, the strip planks can be fashioned from kiln-dried wood, as the planks will be glued and nailed in place in such a way as to make movement all but impossible. Carvel planks should ideally come from air-dried, vertical-grain wood where the

STRIP PLANKING

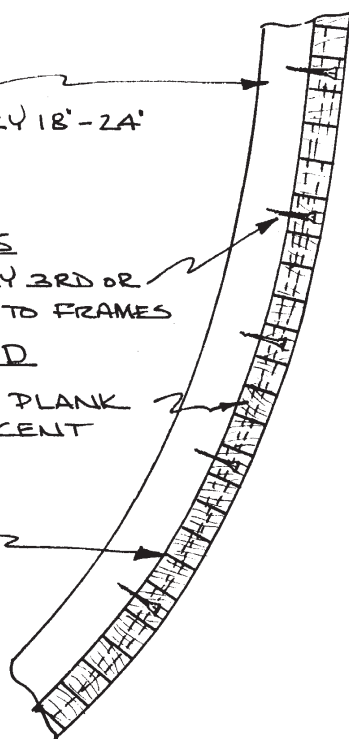
FRAMES
SPACED EVERY 18'-24'

FASTENINGS
FROM EVERY 3RD OR 4TH PLANK TO FRAMES

AND

FROM EACH PLANK INTO ADJACENT PLANKS

GLUE
BETWEEN PLANKS

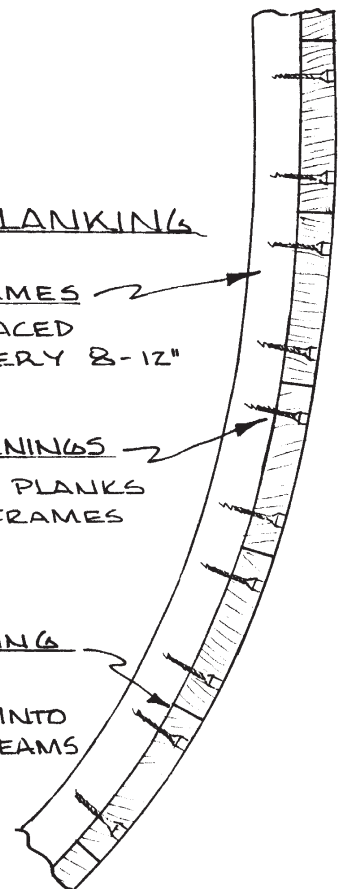


CARVEL PLANKING

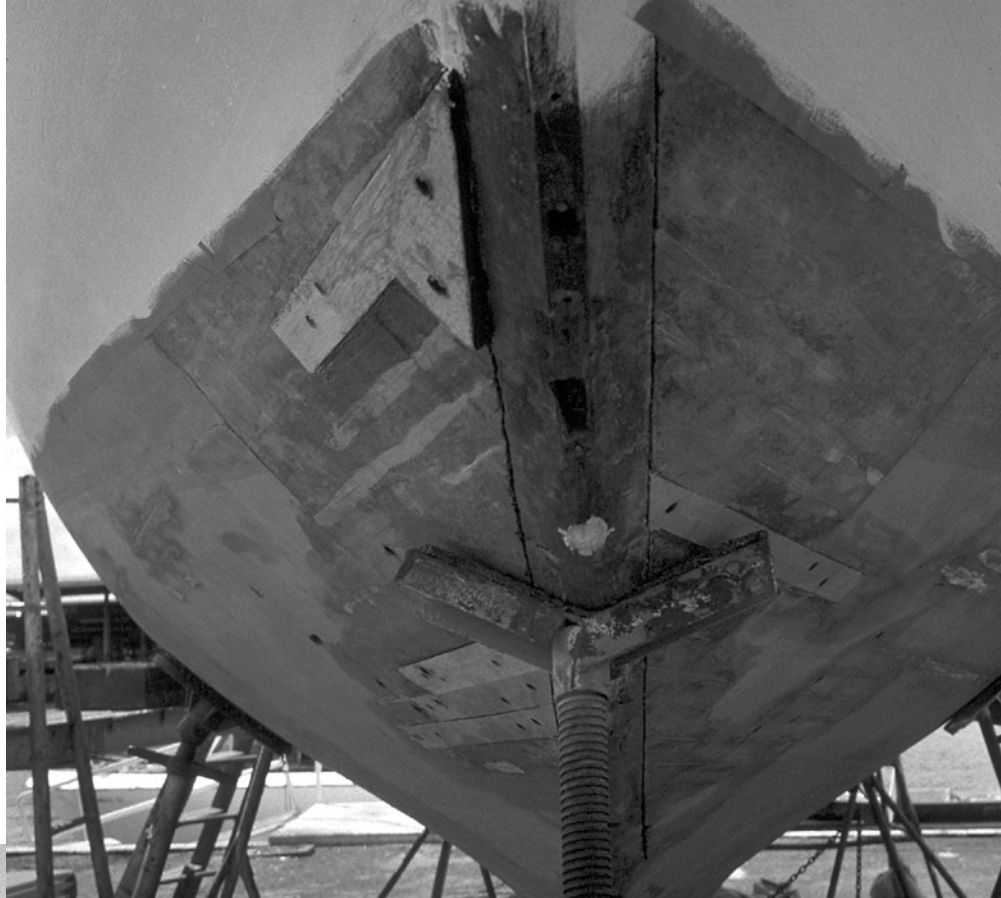
FRAMES
SPACED EVERY 8-12"

FASTENINGS
FROM PLANKS TO FRAMES

CAULKING
COTTON DRIVEN INTO PLANK SEAMS



moisture content and shrinkage characteristics are similar to the rest of the planking. This is because the carvel planks rely on the swelling of adjacent planks, both for watertightness and hull stiffness. Unfortunately, wood meeting these specifications can be difficult or impossible to obtain in many places, and will almost certainly be expensive. A little extra (or a little less) caulking cotton applied to the seams of repaired planks can help make up for differences in wood type and moisture content, but knowing how far to go with such adjustments can be tricky. In the end, carvel repairs require high quality materials and somewhat skilled labor; strip-plank repairs require tenacity and epoxy.



Mark made forward plank end repairs by removing the damaged wood and chiseling a scarp into the plank to accept a new plank section. In the bow-on view, above, the starboard upper section stands proud of the planking. The others have been planed smooth. Below, Nomad is ready for launch.

Repairs to frames — commonly needed on older boats, particularly when frames are steam bent — are simpler on boats with planks that are fastened to each other, as new frame sections can then be laminated directly to the hull, an approach not possible with carvel-planked hulls. In the case of repairs to backbone members, such as stem and stern post, carvel planking is preferable, as plank fastenings can be withdrawn and the planks backed off while the damaged member is repaired. This is not usually possible with the other construction methods, and backbone repairs are consequently much more difficult.



*Universal Rule . . . International Offshore Rule . . .
Thames Measurement Rule . . . International Rule . . .
Yacht Racing Association Rule . . . Bermuda Rule . . .
Cruising Club of America Rule . . . Royal Ocean Racing Club Rule . . .
Seawanhaka Yacht Club Rule . . . Performance Handicap Racing Formula . . .
International Measurement System . . .*

Rating rules shaped

The purpose of any rating rule is to enable yachts of different sizes to race together fairly. Without a rating rule there could be no enjoyable racing as, barring unforeseen circumstances, the largest yacht (and the richest owner) would always win. A good example of this is the famous race between the schooner *America* and the British yachts off the Isle of Wight back in 1851.

Due to several disqualifications, a grounding, and a collision, the serious British contenders were eliminated one by one, leaving only the smaller yachts and unwieldy topsail schooners to compete against the trim Yankee upstart. In the end, the 170-ton *America* finished first, but she was followed across the finish line only 8 minutes later by the 47-ton cutter, *Aurora*. If there had been any fair type of handicapping system in the race, by tonnage, length, or whatever, present day yachtsmen would have been competing for the *Aurora's* Cup this year, not the *America's* Cup.

Early attempts at creating rating rules were based on the old British tonnage measurement system, which was created in the Pleistocene era to

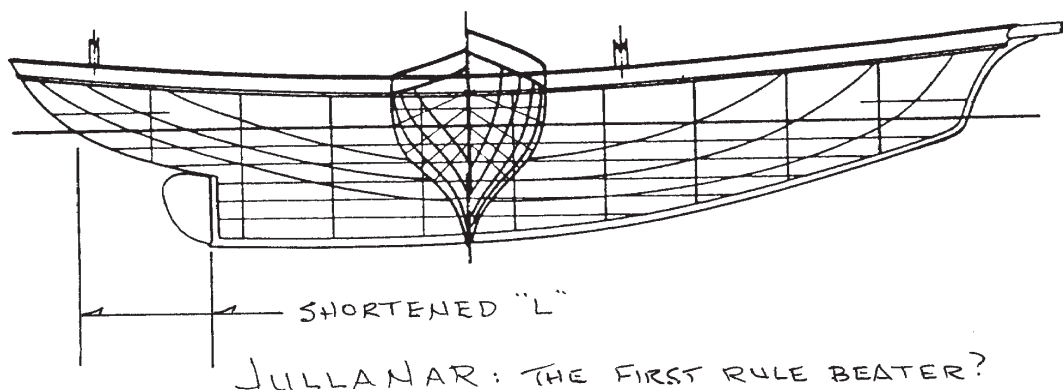
Ted Brewer explains how racing rules affected seaworthiness — but not always for the better

by Ted Brewer

calculate the tonnage volume of large, commercial sailing ships. It gave the vessel's carrying capacity in tons (at 35 cubic feet per ton) or, as some believe, in "tuns" (casks of wine). Sail area was not included, of course, nor were any credits given for less efficient rigs so, naturally, in the yacht-racing field the cutters predominated. Eventually, this rule was modified in 1854 as the Thames Measurement Rule: $Tons = ((L-B) \times B \times .5B)/94$. (L = length stempost to sternpost and B = maximum beam.) But rigs were still ignored, and the depth measurement was eliminated.

Moved rudder

An easy way to beat such a rule is to shorten the keel measurement, and E. H. Bentall did this with the design of *Jullanar* in 1875 by moving the rudder radically far forward. (*Remember, this moves the sternpost -eds.*) *Jullanar* received a lower rating as a result, won more than her share of races, and was the first of the rule beaters. Because beam was such a large factor in the rule, another way to lower the rating was to make the yachts narrower and narrower. *Jullanar* was certainly slim, but the rule finally resulted in freaks like the *Oona*, with a beam 1/6 of her



our boats

waterline length. Attempts were made to encourage greater beam by the 1881 Yacht Racing Association Rule, $((L + B)^2 \times B)/1730$, but the *Shona*, designed in 1884 by the famous G. L. Watson, was 42 feet overall, 5 feet 9 inches in beam, 6 feet 3 inches in draft, and carried 1,640 square feet of sail!

Small Yachts, by C. P. Kunhardt, published in 1891 and republished by WoodenBoat Publications, Brooklin, Maine, in 1985, shows a number of these narrow beamed, plank-on-edge cutters. One of my favorites is the *Spankardillo* (what a grand name!), which was 36 feet overall, 30 feet on the waterline, 5 feet in beam, and 6 feet 2 inches in draft. You may be wondering how these skinny cutters could stand up to their tremendous press of sail in a breeze, but the answer is simple: heavy displacement and lots of lead down deep. "Spanky" displaced 19,000 pounds and 12,300 pounds of that was lead — a 65-percent ballast ratio!

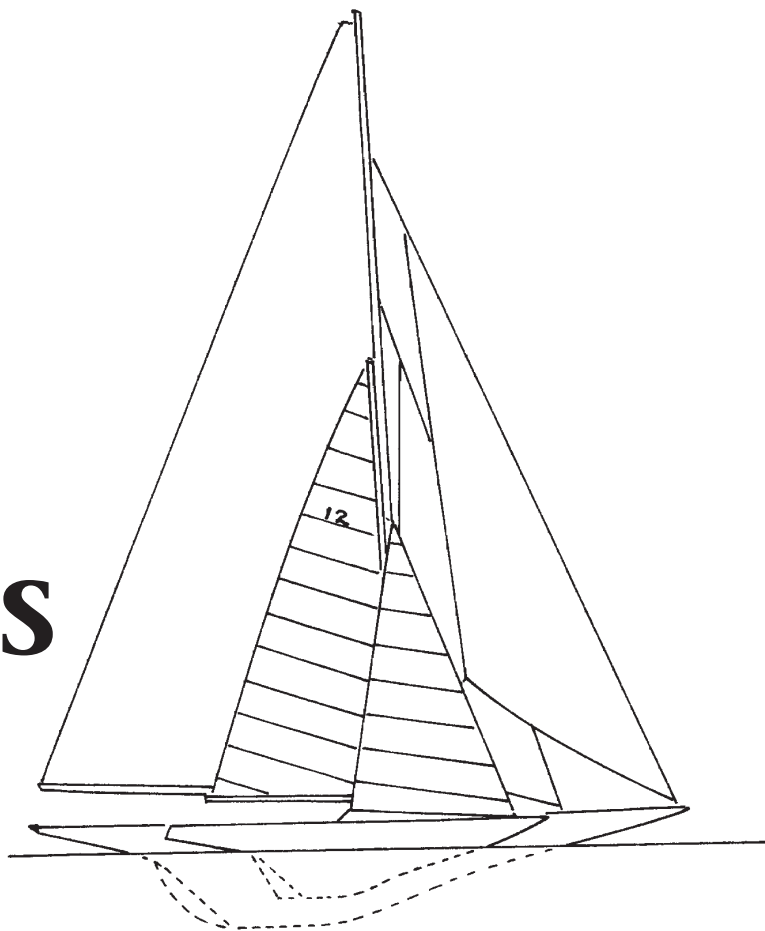
Another example, shown in great detail, is the Watson-designed *Madge*, 46 feet overall x 39 feet 9 inches LWL x 7 feet 9 inches beam x 7 feet 7 inches draft, displacing 39,000 pounds and carrying a lead mine of 23,500 pounds (63.5 percent ratio) on her keel! Unlike many modern yachts, *Madge* was much more stable right side up than upside down, although her accommodations left a bit to be desired!

Carried to excess

The British measurement rules and the narrow British cutters never caught on in the U.S., and yachts on this side of the pond developed very differently, having somewhat greater beam and less draft. This was carried to excess in a

"If there had been any fair type of handicapping system ... present-day yachtsmen would have been competing for the Aurora's Cup this year, not the America's Cup"

few cases, as such things always are, and a very beamy 128-foot center-boarder, with sail set, capsized at anchor in New York harbor with some loss of life when several guests were trapped below. However, mainstream American yachts were more conventional and *Small Yachts* shows



COMPARITIVE SIZES : 12 METER & J BOAT

plans of a number of craft that are quite practical even by contemporary standards. The 24 foot 6 inch *Columbine*, and the 25 foot 10 inch *Mignonette*, are two of my favorites and, even today, they'd be great fun to sail and cruise and would definitely draw envious eyes wherever they sailed.

The racing yachts in the U.S. developed along different lines, unfortunately. The Seawanhaka Yacht Club developed a rating rule in 1882 that placed the emphasis on length and sail area and ignored beam altogether. The result was inevitable; racing yachts became short on the waterline and gained stability by great beam. Perhaps the epitome of this insanity was the *Outlook*, designed by Starling Burgess, of 52 feet 7 inches LOA, 20 feet 10 inches LWL, 16 feet beam, and 1,800 square feet of sail.

The fin keel was invented about the turn of the century partly in response to this rule, and Captain N. G. Herreshoff designed and built *Dilemma*, the first successful and well engineered example of the type. Naturally, others designed extreme fin keelers following her success, so the type fell into disrepute when a few poorly engineered boats succumbed to structural problems.

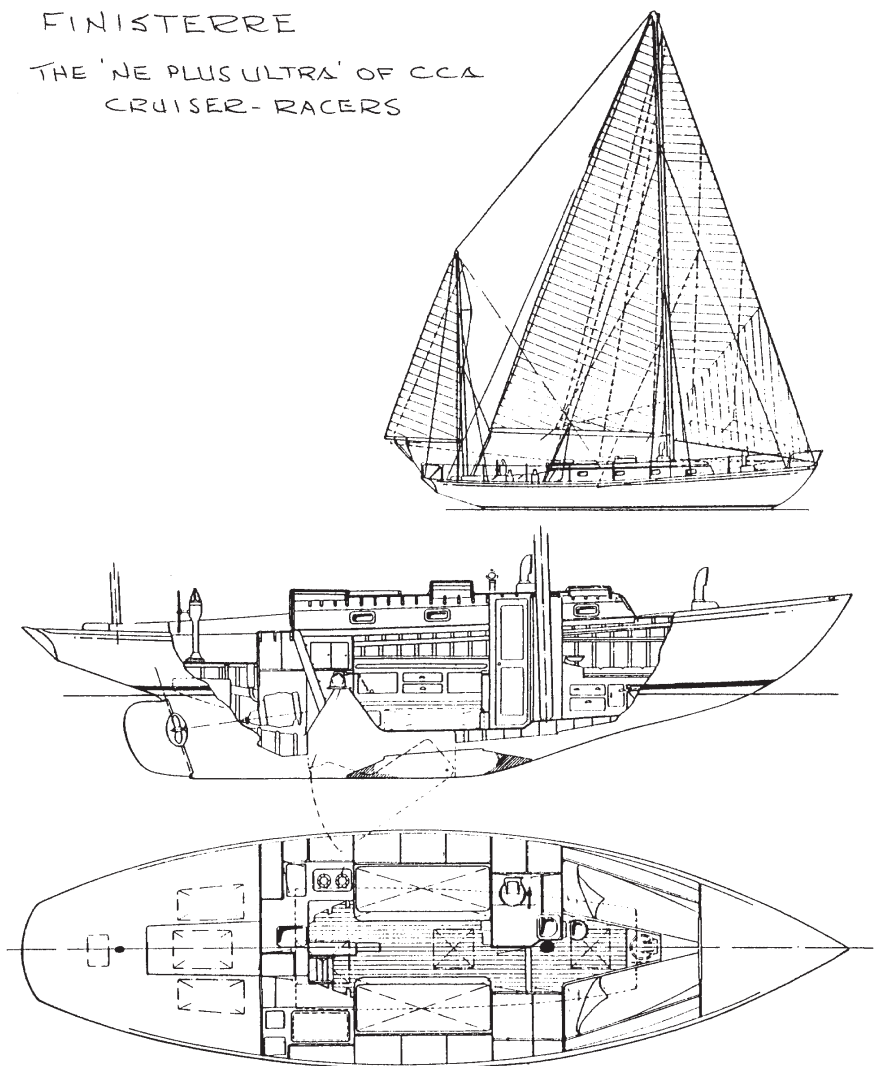
In 1902, the New York Yacht Club adopted a rating rule developed by Herreshoff. Its first simple form was $Rating = .18 \times ((L \times SA^5) / D^{.333})$ which became known as the Universal Rule and, by 1906, was quite popular. However, such a simple rule can easily be beaten, so in order to plug the loopholes the rule became more and more complex. Still, it was used well into the 1930s in the J, M, P, and R classes, each with a maximum rating under the rule. I was born too late to get involved with it, but R boats are the smallest, in the 40-foot range, P boats were a little over 50 feet, M boats even larger and J boats huge, 130 feet or so!

Meter yachts

Men were still working on the other side of the Atlantic to develop a rating rule, and in 1907 they devised a variation of the YRA Rule, called the International Rule. Under it the 6-, 8-, 10-, 12-, and 14-Meter yachts were developed, but readers must note that there is no single measurement in any of these classes that gives them their name. Rather, the rating of "X" meters is developed from a complex formula of measurements taken off the yacht and, on top of that, there are limitations on beam, draft, mast height, etc. within each class.

Too, the larger yachts such as the 8-, 10-, and 12-Meter boats, were required to have minimal "cruising" accommodations, and all had to be built to scantlings established by Lloyd's Register of Shipping. These ensure that the yacht is built to reasonable standards of structural strength so that, to my knowledge, not one has ever broken in two as did one of the contenders for the recent America's Cup nonsense. Indeed, the *American Eagle*, built by Luders in 1964, was converted to an ocean racer in

FINISTERRE
THE 'NE PLUS ULTRA' OF CCA
CRUISER-RACERS



'68 and, with Ted Turner as skipper, took part in distance races all over the world from Australia to Europe, with much silverware to her credit. Despite this hard usage, she is still sailing and racing in Newport, R.I., some 36 years after her launching, thanks to the quality ensured by being built to Lloyd's Rules by superb craftsmen.

I began my distance racing in the late '50s aboard an 8-Meter, the *Vision*, on Lake Ontario. You may find it hard to imagine a 48-foot yacht that was steered with a tiller, but those 8s were beautifully balanced craft and a dream to handle.

The old *Vision* was quite comfortable for a weekend or longer race, with good berths, a workable galley, and an enclosed head. The cruising accommodations on the last of the 12s did leave something to be desired, as I know from experience. I designed the accommodation plan of *Eagle*, and she had Dacron berth bottoms with 1/4-inch thick mattresses, a sink that had to be taken up and emptied overboard, and a head out in the open in the middle of nowhere.

"This was carried to excess in a few cases, as such things always are, and a very beamy 128-foot centerboarder, with sail set, capsized at anchor in New York Harbor"

It met the intent of the rule, if not the spirit, and other 12s were similar in an attempt to keep unnecessary weight to a minimum.

Bermuda Rule

Still, the Universal Rule and International Rule yachts were, basically, inshore racers rather than ocean racers so, in 1928, the Bermuda Rule was created. It took in length, beam, sail area, and depth, and had a rig allowance, with yawls rated at 93 percent, and ketches and schooners at 90 percent, of their measured area. L, or length, was measured at a height of 4 percent of the LWL above the LWL, and so was an attempt to eliminate the real freaks with long, overhanging ends. Again, over the years, the rule was changed and became much more complex in order to eliminate the rule beaters. Eventually the Cruising Club of America Rule was the final development. It considered length as the basis for the rating and then had adjustments for beam, draft, displacement, and sail area, plus correction factors for stability and propeller.

At the same time, on the other side of the Atlantic, the Royal Ocean Racing Club developed the RORC Rule for offshore yachts. It had many similarities to the CCA Rule, and certainly a similar intent, but whether it was the rule or tradition, the British ocean racers were always less beamy than their American cousins and favored sloop and cutter, rather than yawl, rigs.

In the '50s and early '60s, the CCA Rule used the displacement that the designer calculated from the measurer's flotation figures, and the rule established the basic stability from the designer's reported ballast. A credit was given for heavy displacement, and another for a low ballast/displacement ratio, so, naturally, there were designers who were so anxious to win that they might stretch the displacement a pound or two when reporting it, and knock a bit off the ballast at the same time. Too, measuring the flotation of a yacht on a breezy

“In a very short time, designers were coming up with weird shapes with chines and/or great tumblehome in order to fool the rule into thinking that the midships was bigger and the boat was heavier than its true displacement”

day was less than exact and displacement figures could be off hundreds of pounds as a result. As to stability, one designer of a fiberglass 40-footer used a big, heavy steel pipe for the structural “keel” and was able to reduce the actual ballast as a result, so that particular boat received a nice ballast credit and was very successful.

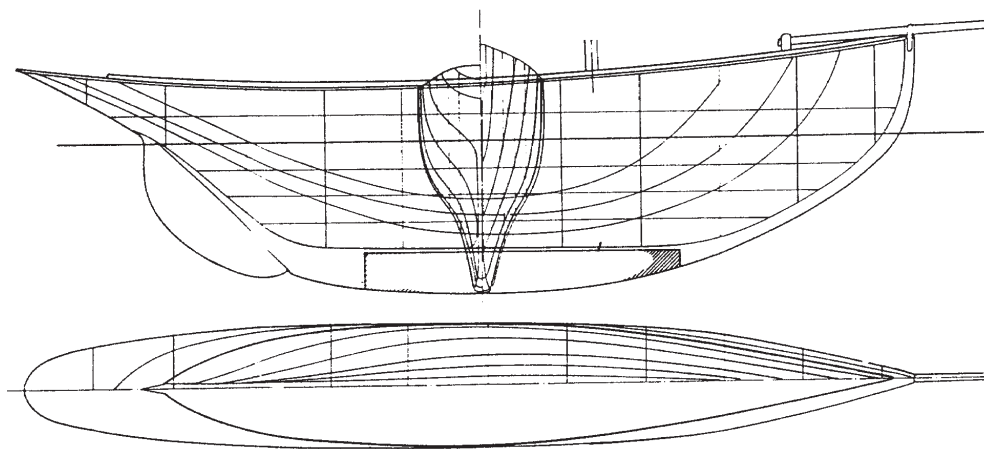
No mainsail

There were many other innovative gambits. Ray Hunt sailed a sloop as a catboat by not setting any headsails and did quite well. Bill Luders sailed *Storm* without any mainsail and also won his share. I designed a 33-foot schooner, *Ingenue*, which was rated with a small Bermudian foresail, which she rarely set. Instead, she raced with a huge “fisherman staysail” that set on the foremast sail track, completely filled the space between the masts and overlapped the mainsail like a genoa jib. She gained quite a bit of silver, too, particularly in races where there was a fair amount of offwind work.

One true rule beater was the 1950s Olin Stephens-designed *Finisterre*. This beamy keel/centerboard yawl took advantage of the rule without really bending it. Her wide beam (moderate by today's standards), shoal centerboard draft, hefty displacement, modest ballast, and yawl rig

combined to give her a favorable rating. Combined with Olin Stephen's design genius and Carleton Mitchell's expert handling, she was *the* boat to beat in any race she entered, and won a room full of trophies. *Finisterre's* success inspired a host of keel/centerboard yawls, ranging from Bill Shaw's lovely little 24-foot MORC racer, *Trina*, to Bill Tripp's handsome Block Island 40 and Bermuda 40 and big 50-plus footers such as the beautiful *Innishfree*, designed by George Cuthbertson, founder of C&C Yachts.

To keep ahead of the tricksters, the CCA committee kept inserting new paragraphs, outlawing most of the rule-beating stunts. By 1967 they had changed the rule so the boat had to be weighed to obtain her displacement, and stability was measured afloat by shifting weights instead of relying on the designer's often inaccurate ballast figures. The 1967 CCA rule book took about 40 pages to detail the measurements and calculations and to explain the rule.



A TYPICAL 6 BEAM ENGLISH CUTTER

*“The IOR . . . did nothing
to encourage husky construction
and, due to their light weight,
the boats had insufficient
strength and stability”*

Very competitive

Despite the rule changes, well designed yachts, such as the keel/centerboarders, and keel yachts, like the Concordia yawls and the Luders 33, remained very competitive in coastal and offshore distance races. However, changes were on the horizon. Bill Lapworth had reinvented the wheel in California with the fast, fin-keel-and-spade-rudder Cal 40, the first largish fin keel yacht since the type died out in the early 1900s.

At first, many East Coast sailors pooh-poohed her as a downwind screamer, best suited to the TransPac and similar off-wind races, but they changed their minds when the swift Cal 40s began to appear on the East Coast in the mid '60s and started to gobble up the silver. Then, when a Cal 40 won the Bermuda Race in '66, the rush to fin keel/spade rudder designs was on and the popular keel/centerboard yawl was left in their wake.

In those days, no one really knew which type of fin was the most effective, so there were many weird and wonderful shapes tried for a while, from extremely raked designs to fancily shaped shark fins. Eventually, it turned out that Bill Lapworth had figured it right in the first place, and most cruising boat fins even today (except for the bulb or winged type) are fairly close in lateral profile to the old Cal 40's squarish fin.

All good things come to an end, though, and so did the CCA Rule. The International Offshore Rule was adopted in 1970 to prevent yachts from having to be remeasured under another rating rule every time they sailed off to race in a foreign country. The early IOR had its faults, of course, and the rule was modified many, many times over the years. Basically, the IOR tried to estimate the displacement of a yacht by measuring beam and depth amidships. The theory was that all sailboats have prismatic coefficients in the .54 to .56 range so, by estimating the midship area you can estimate the displacement. In a very short time, designers were coming up with weird shapes with chines and/or great tumblehome in order to fool the rule into thinking that the midships was bigger and the boat was heavier than its true displacement.

Girth stations

Also, under the IOR the measured length (a major factor, of course) was based on the distance between girth stations, measurements taken at the hull ends. It took two pages in the rule book and a mess of diagrams just to explain how to establish these girth stations, and the whole rule took almost 60 pages to cover the calculations, with some 60 diagrams to explain how and where to measure this and that. Again, designers took advantage of the rule, using extremely pinched ends in order to move the girth stations toward midships and shorten the rated waterline.

It was about this time that I decided I didn't want to design racing yachts anymore. Actually, I did design one IOR yacht, a 37-footer, which had trim tabs fitted at both the fore and aft ends of her fin keel. Unfortunately for the owner, whose idea it was, the trim tabs were outlawed before she was launched. Oh, well!

The early IOR yachts were rather strange looking to my eyes, as the boats were fairly beamy but the ends, both bow and stern, were very pinched and the deck plan wound up looking like the ace of diamonds. If you see a yacht with a transom that resembles the letter V, then she's probably an early IOR boat!

The problem with the rule, in my opinion, is that it produced unseaworthy yachts. The CCA boats received a credit for heavy displacement and a credit for moderate ballast. This ensured yachts that were strongly constructed, as weight in the structure was not penalized. Indeed, this helped to lower the rating! The IOR, on the other hand, did nothing to encourage husky construction and, due to their light weight, the boats had insufficient strength and stability. The result was yachts that could not stand up to heavy weather, as was shown in the Fastnet Race in 1979, when so many yachts capsized or foundered, and sailors died.


Equal chances

Since then, the rating system has been

changed and many coastal cruisers now race under the Performance Handicap Rating Formula that establishes a rating for a yacht, or a class of yachts, and allows that rating to be altered if the yacht continually wins or loses. The

“rule” is an attempt to even out the handicaps, so that every yacht has a chance at the silver if she has good gear, is well sailed, and has her fair share of luck. The PHRF has proven deservedly popular on both East and West Coasts for good reason, as good old boats can have fun racing despite their age and despite how they would have rated under the CCA or IOR formulae.

Unfortunately, serious long-distance ocean racing seems to have left the mainstream of sailing now, and the boats that take part are built regardless of cost, are owned by millionaires and, in many cases, are sailed by well-paid skippers and large crews. The boats are rated under the IMS rule, but I am so completely disinterested in it that I don't even know what the letters IMS stand for or how the rule works and, Scarlett, I don't give a damn. (*We looked it up: International Measurement System -eds.*)

I will not even grace them with the name “yachts” anymore because a yacht is a boat built for pleasure and there is not much pleasure in sailing aboard a modern ocean racer. I've been on ocean races where we sang sea chanteys on watch, had a happy hour in the late afternoon, roasts and pies at dinner, and a bottle of good wine to wash it down. We sailed for fun, and we won our share. That's pleasure, but I doubt if the today's owners and sailors get any true pleasure out of their sailing, unless they win! 

Ted Brewer is one of North America's best-known yacht designers, having worked on the



America's Cup boats, American Eagle and Weatherly, as well as boats that won the Olympics, the Gold Cup, and dozens of celebrated ocean races.

He also is the man who designed scores of good old boats . . . the ones still sailing after all these years.



Beyond the label

“Varnished wood on a fiberglass boat is a waste of time,” says my neighbor, who is a devout wooden-boat fan. “You’re just trying to cover up the fact that you’re sailing around in a big Clorox bottle.”

Like all zealots, my neighbor overstates the case a tad. So when I gently pointed out that all paints and varnishes are intended to be coverups, even when used on wooden

boats, he turned away in disgust. But in its most basic form, any coating on wood, fiberglass, steel, aluminum, or ferroconcrete is meant to do just one thing: protect the underlying material.

In fact, wood needs protection at least as much as any synthetic material, usually more. And so, every spring, owners of good old boats must decide what wooden parts of their boats get rejuvenating coats of paint or varnish. From companionway hatches and handrails to dinghy thwarts and navigation tables, a glossy new coat or two of finish today will always bring compliments for the rest of the sailing season.

Most oil-based paints and varnishes come with specific instructions on how to get the best results. If you carefully follow all the directions on the can, you can expect a handsome finish that will protect the surface and increase the life

expectancy of the object under the new coating. But over the years, I’ve learned some small but essential painting and varnishing techniques that go beyond the can’s directions. Using

them, I’ve achieved better results, saved some time and money, and maybe even improved the environment.

Cold cure

Too often, many paint and varnishing jobs are postponed or even canceled because you’re waiting for “just the right weather.” This is usually defined as dry sunny days with temperatures in the high 70s. In Maine, the sailing season would

Beautiful brightwork makes beautiful boats. This shot, from the Independence Cherubini Company, shows the pains these craftsmen take to make their boats glow. More on Cherubini’s on Page 36.

be half over if I held out for those conditions.

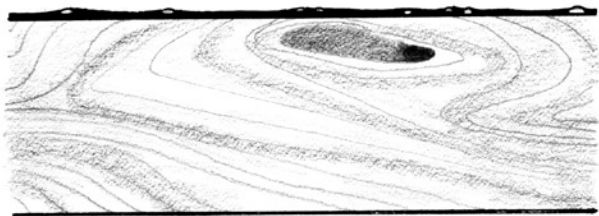
Instead, I’ve found I actually get better results if I paint and varnish when temperatures are in the 40s and 50s. In fact, if you can work in a garage, under a winter cover, or in some other outside shelter, painting during cool, damp, or even rainy weather works best. Here’s why:

Most oil-based paints and varnishes need time to “lay down.” This is a process by which the layer of finish spreads evenly over the surface of the object. Done properly, the finish lays

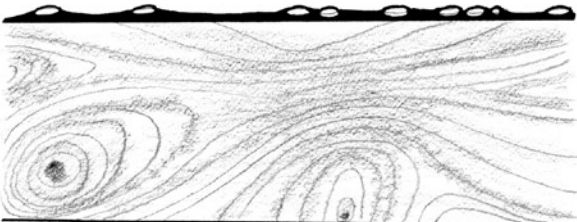
*by Ken Textor
illustrations by
Hilary McNally*

*A few tricks of the trade add sparkle
to springtime varnishing rules*

50 degrees



65 degrees



With some porous woods, trapped air will expand when the temperature rises, causing bubbles to form in the uncured finish.

down without any sags, runs, curtains, or drips, resulting in a gloss that rivals a mirror.

However, in warm dry weather, the amount of time for a finish to lay down is decreased. The finish “sets up” quickly, very often before you can spot imperfections and brush them out. But my cold-cure method of painting significantly retards the drying process. This gives you plenty of time to see all the problems and fix them before they become permanent.

As for doing finish work in a shelter on rainy days, I’ve found the advantages are twofold. First, the dampness keeps dust, bugs, and other airborne miscreants to a minimum. This is important for a contamination-free finish. Also, the dampness allows me to paint at slightly higher temperatures and still have a slow cure. So even with temperatures in the 60s or low 70s, a finish brushed on during a rainy day has plenty of opportunity to lay down properly, plus I have ample time to correct problems.

The only drawback to the cold-cure finishing technique is when it’s used on bare porous woods like Spanish cedar, some mahoganies, or oak. In this situation, a modest change in temperature (15 degrees or so) can make the finish bubble up out of the pores when the temperature rises (*see sketch above*). In fact, I’ve seen this happen in perfect finishing weather, particularly when the object is finished in the shade and the sun hits it a few hours later.

Preventing this problem is easy, though. Most paint and varnish manufacturers offer a paste filler specifically designed to smooth a porous surface before the finish is applied. Most paste fillers are available in various colors or in a semi-clear formulation.

Using the cold-cure method, I’ve found it only takes an extra day or so for the finish to cure completely. If you do your boat

maintenance on weekends, it’s therefore best to save the finish job until Sunday morning. That way you won’t care about the extra day for curing because you’ll be back at your regular work anyway. Moreover, you can spend Sunday afternoon hunting down and correcting imperfections that develop as the finish lays down.

Sags and drags

Even using the cold-cure method, some day you will face a sag, curtain, drip, or other blemish in your finish (*see sketch at right*). As already mentioned, if you catch this before the finish has cured, the problem can be brushed out.

This is done with a natural-bristle brush that has just enough of the finish on it to coat but leave the bristles very loose. It’s called a “dry brush,” which is not the same as a “clean brush.” A dry brush’s relative lack of paint or varnish helps pick up some of the excess paint causing the drip, sag, or curtain. Avoid using a clean

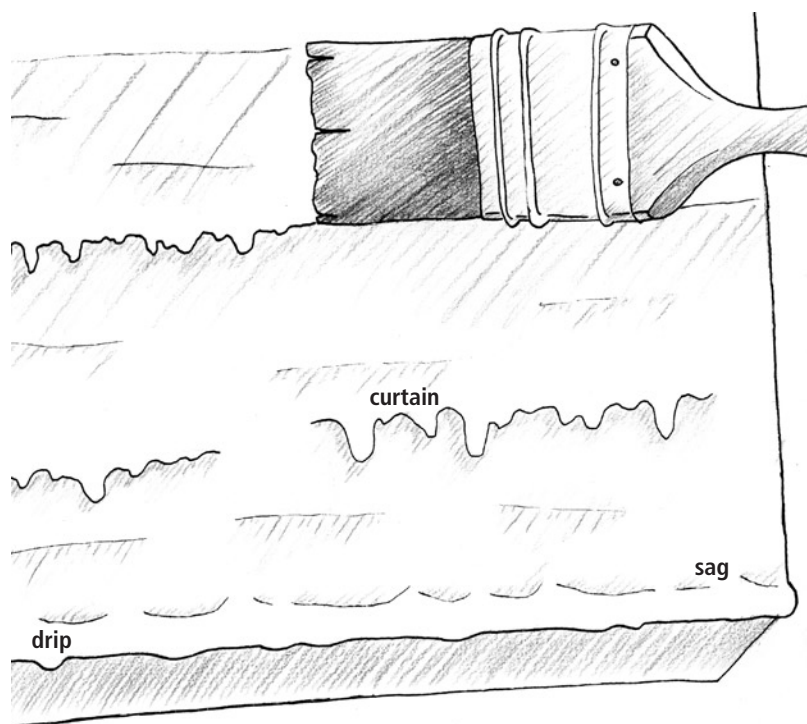
brush (no paint or varnish on it at all) or a brush that has been recently cleaned with thinner. Both will create more problems than they solve.

Unfortunately, sometimes excessive-paint defects turn up after most of the new coating has cured. Though difficult, remedial action is still possible.

Sags, curtains, and drips are all a result of excess paint or varnish building up. This is important to keep in mind because fresh excessive-paint or varnish defects usually have not completely cured; just the defect’s surface has cured. So removing defects is a job for a razor, not sandpaper. If you use sandpaper, once it breaks the surface of the defect, the underlying damp paint or varnish will clog the sandpaper and spread a sanding dust/uncured paint or varnish all over the immediate area. Sanding may also gouge out some finish material, leaving a slight depression where the bulge was.

A single-edge utility razor is the best tool for this job. Hold it at a low angle to the surface and slice off the top of the bulging paint or varnish. This will cut the bulge level with the surrounding cured paint and also give the uncured paint or varnish under the bulge a chance to dry.

Once it does dry (usually in a day or two), it can be sanded smooth with 180-grit sandpaper. Then all of the paint or varnish can be pre-sanded with some



320-grit sandpaper and another coat applied. But remember, as the paint cans always warn: two thin coats are better than one thick coat.

Spot repairs

Sometimes, a spot repair is necessary before the entire object is refinished. Oil-based paint is easier to repair than varnish, but both require steps you won't find written on the can.


Before you begin a repair, be sure it's not indicative of a more serious situation. Peeling paint or varnish may signify incipient rot in the structure underneath the paint. Gently probe the area in and around the peeling finish with a thin-bladed, sharp-pointed knife. If the blade slips more than an eighth of an inch below the structure's surface, you've probably got rot problems.

On the other hand, peeling paint or varnish may just be indicative of a sharp blow to the area from a previous season. In varnish, such a blow can also cause a symptom known as crazing, which is characterized by lots of small cracks radiating out from a central point. In either case, all of the finish in the area plus about two inches beyond the area must be removed by scraping and/or rough-sanding. Then the area is sanded smooth. Then tape the area off and begin filling.

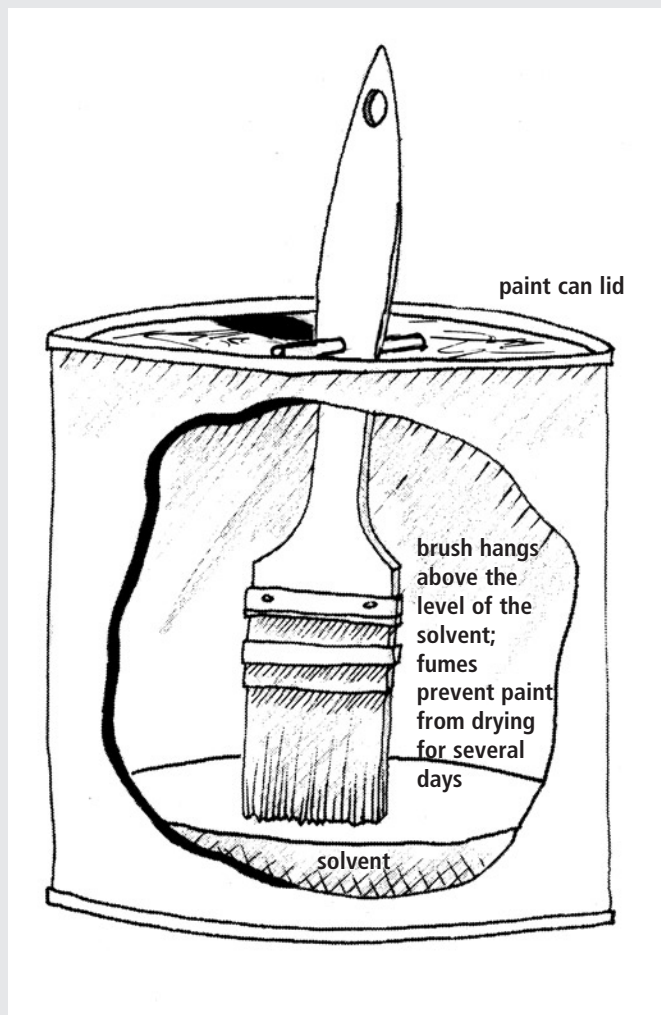
For paint, there are opaque fillers that have so much body you'll be able to fill and begin repainting the entire object in a day or two. Most paint companies have a list of recommended fillers and their uses.

For varnish, though, filling is painstaking because no one has invented a truly clear filler. So filling must be done on a coat-by-coat basis. To accelerate this process, I use an ordinary blow-dryer on a fairly low heat setting. This allows me to put two thin coats of varnish a day on the affected area. It takes a few days to fill the area of repair.

The other problem with repairing varnish is the color of the wood in the repair area is difficult to match with the surrounding wood. Depending on the wood species, the problem may take care of itself when exposed to the sun. Some paint companies recommend stains that will very nearly match the newly exposed wood with the surrounding wood. The best paint companies have toll-free telephone numbers to help with problems like this. Use them. The numbers are usually printed on the paint can.

Once the repair area has been filled and properly built up, remove the tape and use some 220-grit sandpaper to make both the repair area and the rest of the object's surface completely smooth and consistent. Then finish the object with two thin coats and prepare for the compliments. 

Ken Textor has lived and worked aboard boats for 22 years. He contributes to a number of sailing periodicals and offers boat deliveries and pre-purchase surveys for other mariners. Ken's latest restoration project is an Allied Seabreeze.




Brush care

Environmental concerns have kept me out of the finishing fraternity that advises the use of throw-away foam brushes. The foam brush advocates claim using solvents to clean a bristle brush every day is environmentally worse than just chucking a finish-laden brush every day.

It's true that when you clean a bristle brush, fumes are released into the air. But I use an old trick that avoids the daily washing and thereby minimizes the amount of fumes vented into the air. If you simply suspend the brush over cleaning solvent rather than dipping it in, and then seal the brush in the can of solvent, the finish left on the brush will stay flexible for several days, particularly in cool weather.

The best way to suspend a brush is to cut a slot in a paint can lid. The slot should be about the same width as the narrow part of the brush. To keep this process from getting messy, buy clean, unused paint lids and cans at a paint store for a few cents a piece. Once the brush-in-the-lid arrangement is placed back on the can of solvent, some rags should be used to plug the open part of the slot.

In the end, refinishing the wooden parts of your good old boat is a lot like sailing itself. If you follow the basic written rules, you'll have good results. But a few extra tips can give a decided advantage, whether you're tacking to the windward mark or waiting for the paint to dry. 

Restoration relived

Green machine



Green seems to follow me. First, I'm a self-admitted green sailor. I'm beginning my fourth season of sailing since I started out with a loaded-to-the-gills West Wight Potter 19, purchased new in 1997. After two seasons of learning the basics, I was yearning for a larger boat that I could refurbish over the winter.

My marina owner is constantly buying used sailboats to fill his slips, but the boats tend to be under 22 feet long. One day, however, he picked up a used 1972 Pearson 26, which he sailed down the Chesapeake and up the Potomac River, towing another used boat, a Tanzer 22. The Pearson was still completely stock, without any instrumentation and sporting the retro '70s

After inspecting the boat, I took my wife down for a look. "It's green," was her first comment.

"Yeah," I replied, "but the inside I could redo in any color you want."

We both liked the interior, with a real dinette and enclosed head. It seemed huge compared to our Potter and also very solid and safe.

Unlike our Potter, the Pearson had minimal gadgets, and I was ready for simplicity.

Definite novice

At the end of the summer of 1998, I became the proud owner of hull #395

and began the process of refurbishing the interior. As I was a definite novice when it comes to fixing up old boats, having no elaborate workshop and only basic power tools, green was the right description once again.

My first task was to unload all the stuff in the boat. All the sails, cushions, and gear went into local storage. Then I removed all the fake wood paneling. I cleaned the cabin

and bilge, removing 25 years of crud from every nook and cranny. And I scrubbed the interior until I had a clean surface to work on. The magic solution was a bucket of Pine-Sol and a lot of scrubbing.

I scrubbed and compounded the deck before the weather got too cold. To my surprise, the green hazy decks began looking better. The cabin walls, ceiling,

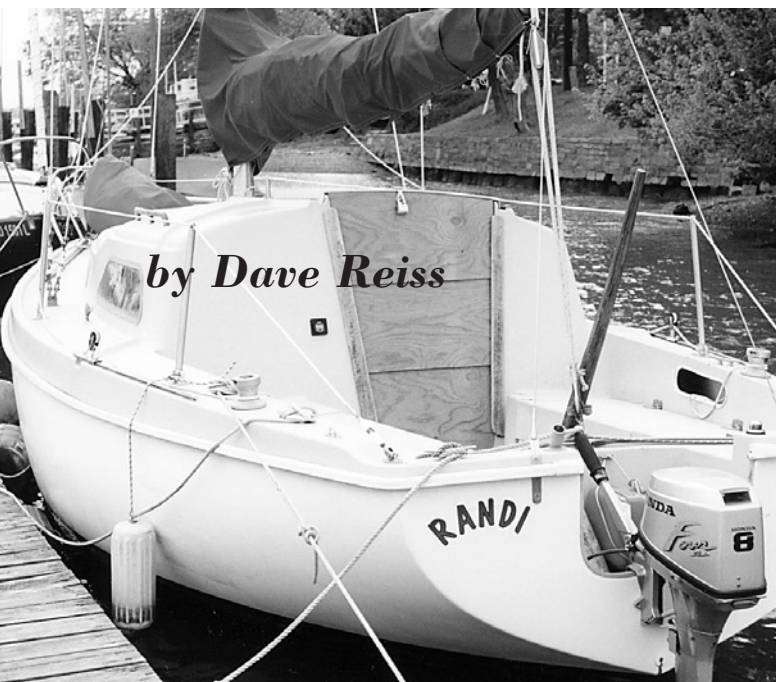
Refurbishing a 1972 Pearson 26

and floor were in a dingy cream color, which I painted over with two coats of white. I opted for a water-based, mildew-resistant paint from West Marine.

The main bulkhead panels, like the rest of the wood in the boat, are marine plywood with a dark fake-wood veneer. I replaced the bulkhead panels with tongue-and-groove ceiling fir strips at 30 cents a foot. After purchasing \$40 worth of lumber, I found a local woodsmith to cut the strips to length using the old panels as a guide. Woody (his real name) had owned boats before and knew what I was up to. While he was at it, I had him make a new hatch from a dry, pressure-treated piece of plywood he had lying around. Finally, I had him install a single-burner propane stove in the existing galley table. The total cost for his services was about \$600.

Resources Dave recommends:

The National Pearson Yacht Owners Association and its members' web pages, 718-789-7105, <<http://www.pearsoncurrent.com/>>;
West Marine, 800-262-8464, <<http://www.westmarine.com>>;
BOAT/U.S., 800-937-2628, <<http://www.boatus.com>>;
Rigging Only, 508-992-0434, <<http://www.riggingonly.com>>;
Star Upholstery, 703-751-3147; and **The 12-Volt Bible for Boats**, by Miner K. Brotherton.



by Dave Reiss

interior. She had belonged to a summer camp, and although the sails, hull, and rigging were in great shape, the interior was shot. The once green-and-yellow cushions were worn to the foam, and the carpet disintegrated into messy clumps as I removed it. Oh, and she had a sea-green-colored deck that was covered in a white haze.



Slate blue

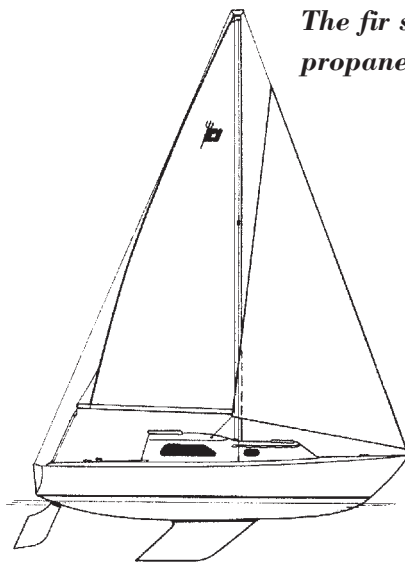
One weekend at home in my dining room, I painted the finished wood with polyurethane. Now the bulkhead was done, but the rest of the wood panels and trim needed something. I painted over the side trim panels in a slate blue my wife picked out. The rest of the wood I cleaned up, and decided to live with.

During the winter of working odd weekends I also:

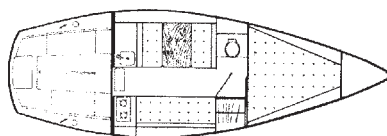
- removed and recaulked the main ports
- installed a depth sounder
- ran a charging line from my Honda 8-hp outboard to the battery
- replaced all the running lights
- installed new electrical terminals on the leads running to the switch panel
- installed a cigarette lighter adapter and small fan in the main cabin, and
- installed a Porta Potti in the head.

When spring finally came, I was excited to get the cushions redone and the gear back in the boat. After taking the cushions to a few upholstery shops, and getting quotes from \$800 to \$1,000, I managed to talk one shop in recovering the existing foam cushions for \$380. The existing V-berth cushions were covered with a BOAT/U.S. fleece V-berth sleeping set which fits perfectly.

Holy cow! The interior looked great! The white walls really brightened up the cabin, and the change from green to



Pearson 26



various shades of blue was a welcome relief.

New halyard

Topsides, everything was still vintage 1972 as well. I replaced the fairlead blocks and the genoa block at the top of the mast. All that was needed then was a new halyard with a shackle, and she was ready to sail. After some harrowing experiences in a borrowed bosun's chair,

The fir strips, at left, add warmth, and the propane burner, above, improves liveability.

I broke down and got a mast ladder that used sail slugs to keep it secure. After a memorable morning, my boat was rigged and ready to sail.

With a purchase price of \$5,800 for the boat, then the cost for the services and supplies for the refit, and after buying a handheld VHF and other safety gear, my new old boat cost about \$8,500.

After I had tied her up following one of the first sails of the season, a friend who is docked two boats down from mine, passed by. "She really looks nice, you did a great job," he offered.

"Thanks, what do you think of the green deck?" I asked.

"Looks a lot better than when she came in here," he admitted with a grin, "It's kinda growing on me."

"Me, too," I said with a smile, thankful I wasn't the only one.

Dave has sailed his vintage Pearson

Randi, named after his wife, on the Potomac River in Washington, D.C., for two seasons. This year the boat and his family have moved out to Maryland's eastern shore, where they are looking forward to sailing the Chesapeake Bay. Dave can be contacted via email at davereiss@compuserve.com.





Soft dinghy?

*Check the pros and cons
before you decide which tender
is right for you*

The age-old question of what dinghy is best will never find a universal answer. Each boating situation has too many variables to recommend a “one-dinghy-fits-all,” but it is possible to list the advantages and disadvantages of each type.

Traditional dinghies

With a history predating the larger boats and ships they serve, hard-hulled tenders or dinghies have much to offer the recreational boater.

They are durable. Made of fiberglass or wood, a well cared-for dinghy will last as long as the boat she serves. Combating the tar or creosote souvenirs collected from wharves is not a problem for them; paint removers or solvents that could attack soft dinghies can be used with impunity. Their ruggedness extends to another common occurrence: being tied to a barnacle- or mussel-encrusted wharf piling results in mere scratches, whereas an inflatable would be shredded.

Similarly, a hard dinghy can be dragged onto a rocky beach, or scraped over a reef, without the catastrophic failure many inflatables would suffer. Tiny salt crystals wage an unseen war against an inflatable’s seams, weakening and abrading them with each movement of the boat, while their fabric ultimately degrades from the ultraviolet rays of sunlight. Neither of

these affects a hard dinghy’s structural integrity in the least.

They are versatile. Their skegs, small keels, and sometimes centerboards, provide directional stability, dramatically reducing wandering, leeway, and sideways skittering. This important advantage is the basis for their multi-functionality, making them a joy to operate with any form of power: paddling, rowing, motoring, or sailing. Rowing through a chop from your anchorage to the public dock may take three times as long in a smooth-bottomed inflatable . . . and it may be impossible if a good breeze is lifting the nose.

Better value

They are relatively inexpensive.

Traditional fiberglass dinghies start at prices well below those of good-quality inflatables. With an indefinite lifetime, as

opposed to the very finite five-to-10-year lifetime of inflatables, traditionals are usually the better value. However, handmade wooden dinghies can easily cost as much as an inflatable.

They’re beautiful. There is really no comparison between the looks of a classic lapstrake sailing skiff and an inflatable. A skiff’s timeless lines and

graceful sheer bespeak generations of nautical tradition, while most inflatables are strictly utilitarian. The hard dinghy is often an aesthetic extension of the boat she tends; an impossible feat for an inflatable unless the mother yacht is a dirigible.

Versatility, durability, economy, and beauty. Can there possibly be any other attributes for this type of dinghy? Very definitely. In addition to everything else, they are (or can easily be made) unsinkable. Hard dinghies should have flotation built into their seats, bows, and/or gunwales. A hard-shelled dinghy will be safer aboard the mother ship during a blow if it is inverted and made fast securely. Its V-shaped or rounded hull will help press it down, while its rigidity prevents it from flexing and lifting to catch the wind . . . an inflatable idiosyncrasy.

One last advantage, small for some but large for me: my pets seem to prefer a solid dinghy. They balk at giving up the security of a larger boat for the squishy uncertainty of an inflatable. A minor point, but coaxing a sizable dog

*An Apex inflatable rests easily
on the shore in paradise, above,
and a Trinkia waits serenely in a
more northerly locale, below.*

Hard choice!



to shore for his morning ablution is not an option; it's a necessity, and cooperation is appreciated in foul weather.

Inflatable dinghies

Despite the advantages of traditional dinghies, there are significant reasons for having an inflatable as your boat's tender. If there weren't, you wouldn't see a majority of yachts with them.

Inflatables are the hands-down choice when it comes to variety. Especially suited to mass-production methods, with all the attendant savings and compromises, inflatables are commonly made from polyvinyl chloride (PVC), neoprene rubber, and coated nylon. They can cost anywhere from \$75 to as much as a sizeable yacht. They can carry one person on a still pond, or 20 people through fierce rapids, and they can weigh anything from five pounds to one ton.

They can have smooth bottoms, inflated bottoms, or rigid bottoms made of wood or fiberglass panels. There are more manufacturers, models, and retail outlets than you will ever find for traditional dinghies. If you're a comparison shopper, you'll be in heaven sorting through the endless choices among inflatables.

Inflatables have outstanding stability. Stand up in a traditional dinghy (if you can) and put half your weight on the gunwale. Or, try climbing aboard after swimming. You'll either be perilously close to swamping, or treading water as the dinghy turns turtle. Try the same thing in a modest eight-foot inflatable, and you can stand there all day. Stand there fishing, stand there handing bags of groceries aboard, or stand there off-loading small children. Inflatables are unbeatable when it comes to being safe and docile, as opposed to the tippy traditional types.

Inflatables have a large carrying capacity. Pound for pound, or per foot of length, inflatables can carry almost twice as much as traditional dinghies.

This is a critical feature on smaller yachts.

Gouge-free

Inflatables are soft. If you do find yourself flipped into the water, a hard dinghy can seriously injure you in the capsizing. The inflatable will dunk you but not knock you out. The same softness will not mar your big boat's topsides while you are anchored, nor will it keep you awake by banging against the hull. Your deck or cabintop will be gouge-free if you carry an inflatable aboard during voyages.

Inflatables tow well. A traditional dinghy is a constant concern under tow. The bridle arrangement, the length of the tow line, and the dinghy's position on the stern wave are all critical. An inflatable placidly slides along in the wake, while the hard dinghy tends to hunt back and forth, slowing a smaller yacht. At worst, an inflatable will flip over when being towed in a crosswind. A hard dinghy can turn from a dinghy to a submarine if pooped, flipped, or filled with spray and rainwater. If you're lucky in those instances, you'll merely have some anxious shoulder-wrenching moments pulling a few hundred pounds of deadweight aboard after killing the engine and dropping sail. If you're unlucky, the slamming force of a diving dinghy can rip out your towing cleat, leaving it and dinghy to disappear in the stormy night.

Inflatables stow like no traditional dinghy can. Any tender, hard or soft, when lashed on deck or towed, is vulnerable to damage from weather, other boats, sunlight, and bird droppings. A pure inflatable, however, can be deflated and placed in a quarterberth or cockpit locker. For offshore work, this is the preferred method, as boarding seas can sweep a deck clean despite the best tie-down efforts. This portability also means your inflatable can go home with you after the boating season to be washed, repaired, and stored, thus extending its useful life.

An Achilles inflatable (a) speeds through the water. The smallest of the Boston Whaler line (b) moves its passengers between boat and shore. A Zodiac Cadet (c) moves effortlessly through an anchorage. The Walker Bay dinghy (d) is suitable for sail, oars, or motor. The brand-new Chesapeake Light Craft Eastport Pram (e) comes as a kit and is put together using stitch-and-glue methods.



Resources

• Traditional tenders

Bauteck Marine Bauer sailing dinghies;
888-228-8325; <<http://www.bauteck.com>>

Boatex fiberglass rowing/towing/sailing dinghies;
800-596-5545; <<http://www.boatshow.com/boatex.html>>

Boston Whaler-Perga Marine; 904-428-0057;
<<http://www.perga.gr/Boston/construction.html>>

Chesapeake Light Craft dinghy kits; 410-267-0137;
<<http://www.clcboats.com>>

Dyer Boats/The Anchorage; 401-245-3300;
<<http://www.dyerboats.com>>

Edy & Duff Fatty Knees dinghies; 508-758-2591

Glen-L dinghy kits; 562-630-6258; <<http://www.Glen-L.com>>

Porta-Bote folding boats; 800-227-8882;
<<http://www.porta-bote.com>>

Trinka Dinghies-Johannsen Boat Works;
800-869-0773; <<http://www.trinka.com>>

Walker Bay Dinghies; 425-402-7066,
<<http://www.walkerbay.com>>

• Inflatable tenders

AB Inflatables; 800-229-2446;
<<http://www.abinflatables.com>>

Achilles Inflatables; 425-353-7000;
<<http://www.achillesusa.com>>

Apex Inflatables and RIBs; 800-422-5977;
<<http://www.apexinflatables.com>>

Avon, Bombard, Sevytor, and Zodiac Marine
Inflatables and RIBs; 410-643-4141;
<<http://www.avonmarine.com>> and
<<http://www.zodiac.com>>

Caribe Inflatables and RIBs; 305-253-4822;
<<http://www.caribeinflatables.com>>

Norse Marine; 877-642-6967;
<<http://www.norsemarine.bc.ca>>

Novurania; 561-567-9200;
<<http://www.novurania.com>>

Polaris; 604-534-5585;
<<http://www.polarisboats.com>>

Quicksilver Inflatables (Mercury Marine);
920-929-5000; <<http://www.mercurymarine.com>>

Rendova; 800-611-4970; <<http://www.rendova.com>>

Sea Eagle Inflatables; 800-852-0925;
<<http://www.seaeagle.com>>

Seaworthy Inflatables (BOAT/U.S.); 800-937-2628;
<<http://www.boatus.com>>

Tinker Marine Inflatables; 800-410-5297;
<<http://www.tinkers.com>>

Titan aluminum hull inflatables; 250-656-3153;
<<http://www.islandnet.com/carswell>>

West Marine Inflatables; 800-262-8464;
<<http://www.westmarine.com>>

• What's more

The following specialize in inflatable boats, offering multiple product lines and valuable expertise:

Hurricane Inflatable Boat Center, St. Clair Shores, Michigan; 810-777-7766;
<<http://www.hurricaneibc.com>>

Inflatable Boat Center, Portland, Oregon;
503-235-2628; <<http://www.inflatableboats.com>>

Inflatable Boat Specialists, Ventura, California;
805-644-6290; <<http://www.inflatableboats.net>>

Or try this website which has everything you wanted to know about inflatables but were afraid to ask:

The Inflatable Boat Network;
<<http://www.marketersnet.com/inflatables/supplier.html>>



The Amazing Roll-Away from Avon goes through its paces.



Double duty

Inflatables are versatile in their own way. They serve double duty as tender and life raft. Even full of water, they provide survival buoyancy. With an emergency abandon-ship bag, they can literally save the day. Inflatables also make luxurious freshwater bathtubs during summer rainstorms. Most inflatables are relatively lightweight, which means they can often be carried up a beach, rather than dragged ashore or tied to a dock.

There are also boats that attempt to offer the best of both worlds. These are the rigid-hulled inflatable boats, or RIBs. They have a conventional fiberglass hull with superb directional capability, plus inflatable air chambers along the sides that provide buoyancy and stability. Larger RIBs can have steering consoles, Bimini tops, and even radar arches. They can handle large outboards and safely attain speeds in excess of 30 or 40 knots. These boats carry large payloads and, with a cover to protect occupants from the elements, may just be the ultimate tender or lifeboat.

Yet, there are tradeoffs that prevent RIBs from dooming traditionals and inflatables to extinction. RIBs are more expensive than the other types. Significantly more expensive. They are heavy and require davits or some other lifting device. Because of their weight and size, most are suitable only for larger yachts. I'm aware of no RIB that can sail. With a rigid hull they give up the deflating and stowing advantages of inflatables. Nor, because of their large air chambers, will they ever have the pleasing aesthetics of the traditional tender. Still, would I have one if a magic genie offered? Absolutely!

Your dinghy can be a constant source of pride and satisfaction, enhancing your time on the water. It deserves considerable thought and research in the planning stages. In addition to reading the glossy ads and promotions, talk to owners of each dinghy type and, if possible, borrow it for a row or sail. Ask them about durability, maintenance, and any problems they've had. Finding the right one for you is part of the wonderful journey.

Bob has owned an odd assortment of sailboats and sailed them in waters from the Florida Keys to British Columbia's Gulf Islands and from New York's Finger Lakes to Colorado's and Idaho's impoundments and reservoirs.



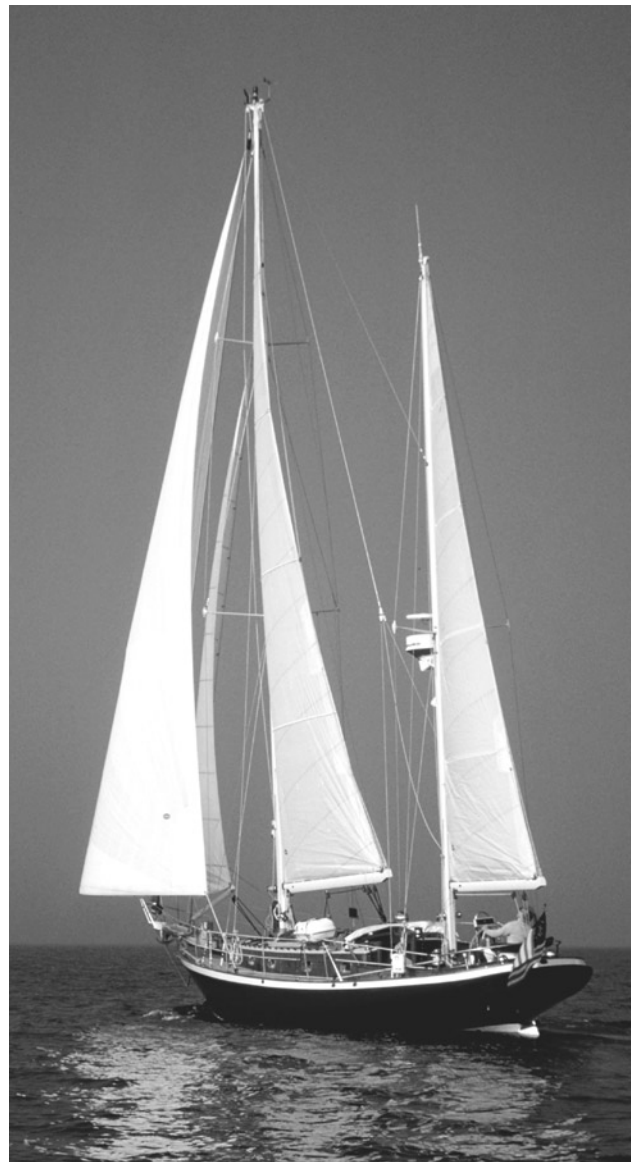
The Porta-Bote makes it easy to stow and go.



Classic American Sailboats

Few American yacht designs survive the harsh reality of the marketplace, but here are three everlasting classics from ages past

by Reese Palley



THERE ARE SURPRISINGLY FEW CLASSIC AMERICAN SAILBOATS. The boat industry has sloughed off designs by the dozens in past decades. Each new fad and each technological improvement left elephant's graveyards of abandoned molds strewn about boatyards on both coasts. The classics are those that survived, unaltered, through good decades and bad.

Taiwan took its toll, and boats and yards disappeared with depressing regularity. Under these circumstances, there has been little opportunity, given foreign competition and economic realities, for any boat to survive long enough to become a classic.

If any American boat did survive this harshest of climates, it must have had a lot going for it. The few boats that passed the decades of attrition had to have the powerful loyalties of buyers who were willing to sail between the dangerous wind of fashion and the tricky current of price. What was it among these few surviving vessels that let them proceed steadfastly on through seas of crashing markets and hurricanes of bankruptcies?

It was first necessary to seek out the boats, those few vessels that are still selling and sailing unchanged after decades. Boats whose buyers do not care that they are by now a bit old fashioned . . . a bit out of synch with the snazzier new

offerings. There are only three boats that, by this definition, can be called classic American sailboats. A surprising three with which, no doubt, not all will agree . . . but these three did survive, two are still selling, and each can muster regiments of partisans willing to leap to the barricades. (*Since this article was written, one of the three has been discontinued. This one, the Hinckley Bermuda 40, has been replaced by the Hinckley 42, an updated version. —eds.*)

All survivors

They are (in alphabetic order so as to maintain our objectivity) the Cherubini 44, a ketch; the redoubtable Hinckley Bermuda 40, a sloop; and the Valiant 40, a cutter designed by Bob Perry, and upon which Nate Rothman expended his youth. Cherubini, Hinckley, and Valiant. Survivors all. Why?

I put the question to the builders . . . with surprising results. Rather than stock answers and PR “cow chips,” I found myself confronted with thoughtful and cogent opinions. The builders were themselves a bit surprised at the unlikely survival of their progeny and had pondered on it. Thinking about things hurts. But it is worth the pain, as in this case, where the opinions were refreshing and wonderful.



The Hinckley Bermuda 40

THE GRANDPAPPY OF THEM ALL IS THE BERMUDA 40. AFTER all, the Bermuda 40 was, until it was discontinued in 1991, built for decades essentially without change. It is the oldest boat of its class. A total of 203 were built over the years. While new 40s are no longer available, there are many more buyers than sellers for this beloved sailboat. It certainly deserves head-of-class ranking.

I interviewed Rig Reese, who, when the first 40 was built, was beardless and callow, not yet even a teen. Rig has since moved on to other maritime endeavors, but at the time he had that special glint and sparkle that some men only get from a torrid, illicit love affair. Rig got his sparkle from his surprise and joy in being involved with “the best fiberglass sailing boat ever built.”

Lost wonderment

As marketing manager for Hinckley at the time, and since he had only been with them for a few years, I figured Rig would be more forthcoming than other Hinckley types who, having been so long in the business, might have lost some of their wonderment. He taught me about classic boats and why boats sell and sell and sell . . . against all reason, perhaps even against the economic good sense of clients.

I had called Rig the day before and warned him that I wanted his considered opinion of the staying power of the 40. He was prepared for me, and at his first words I knew that I had struck paydirt.

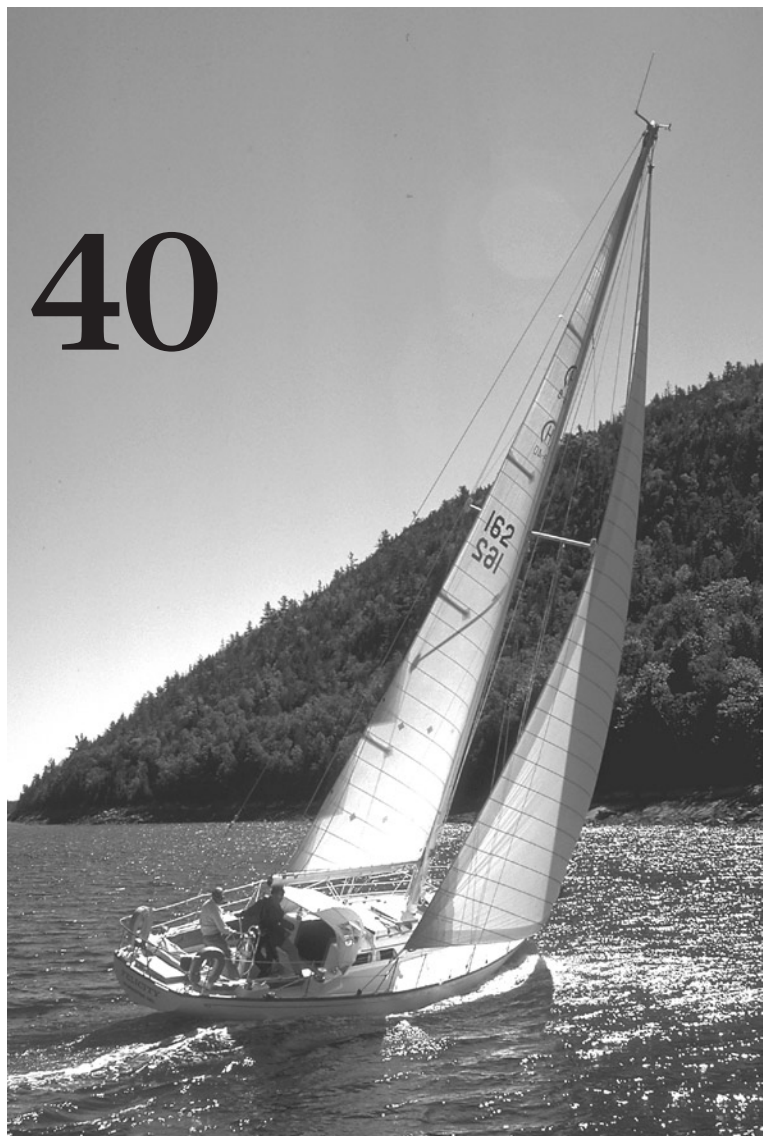
“The boat must not be extreme,” he declared, and with seemingly modesty he added, “the Bermuda 40 is not fast, it does not sleep many, it does not point as high as others. It is not extreme, it is not even the best, except in construction, in any sense.”

I was gratified that Rig chose not to adulate. “Extreme boats . . . boats that are the fastest and the ‘mostest,’ do not last. The boats that last, those that become classics, are those that offer the most reasonable solution to the infinite conundrums of sailing. A sailboat is a bundle of contradictions, pulling every which way, held together by the glue of reasonableness and,” Rig dropped his voice for emphasis and revealed the romantic he is, “truth in labor.

“In addition to reasonable solutions to antithetical problems, a classic boat must be simply . . . simply,” he groped for a special word then settled for the ordinary one, “beautiful.”

Enduring beauty

“She need not be stunning. Everyone in the ballroom need not drop dead when she enters, but she must have that same



enduring beauty which, again against all reason and most instinct, causes men to love and marry.”

Love and marry? Was Rig not waxing too poetic, even for a sappy romantic?

“No,” he explained, “The Bermuda 40 is like the woman you finally choose to marry . . . not the sexiest, not the fastest, not the most brilliant. The women men marry are forgiving, nurturing, reliable, loving, and,” again he rooted for a word, “comely. These qualities, those of great and satisfying women, are the qualities of the Bermuda 40. She is not a confrontational boat. She is, like a satisfying life mate, accommodating.”

Of the 203 Bermuda 40s built, only one came a cropper. One boat, crewed by a young and inexperienced couple, sailed out against advice into the very foggy and heavily traveled channel under the Golden Gate Bridge and was never heard from again. All the other 40s still sail. All the other 40s today are worth varying multiples of the original prices paid. All the 40s are regularly welcomed back into the womb of the Hinckley yard, whence they sprang, for a fountain-of-youth treatment that the Hinckley men have devised. “The 40s will go on forever,” said Rig. I believe him.

“The Bermuda is an expensive boat. Twice what similar good boats cost and three times others not so good. She has

8,000 hours in her — 8,000 honest hours, put in by men and women whose parents built 40s before them, and whose children are building Hinckleys today.

Counted lucky

And then he revealed a startling fact.

“We never earned so much as 1 percent, if that, on any Bermuda 40. We counted ourselves lucky for the years when we did not lose anything on the 40s we built.”

I expressed surprise. Rig explained, “It’s true, unfortunately, it’s true. If we were to maintain the original quality of the 40, if we wanted them to go on forever, then there was no money to be made on them.”

I arched an eyebrow and suggested that tight-fisted folk from Maine rarely descend to charity in business. It was hard for me to believe that Hinckley was in business for the pure love of it. What about “Down-East economics”?

“Oh, we make money on the 40s *now*. We make money on the reselling of them. Every time we broker a 40, and we broker most, we pop 10 percent. By building a boat that will last forever, we guarantee Hinckley’s future. Maine folk are not *entirely* stupid.”

*“While new Bermuda 40s
are no longer available,
there are many more buyers than sellers
for this beloved sailboat”*

The cat was out of the bag. The Classic Bermuda 40 was bought at exactly what it cost the company to manufacture it. It was purchased, uninflated, directly from the manufacturer himself — no middlemen to pump up the price.

The first price people were quoted

was the last price; there was neither margin nor inclination for a “deal.” As a result, the Bermuda 40, even at its dazzling price, was a screaming bargain.

If you are one of the hundreds of owners of Bermuda 40s, then you are not only the owner of a beautiful vessel that will last forever and be the envy of all the kids on your block, you are also the shrewdest boat buyer in America.



The Hinckley Company, LLC

P.O. Box 699

130 Shore Road

Southwest Harbor, ME 04679

207-244-5531

207-244-9833 fax

<<http://www.thehinckleyco.com>>



The Valiant 40

GREAT IDEAS ARE BORN OF dreams. The people who dream them are “the unacknowledged legislators of the future,” the folk who sketch out how that future will look to our children.

Dreamers are out of step . . . out of synch with common knowledge and common taste and are often so unlikely in their person as to be, perhaps not ludicrous, but something close.

So was the dreamer who fashioned, out of his own private passions and needs, a boat that was to become one of the American classics. The boat was the Valiant 40, and the dreamer was Nate Rothman.

While not quite ludicrous, Nate is one of those fellows who just never looks right in a blue blazer and red pants. Nate is the son of immigrants and a child of the roughhouse streets of the Bronx. What, you may well ask, was a Bronx Jew doing in the very sniffy company of the Herreshoffs and the Hinckleys?

What Nate was doing was dreaming up a boat of which there was simply no prototype in the yards, or even in the minds of the naval architects at the time. Like so many immigrants who come to love this country wildly, Nate developed a passionate need for a chunk of American history. He yearned for a yar, fat, lumbery looking boat in

the tradition of the designers who traced their origins to Colin Archer. A boat that caught Nate’s eye was the Westsail 32, sometimes dubbed the “Wetsnail.” But Nate had sucked up enough design theory that it took only a glance at her tubby hull shape, more particularly her entrance, to disenchant him. The boat was beautiful . . . but it simply would not go anywhere very fast. The immigrant in Nate was in a hurry, as newcomers usually are, and he transferred his newcomer need for celerity into his dream of a boat.

Fast and lovely

The fast cruisers of his day were full of cranky angles and unlovely lines, the ocean cruisers were dumpy and slow, the racing machines could not touch the poet in him. He turned to Bob Perry and put the question to him: “Why do beautiful boats have to be slow? Why are only ugly boats fast?” Bob, God bless him, listened to this Auslander, and the two of them together drew the first sketchy, hesitant lines that were to give birth to the Valiant 40.

From the waterline up, Nate demanded tradition. The boat should look like it could not get out of its own way. It could look 100 years old. It



could look like it needed half a circle to come about, but it had to be beautiful. They drew the most elegant sheer of any boat ever made in America. They stretched out the cabintop so that it melted into the gunnel and drew a sweet curve that was to become the sexy, rounded little tail end of the Valiant, a satisfying canoe stern that had been lost from designers' tables for 50 years.

Nate was getting the look he needed . . . a Yankee look. Now to make it go fast. So Nate and Bob built a "schizoid boat" . . . really two boats. One from the waterline up, and one from the waterline down. One day, Nate dreamily recounted to me his fantasy of revenge and comeuppance. In his mind's eye, he would lumber alongside a whooshy looking boat full of deck apes. No two sailboats have ever come abreast without engaging in a little race, and it was no different in his dream.

Insulting dare

In this dream, the fast racer laughingly challenged Nate's dumpy boat to a race. "Give 'ya five boat lengths to the point," was the insulting dare. Nate offered, in his dream, to start even, and the whoops of derision were soon replaced by the other skipper's querulous, "What the hell . . . we draggin' an anchor?" Nate was proud.

Today, when racy skippers out for blood sight a Valiant 40, they usually find they have other places they would rather be.

Nate and Bob shared their plans and intentions with sailing friends. The response to the boat's delicious paper lines was . . . "If it's half as fast as you claim, build me one." When the boat was finished, Nate remembers that he was scared to death. Would it move? Would it point? Were he and Bob, youngsters both, trying to do something at which their elders had failed?

They secretly launched the boat and secretly took her sailing . . . they two alone . . . lest the dream become a nightmare. In her first sea trials, she proved as fast as a B girl and as satisfying as a first love. They whooped and hollered, as boys will, and came back to the harbor knowing that they would not disappoint good friends.

The Valiant 40 is the ultimate Walter Mitty boat. It is the ultimate tyro's boat. It is the choice of the sailing novice

*"Today, when racy skippers
out for blood sight a Valiant 40,
they usually find
they have other places
they would rather be."*



who wants not only to join the club but also to show his sailing betters his cute stern.

The folk who eventually bought Valiants knew little about boats, and in spite of this they all wanted to cross an ocean, or so they claimed. In his dream, Nate was no different. Nate wanted to cross oceans, too, but Nate was a very careful sailor, almost timid in his respect for the sea, so his boat was belt-and-suspenders built. Tough and heavy, compared to the featherweight chichi of the day, and perfectly capable of taking care of herself . . . even if the man at the helm knew little about sailing.

Osmosis problem

The Valiant 40 has lived up to Nate's dream and now, years later, she has survived not only the vicissitudes of the marketplace and the invasion of the Taiwanese, but also a disastrous couple of years when a fireproofing option led

to extreme and incurable cancering on some hulls, a cosmetic condition which did not affect the integrity of the hull but buried Valiant in bad publicity.

The last of the blister-prone hulls was laid down in 1981. There has been no repeat of the sickness since then. Since the scabrous boats have little support from a market that puts looks first, they are offered at very deep discounts (*see Good Old Boat, March 1999*). A dealer told me he has a long list of buyers waiting for "bad" boats. Like the old saw, "Looks awful but feels great," even unsightly Valiants have found lovers.

Members of the Worstell family are the present keepers of the Valiant flame. They have thought long and hard over the mystique of the boat. Rich Worstell, especially, since it was his love that bought Valiant at its nadir and brought it back.

"My buyers want a boat that will change their lives. They do not want to make design decisions which could prove a disaster at sea. They want a boat that will be fast and look good, but more than that they want a boat that will take care of them when they finally push off and face a thousand miles of empty water."

Secret heroes

"It has become a cult boat, a boat which so satisfies the dream life as well as real life that people who own them can see little else than their Valiant. A deep need, a void, has been satisfied in them. The boat makes them into the secret heroes they all long to be.

"When Valiant owners get together, a bonding takes place. They join a club . . . they paid their fee, they felt the thrill of what they consider the best. There are no strangers among the Valiant folk."

One owner, blinded by love for Nate's dream, shared his thoughts with me. "Nate designed a classic. From the waterline up she's all staid, proper, ladylike. But from the waterline down . . . Man, let's boogie!"



Valiant Yachts

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Grodonville, TX 76245
903-523-4899
903-523-4077 fax

<<http://www.sailnet.com/valiant>>

The Cherubini 44

*"The Cherubinis know it.
They can relax
secure in their place
in the lore
of American boats"*



ONLY ABOUT 40 BOATS OF THIS TYPE were built, and of these only about 20 have ever been resold by their original owners. All the rest remain firmly in the hands of the folk who came to Cherubini with mountains of cash in hand, dazzled by the sweet lines of a boat that was already obsolete before World War II.

Why pay too much for a boat that is so old-fashioned? Why spend years lining up for one of only a few Cherubinis built each year when good boats from other builders can be bought off the rack at half the price?

In a candid moment of rare and refreshing frankness, Frit Cherubini allowed as how anybody could sell two boats a year for too much money, "just so long as it looks like Herreshoff drew it."

"It's the looks that hook 'em," Frit said. "We could build for half the

money [in materials] and still sell as many. Then we might get rich . . . 'stead of bein' stubborn enough to stay in the business and do an honest piece of work."

Frit was getting a mite South Jersey cantankerous about his boat and boatbuilding in general. But the calm, white-fringed face, punched through by smiling neon eyes, belied his cranky reflections. But he did keep saying that he was just too stubborn to get out.

Cherubini is the generation past . . . his father built boats, his brother John, now dead, designed the Cherubini 44, and his son, Lee, represents the current generation of Cherubini builders. It is too easy to sniff a bit of ennui and resignation in Frit Cherubini, a pose he likes to suggest. But all the nonchalance passes as he leans back in the Cherubini office, his son beside him, and glances at the 44s that march

photographically up one side and down the other. And especially when he describes his latest trip in his own personal 48 ("Annapolis to here . . . 9.4 knots average"), Frit lights up like a corn fritter.

Come in, No. 6

The boats are all referred to by number. "Number 6, that there one behind me, went through the hurricane that smashed at Charleston a few years back. The owner took some bad advice and tried to anchor off the bar. That old sea just plucked his two storm anchors out like candles from a birthday cake and slammed the boat 200 feet up onto the beach. Nothin' much happened to the boat. Just bounced around a little and settled into the sand. Went through four high tides, waves slamming into her broadside for a couple of days."

There had to be more to the story, but Frit is anything but loquacious. "And . . . ?" I prompted. "Well, when the weather settled down they sent out this big tug, tied hawsers onto Number 6, and just plain dragged her 30,000 pounds of dead weight out of the suck of the sand into deep water. Floated off, good as new, sans rudder."

"Come on . . . good as new?"

"Yep, 'cept that there was no more gelcoat, varnish, or paint on the whole damn boat, scoured off it was; good as new she was otherwise."

After the tale of the hurricane and hull Number 6, it was clear that Cherubini 44s, despite Frit's tongue-in-cheek tale, were not built for looks. These are simply the best modern "antique" boats built in America. In my book, that means they may be the best-built boats in the world.

Sharpie guy

The Cherubinis know it. They can relax secure in their place in the lore of American boats while other builders are frantically trying to build more, and arguably worse, boats every year. Lee tells of "this sharpie guy" (his term) who came along and hustled them to get all fired up and build 10 boats a year. "Improve your market presence," he told them. Lee Cherubini summed up this advice in two words. "Market presence," he spat.

I asked the younger Cherubini what was the best year the firm ever had. Like everything else about the clan, his answer was a surprise. "Don't know what the best year was, but I sure know what the worst year was. That was the year that we built six boats. Near killed me and near killed the Cherubini. Had 35 people working, and I just lost touch with my boats. Boats need hands-on by real people . . . not boards, and commitments, and hired labor. My family builds these boats. Me, and Frit, and Frit's brother, and my cousin, and my sons, and all our women who wait for us to come home . . . which we rarely do. Six boats . . . damn. Market presence . . . baloney."

Nobody builds a boat like the Cherubinis. "Nobody," as Frit Cherubini would say, "is that crazy." So why keep building them? "Dunno," he said, knowing, but reluctant.

The answer came from his son. He still wears a romantic heart on his sleeve.



Tough old goat

"We have this guy who owns a 44 that's here in the yard for refit. Had a terrible year. Heart surgery and all. Didn't think he would make it. His doctors gave him up a couple of times but he's a tough old goat, and he pulled through. He was miserable in the hospital, and then miserable at home in Florida where he was recuperating. Miserable.

"The doctors gave up and dumped him off to a shrink. First session, the shrink asks our friend why he thinks he's depressed. Our guy goes blank for a minute, gets up, puts his coat on and heads for the door. On his way out he yells at the shrink, 'I know why I'm depressed. I don't have to think why. I'm down here in Florida, and my damn boat is up with Cherubini.'"

As Lee tells it, the client is on the next plane north, heart trouble and all, shows up at the yard, and spends the next two weeks at hard labor, fooling around with his boat.

"You want to know why I build boats?" Lee asks. "Here's why: after the refit, the guy with the heart trouble came to the office, paid his bill and, as he headed for the dock to sail to Florida, he said, 'Lee, that boat is my shrink . . . never felt better in my life.' So that's why I build boats. That's why I build Cherubinis."

The Cherubinis not only build the best boat in America, they also have the best stories. You don't get great stories out of

mediocre boats . . . only the classics generate them. The one that dotted the "i" of my belief in the Cherubinis is a sad, but enormously insightful, tale.

Tragic end

A client they had come to love, a hard-drinking, hard-sailing, hard-living man whose Cherubini was the center of his life, called one day and told them to sell his boat. "But to a good man, mind you . . . a good home."

Lee asked why, and was told to butt out and do as he was bid . . . sell the boat. It didn't take long. There had been a buyer waiting for five years for a secondhand Cherubini. The client met the buyer, a man not unlike himself in his love for Cherubinis. The deal was done. Papers signed, money paid, title transferred.

The next day, after seeing his beloved vessel pass into good hands, the former owner killed himself.

Another tale, not so dramatic, but in its own way perhaps as clear, was of the owner who sold his boat because his kids were not giving it the care he felt a Cherubini deserved.

We talked for a while, the Cherubinis and I . . . and I felt that tug of family that must involve a Cherubini owner. The owners become members of the wedding. They get to join the most exclusive sailing club in the world. They get to sail boats built by artists . . . did I mention that the Cherubinis are accomplished musicians?

My fantasy is that the Cherubinis, musicians all, build their boats to the structured and logical music of Bach . . . complicated, intertwined, interdependent, and perfect. But just before I left, I learned the real music to which this passionate family has, for four generations, been building boats. It seems that a great-

grandparent back in the old country, one Luigi Cherubini, wrote the music for "Ave Maria."

"Ave Maria" . . . so that's how the Cherubinis (in Italian, "Little Angels") build such heavenly vessels. They've got help.



Independence Cherubini Company, Inc.

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SEA COLORS

by Reese Palley

White boat,

Green sea,

Blue day ebbs to Red.

Black nights.

In Silver starlight,

We pass dark hours

Of an Amber tropic winter.

Photos by Pat Vojtech



Good old vendor

A “bronze god” for today

*Call him apostle or zealot,
Roger Winiarski believes in bronze*

If he's not a “bronze god,” Roger Winiarski at least ranks as an angel to anyone looking for hardware for a boat of classic design. I met Roger after almost giving up on finding a bronze gooseneck that would fit the mast I was building for my 1968 fiberglass catboat. I wanted bronze because it suited the classic style of the boat and because all the galvanized goosenecks I had seen were just plain ugly. Of course, the stainless ones were all fabricated for aluminum masts. It seemed hopeless. In fact, early in my search, I had asked at a local boating superstore about goosenecks for a sailboat, and the teenager behind the counter brought out a spinnaker pole fitting. I knew immediately that I was in trouble and assumed I would have to make a pattern for my own use and have it custom cast.

Luckily, I found Roger before I'd even finished rounding the spar. When I called to ask about a gooseneck, he not only knew what one was, he had a selection of them in different styles and sizes. I immediately made plans to visit Roger's company, Bristol Bronze, and have a look. When I got there, I was impressed.

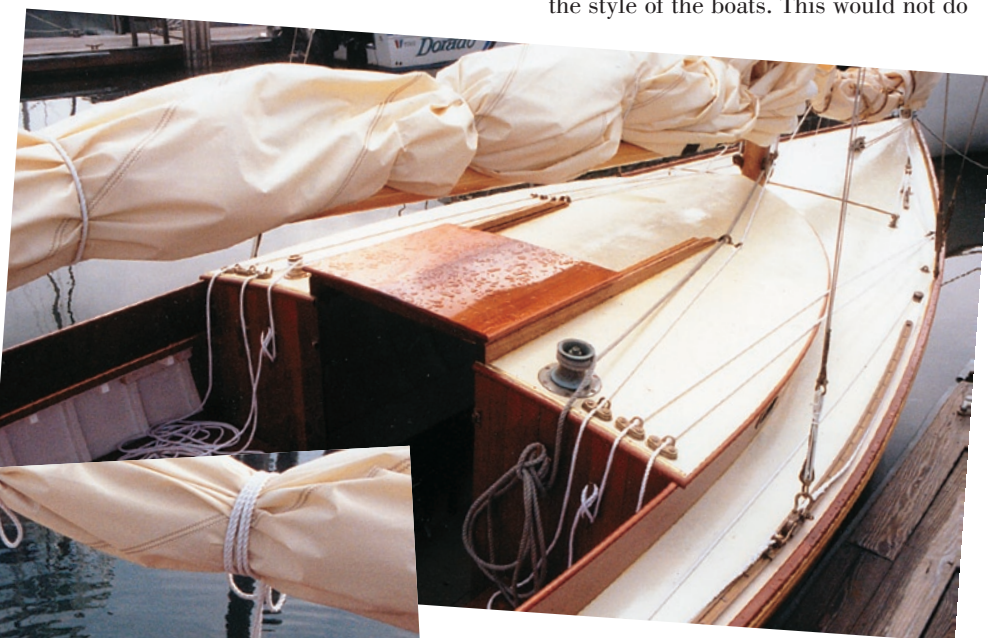
I've never been one to get emotional over hardware, but the selection of classic marine castings was truly impressive. In this day of stamped-out

stainless-steel and aluminum fittings produced for high-volume builders of nondescript plastic “yachts,” the graceful and functional hardware that Bristol Bronze produces is almost impossible to find. Almost. Roger has dedicated his company to the art and science of bronze yacht fittings and his dedication has paid off. If Nat Herreshoff were to rise from the dead to order some turnbuckles, he would come to Roger.

Since its inception in 1990, Bristol Bronze has been turning out high-quality bronze hardware cast to patterns of classic design from Herreshoff, Lawley, Merriman, Crosby, and others. Roger's philosophy is simple. He

believes the hardware designed prior to World War II had much going for it that today's hardware is lacking. This lack is evidenced not only in the design, but also in the manufacture of today's marine fittings. Roger is on a mission to change that and he began his mission, not surprisingly, with his own boat.

Roger's boat is a Herreshoff S-class sloop, designed in 1919 by Captain Nat himself. The class is still actively raced, and the hardware on the boats is, in some cases, 80 years old or more. It is not unusual, therefore, for a block or chainplate to fail after so many decades of hard use. In most cases, the owners were obliged to fit stainless-steel replacements that in no way matched the style of the boats. This would not do



Roger Winiarski's mission began with his own boat, a Herreshoff S-class sloop. When a fitting failed after 75 years or so, he looked for a replacement. Finding none, he made one and unknowingly launched his business, Bristol Bronze.



for Roger, and when one of his fittings finally failed, he set about finding a replacement, cast in bronze, that was in the style of the original.

Nothing worthy

What he found was a dreadful assortment of generic stainless-steel hardware meant for the modern boat market. There were no companies offering fittings worthy of his boat's heritage, so he decided to make his own. Having spent 30 years in the industrial metals field, Roger knew which alloys of bronze he wanted to use in each application, and he had patterns made of his boat's hardware. The resulting castings were exact duplicates of his originals, made of virgin bronze and ready for another 70 years or more.

When the other S-boat skippers saw the new hardware, they began asking Roger to fabricate a cleat here and a pintle there, until he had the patterns for every piece of original hardware on the S-class boat. At this point, he thought to himself, "Well, if I need this stuff, and all my friends need this stuff, there are probably lots of people who need this stuff." Thus, Bristol Bronze was born.

In the beginning, the market for his products was scattered. The problem was not that boat-owners preferred stainless fittings.



It was simply that they were unaware of the outstanding characteristics of real bronze. It is this lack of metallurgical knowledge, which any good shipwright of 80 years ago had down pat, that Roger hopes to remedy. If Roger has his way, real bronze will regain its rightful place as the marine metal of choice.

I use the term *real* bronze because much of the stuff that passes for bronze at your local boat supermarket is technically brass. That's right, brass. The stuff we were all told would evaporate in a marine environment gets sold by the ton as pad eyes, cleats, and chocks every year. And every year it disappoints the unfortunate skippers who bought it. Most of the metal from

which these parts are fabricated is melted down from scrap. This would be fine if a close watch were kept on what kind of scrap was being used but, sadly, this is not the case.

In many instances, these fittings are made in China or Taiwan. Many of the foundries of the Far East are small, and many buy their raw materials on the cheap. This almost invariably means that they use scrap. The end product, whether it's a cleat or an ashtray, is a mishmash of several cuprous alloys, including huge amounts of brass.

The shoddy practice of passing this brass off as bronze has given the real thing a bit of a beating. The

cheap stuff polishes up nicely, but it won't take much abuse because of its high zinc content. In fact, that's the only difference between brass

Brightwood Boats, far left, use Bristol Bronze oar locks, 920-991-1722; the bow of a Haven 12 1/2, at left, made by students at the Landing School, 207-985-7976, complete with Bristol Bronze stem strap, bow chocks and a jib club hook; and a swivel cam cleat, above, in use at The Boat-House, 651-292-1448.

"If Roger has his way, real bronze will regain its rightful place as the marine metal of choice."

and bronze: technically, brass has about 10 to 30 percent zinc in its makeup, and bronze incorporates tin in place of the zinc. The rest is simply copper, plus any other metals (silicon, aluminum, phosphorous or sometimes, as in the case of gunmetal, even a little zinc — go figure!) that are required for a certain characteristic, such as strength or corrosion resistance. Incidentally, the bronze from which Roger casts his hardware is virgin bronze, purchased in pig form from a smelter.

Stainless steel rusts

So, if the bronze hardware in the store is questionable, why not go with stainless? It gets along with aluminum much better than bronze, and it's stronger than bronze. The answer is twofold. First, the metal known as stainless steel is really and truly steel. This means that it contains iron. Iron will oxidize and form rust. It is unavoidable. The iron content may be low, but it's there. Stainless shackles and blocks will leave rust stains on your sails, decks, and so on. It used to be that stainless fittings were dipped in a bath of heated nitric acid to eat away the surface molecules of the iron and leave a corrosion-free veneer of nickel and chrome that could be polished to a high gloss. This process, known as passivation, was rendered prohibitively expensive for most applications by the EPA, which required extensive safety precautions and disposal protocols because of the caustic nature of the acid and related containment problems.

Passivation guaranteed a truly stainless steel — as long as the surface was not scratched. That's why so many old stainless fittings are still looking shiny and new. But if you own an old passivated fitting and the veneer has been scratched, rust will get a foothold, unless you feel like dealing with boiling acid and the Feds!

The other disadvantage of stainless steel is that it is subject to crevice corrosion. Steel is a strong, but brittle, alloy. As it starts to work under cyclic loading, tiny spiderweb cracks appear — not overnight, but eventually.



Roger Winiarski started with patterns for every piece of original hardware on the S-class boat and continues to expand his inventory with pieces such as the lovely cage block at right. Sailors of many classics will find what they're looking for at Bristol Bronze. If not, Roger may agree to add it to his inventory.

Much of this can be mitigated with good design, but good design is not so easy to come by. At any rate, these cracks allow corrosive elements such as seawater to enter the steel and concentrated rusting begins in a very small space. This is where a lot of the bleeding rust on the fittings comes from. This process goes on until the fitting eventually fails — and fails suddenly. Unlike bronze, which gives you some warning as to when it plans to give out (look for white powder or flaking of the metal), stainless usually surprises you with a bang. This is not to say that no excellent steel fittings exist; it's just that like anything of quality, they're not cheap.

Strong alloy

As to stainless steel's advantages, they are many. It's strong, readily available, and the best choice for applications that require direct attachment to aluminum. But if you own a classic boat or one with a wooden set of spars, you might want to consider the use of bronze wherever possible. It won't stain your sails with rust, and it won't look out of place. And as to the issue of strength, it is strong enough, in one alloy or another, for any use on a boat. In fact, Bristol Bronze

has come up with a bronze that is actually stronger than stainless steel and still retains the desirable qualities of all bronzes. Roger calls it "high tensile bronze" and it is one of his proudest accomplishments.

He developed this high-tensile bronze, or HT bronze, from an alloy that a former employer had dabbled in years before. The idea behind it is that, unlike stainless steel, bronze cannot be tempered after casting by heating it up. This is true of all the bronzes except HT bronze. If you try to temper regular bronze, it just gets hot. Bronze is only as strong as its cast form. It needs to be work-hardened by machining or extruding. But HT bronze is different. It can actually be placed in an oven after the casting is made and tempered to a tensile strength greater than that of stainless steel. The problem is that to temper metal you need to go to a tempering oven, and that costs money. Consequently, HT bronze is more expensive than regular silicon or manganese bronze. The extra cost is worth it, however, if you plan to use it in a high workload application.

For example, the owner of the new schooner, *America*, had purchased massive stainless steel shackles for his boat when she was rigged. A year or so after launching, he noticed rust stains on her beautiful and expensive sails and teak decks. He called Roger to ask if he



"Early in my search, I had asked at a local boating superstore about goosenecks for a sailboat, and the teenager behind the counter brought out a spinnaker-pole fitting."

"I use the term real bronze because much of the stuff that passes for bronze at your local boat supermarket is technically brass."

might be able to replace the shackles with bronze versions of equal strength. They put HT bronze shackles on her that year, and there have been no complaints. In fact, the owner ordered several additional fittings, including stanchion bases and cleats. These items work as well as the original stainless steel ones and look better than rusting fittings on this classic design. Roger can cast any of the fittings he produces in HT bronze but, for most applications, blocks and chocks for instance, it would be an expensive case of overkill.

People unaware

If all this seems a bit confusing, it's no surprise. Roger came to this knowledge through decades of work in the metals industry. He has found that most people are unaware of the advantages bronze has over other metals and has begun giving seminars on the subject of metals in the marine environment at the Museum of Yachting in Newport, Rhode Island; at the International Yacht Restoration School, also in Newport; and at the Landing School in Kennebunkport, Maine. He hopes to clarify some of the misconceptions about all metals used in the boating industry and give his students the knowledge required to evaluate hardware thoroughly.

One might think that this is a lot of fuss over a little thing, but Roger is passionate when it comes to metal. When you look at his hardware, it is obvious that care went into its casting and finishing. The pieces themselves are designed by some of the greatest naval architects and builders of the last hundred years. Chocks, blocks, and anchors by Herreshoff, goosenecks by Merriman, cage blocks by Crosby and a host of other designs by past masters adorn the tables and walls of the rooms at Bristol Bronze. In addition, Roger casts complete hardware sets for the Herreshoff Fish class, the S-class, the Buzzards Bay 12 1/2 (and Joel White's beautiful Haven class), the Biscayne Bay 14 and, most recently, the Comet. The Alberg Owners' Association has contacted Roger about a line of hardware for the various designs of Carl Alberg, and the list continues to grow.

Professional builders are also turning to Bristol Bronze for the quality

they see in all of Roger's work. Tony Davis, the maker of the Arey's Pond catboat line, offers as standard many of the fittings Bristol Bronze produces. The same is true of Bill Ryno who has developed beautiful rowing and sailing skiffs sold as Brightwood Boats (*see photo on Page 41*). The famous Beetle Cats of South Dartmouth, Mass., are being fitted with sail tracks from Bristol Bronze, and a growing number of custom builders are coming to Roger for the builders' plates and fittings they need to complement their finished boats. Add to this the huge number of people who are restoring or building their boats themselves, and you get an idea of what prompted Roger to start this business in the first place.

On the lookout

But Roger is not only interested in producing standard fittings of exceptional design. He is always on the lookout for unique or unusual fittings that simply do not exist anywhere but on an abandoned wreck or a flea market table. The aforementioned cage block is one example. Another quite marvelous fitting is the stay clamp that was originally intended for hanging a riding light on the forestay. It works by the use of a lever and cam arrangement that clamps down on a stay when a load is put on the lever's hook. It's simple and elegant, and nobody — except Roger — makes them anymore. And plans for the future include a possible line of rust-free bronze tools that you can be sure will be fabricated from an appropriate alloy.

If all this sounds like a plug for Bristol Bronze, consider this: I checked with eight manufacturers of bronze fittings in this country and England and found only one other gooseneck I would consider buying. It was made by Davey & Co., in England. It was not the exact fitting I wanted (I wanted a sliding

gooseneck on a track, and the Davey product was fixed with a half band to the mast) but it seemed well-made. The price, when I figured in the shipping

costs, was higher than the gooseneck I bought at Bristol Bronze, and I will say that Bristol Bronze is not exactly cheap. However, it seemed ludicrous to buy a piece of hardware overseas when I was fortunate enough to find one much closer.

It's a shame that so few foundries have an interest in the beautiful fittings of the past. The jobs they were designed for have not changed for hundreds of years and they seem to have reached a pinnacle of aesthetics and function that we, in the present, do not fully understand or appreciate. Perhaps companies like Bristol Bronze will help change that.



David is a coastal New England native who's been sailing all his life. A professional guitarist by trade, he has spent the time between tours and recordings building and designing sailboats, his other passion. He lives in South Dartmouth, Mass., where he is building a boat of his own design.



The boat that started a company, Roger's sloop, Resolute, continues to look good and do well in races in spite of her 80 years.



Get the lead out and the

Most of the people I talk to, including many boating professionals, don't know the difference between brass and bronze. Many use the words interchangeably. Although brass and bronze have the same base metal, copper, there is a substantial difference between the two.

Others think there is only one brass and one bronze. In fact, there are dozens of alloys of each. Most were designed for specific uses. Only a few types of each alloy are in general use and readily available.

Brass is an alloy of copper, zinc, and (usually) lead. Bronze is an alloy of copper and tin. It's zinc and lead that cause problems in boats. The zinc and lead are added not, as most people think, to reduce the cost of the raw materials, but to make it easier to machine brass in rod and bar form.

By far the most common alloy of brass is alloy #360, free-cutting brass. This alloy contains approximately 60 percent copper, 36 to 37 percent zinc, and 3 to 4 percent lead. Several years ago, while I was working for the nation's second-largest producer of brass rod, my sales of this alloy were in the range of 18 to 20 million pounds per year. It's an alloy I know well. The company I

worked for produced 180 million to 200 million pounds per year.

Most of this product is used by screw machine shops to make everything from automotive parts to electronic components. The reason that it is so popular is that machines cut it like butter. The screw machines can be run at higher speeds and feeds and therefore turn out more pieces per minute, which means a lower cost per piece.

It is not unusual for a screw machine shop to generate 60 to 70 percent scrap when machining components. Free-cutting brass scrap is therefore plentiful and, because of its low copper content, also inexpensive. From the viewpoint of a manufacturer of marine fittings, brass scrap is an ideal material. Many makers of boat fittings now use it to cast their products. Unfortunately, it is one of the worst metals to use on a boat.

The addition of the zinc and the lead reduces the strength and the corrosion resistance of alloy 360. The addition of the lead also makes the metal fracture readily when it's bent. You don't necessarily intend to bend your fittings, but accidents do happen. It's much better to sail home with bent fittings than to be towed home with broken ones.

Copper and zinc do not like each other as metals. Over time, the zinc will leave the metal in a natural process called dezincification. Salt water acts as a catalyst, and what would take 200 to 300 years ashore will happen in 30 to 40 years on a boat. The zinc leaves the alloy as a white powder called zinc oxide. The zinc oxide is acetic and will attack and rot any wood the metal is attached to.

Few bronze alloys contain lead, and most have little or no zinc. As

Polishing is an important part of the process.



zinc, too

a rule, they are stronger than brass, more corrosion resistant, and less prone to fracture when bent. But because they contain more copper, they also cost more. In addition, bronze is more difficult to machine and polish.

Free-cutting brass has a machinability rating of 100 percent. The bronze I use most frequently, silicon bronze (alloy 655) has a machinability rating of only 30 percent. It is a nasty alloy that concentrates heat at the work face of the tool and quickly dulls it. Nevertheless, it is good and strong, and stands up well in a marine environment.

A few years ago, I made all the fittings for the reproduction of the schooner, *America*. One of the alloys that we used for her was a high-tensile manganese bronze that had a machinability rating of only 8 percent. Boy, was I glad when all of those fittings were done!

For much of the history of boating, marine fittings were made of bronze, and they lasted very well. After World War II, in an effort to remain competitive with offshore manufacturers, many American manufacturers switched from bronze to brass. At first, they used a red brass (alloy 230) that looked like bronze. With no tin, and a high zinc content (15 percent), these fittings did not last long. I have seen many boats from the 1960s and 1970s with badly deteriorated fittings. Just about all of these fittings were of red brass. My own boat is hull #858 from the Herreshoff Manufacturing Company, in Bristol, R.I. She was built in September, 1920. Her fittings are of bronze and most are still fine.

More recently, many suppliers began to import fittings.

Worse yet, they are now using a yellow brass, usually alloy

#360. If you look closely at these fittings, you will find that not only is the alloy a poor choice but the casting quality is poor as well. Go into most gift shops, and you will find candlesticks and doorknockers made from the same material.

How can you tell the difference between brass and bronze? Often, it's difficult for the layman, but the switch


by Roger Winiarski

to the high-lead, high-zinc brass has made it easier. If the fitting is a yellow "brassy" color, then it probably is our old friend, alloy 360. If the fitting has a deep, rich, golden color, then it probably is a bronze.

Over the past 20 to 30 years, many boatbuilders have switched to stainless-steel fittings. In many cases, this was due to the difficulties experienced with the "bronze" (red brass) fittings of the time. The early stainless-steel fittings were all right, although nowhere near as aesthetically pleasing as the pre-World War II bronze pieces. Many of the stainless fittings were made as stampings from sheet metal, while most bronze fittings are castings.

In the early 1990s, the EPA cracked down on the chemical process known as

passivation that kept stainless steel from rusting. With passivation no longer available, many of the more recent stainless-steel fittings now bleed rust. We've all seen boats only a few years old with rust stains on their decks and sides. Now you know why.

So now the process has come full circle. The better boatbuilders are seeking to switch from stainless and brass back to good old bronze. A lot of the people with boats the age of mine or older are wondering what all the fuss was about. We have known all along that a good bronze was the best way to go. 

Roger learned to sail when he was 10 and has owned his Herreshoff S-Boat, Resolute, for 30 years. A sales engineer for the brass and copper industry for more than 30 years, he founded Bristol Bronze in 1989.



The casting pattern and core box for the hollow Herreshoff cleat, at top, and a collection of bronze pieces, above, worthy of display on any coffee table.

A photograph of a sailboat with a large, billowing red and white striped sail. The sail has the number '4144' and '4165' printed on it. The boat is dark blue with a white cabin. Several people are visible on the deck. The background is a clear blue sky and a body of water.

A worthy son of Neptune

The Pearson Triton occupies a niche in the maritime hall of fame

THEY'RE EVERYWHERE. MORE THAN 700 Carl Alberg-designed Tritons were built between 1959 and 1967 by Pearson Yachts in Rhode Island and Aeromarine Plastics in California, and most of them are still floating. Many have undertaken serious voyages, for this skinny Scandinavian was designed to be at home on blue water.

Alberg was of Swedish descent, and much influenced by European standards of seaworthiness as they had evolved in working boats over the centuries. There's a little of the Viking longboat in the Triton, and more than a little of the Folkboat.

Not just because of her distinguished designer, the Triton has her own niche in the maritime hall of fame. She was one of the first boats in the United States to be built of fiberglass, a technique so different from traditional wooden boatbuilding methods that it stood the whole industry on its head.

At 28 feet overall, with a displacement of about 8,000 pounds, the Triton is on the verge of being a splendid cruising boat for two people. She teeters on the verge only because of her small interior (inevitable in a boat so skinny and short on the waterline), not for any want of seaworthiness. Even the small interior wouldn't matter quite so much if a bit more of it were devoted to the galley.

She does have low freeboard, it must be admitted, so she isn't as dry on deck as are some of her more modern sisters when the wind is on the nose, but she makes up for it in looks. Those of us who studied the Triton's lines on paper for years before we saw a real, live one, were belatedly surprised by her good looks. Her delicate stern and gentle sheer had always seemed to be badly marred by that tall, slab-sided doghouse protruding skyward at the aft end of the cabintop. But, upon closer acquaintance, that doghouse wasn't nearly as repulsive in reality as it had been on paper, and if you stationed yourself off to one quarter while she waltzed away from you, flirting and showing her gorgeous transom, your gaze never reached the doghouse anyway.

But we must not get fixated on looks, important as they are. The two major assets of the Triton are these:

by John Vigor



Robert Douglas races and cruises his 1964 Pearson Triton hull #469 in the waters near Richmond, Virginia, above. At left, Brenda and Gary Everingham sail Protégé on Lake St. Clair, which is shared by Michigan, near Detroit, and Ontario, near Windsor.

- Even after all these years, most Tritons are capable of going to sea. Many do. At least one has circumnavigated. Some will need to be upgraded, and those that haven't been properly maintained will need a thorough refit, but basically they are sturdy boats of inherently seaworthy design that will look after you in bad weather.
- They're cheap. You'll find bargain-basement Tritons going for \$10,000 or less and nicely fitted-out Tritons for \$15,000.

Basic design

Like many boats of her era, the Triton's design was influenced indirectly by the Cruising Club of America (CCA) rule (refer to *Ted Brewer's article on Page 18*). Quite coincidentally, this rule fit well with Alberg's basic design philosophy. He was a proponent of the type: large mainsail, small foresail, low freeboard, and moderately long overhangs fore and aft. To this he added a traditional full keel, except that he cut it away up forward and sloped it inward from the stern, so that it appeared to be starting the metamorphosis toward a fin keel (see photo on *Page 49*).

Most noticeably, Alberg made her beam quite narrow so she would slip through the water more easily. In this respect, he sacrificed accommodations for performance; but in those days it didn't matter because almost all boats followed the same pattern. It wasn't until a decade later that the boats considered to be "normal" began to be wide and shallow, rather than deep and narrow — and the sacrifice these newer boats made for the interior space they gained was seaworthiness.

Within reasonable limits, narrow and deep is safer at sea than shallow and wide, although if you're not planning to cross an ocean, as most production-boat owners are not, you can afford to sacrifice a certain amount of safety because you're never far from help and shelter.

The hull of the Triton is solid fiberglass, varying from about 3/8 inch at the sheerline to about 3/4 inch in the keel area. The decks are also fiberglass, cored with end-grain balsa. Early boats had external ballast keels and keel bolts, but a little over halfway through the production run a change was made to a cast-lead keel encapsulated in the fiberglass hull. The ballast amounts to about 40 percent of total displacement and gives her a wide range of stability. Although the Triton has reasonably hard bilges, which spells good form stability, her narrow beam causes her to heel over 10 or 15 degrees before the keel really starts to show who's in charge.

Her foredeck is wide and reasonably clear of obstructions, and while it would be wonderful if a fairy



Gary and Brenda Everingham restored Protégé's interior, refinishing the woodwork, redoing the cushions, adding shelves, lights, and a chart table. Note the Triton's trademark forward-facing ports (above). The minuscule galley (at right): a gimbaled coffeepot hangs in the foreground. In an effort to "gentrify" the Spartan conditions in the Triton (below left), Gary added the smallest of tables for two — a hinged board which drops down and is stored on the door when not in use. The head (below right): complete with a holding tank covered — as all things on this boat are — with Sunbrella.



could wave her magic wand and make the sidedecks wider, it isn't going to happen except in your dreams. About all you can say of them is that they're manageable. You might also wish that if the fairy could spare a second wave of her wand, something aesthetic would happen to the doghouse, that upward step in the coachroof. It's more likely, however, that her wand would short out or blow a transistor when faced with a task of such magnitude.

The cockpit is more than 6 feet long, but it has a bridgedeck to keep water out of the cabin, and it is narrow enough that it ships no water when the boat is laid on her beam ends. In any case, owners report that it doesn't hold enough water, even after a pooping, to threaten the safety of the boat.

The original rudders were wooden, made of mahogany, and while they have many advantages, they do tend to deteriorate over lifetimes as long as those the Tritons appear to be enjoying. You can have a new rudder made of fiberglass, but you can also laminate a new one from marine plywood if you have the time and inclination.

The original engine was the venerable Atomic 4, a 30-hp, four-cylinder gasoline engine designed from the very start for marine use by the Universal company. By today's standards, it's quite crude — but that gives it certain advantages denied to modern diesels. If you have even the most rudimentary knowledge of how an internal combustion engine works, you can usually coax an Atomic 4 into life. It will absorb an extraordinary amount of abuse and still get you home on two cylinders. You can attack it with crude wrenches that would cause thousands of dollars'-worth of damage to a finely engineered diesel, and take pieces away to your local blacksmith for repair. Parts are still available, as are reconditioned engines and books on repair and maintenance.

Thirty horsepower is far more than the Triton needs, of course, but it means you'll achieve hull speed with half the noise and a quarter the vibration of a comparable diesel.

Accommodations

For a boat only 20 feet long on the waterline, the Triton has a reasonable, if not generous, amount of room below, thanks largely to the high cabintop. You'll find more than 6 feet of headroom beneath the doghouse roof in the main cabin, and a little less as you move forward.

The usual V-berth resides in the fo'c's'le, but it's not really usable at sea, and in port it's probably better left to the kids. Aft of the V-berth there's a separate, but rather small, head compartment (designated on Pearson's plans as a rather posher-sounding "toilet room") with a linen locker; and opposite, to starboard, a capacious hanging locker and shelf.

The settee berths in the main cabin are 6 feet 3 inches long and awkwardly wide — too wide for sitting without something to support your back and too narrow for a double berth.

In the vertical step between the cabintop and the doghouse, Pearson built in two opening portholes. These not only greatly help ventilation below but offer you the chance, when you're anchored in a heavy blow, to stand on tip-toe down below in the comfort of your own cabin and see the other boats dragging down onto you.

Aft of the settees, we stumble across the Triton's disaster area, the galley. Although the Swedes are not renowned for haut cuisine, it's hard to believe that Alberg so hated food that he refused to leave space for a permanent cooker. No doubt it was the usual pressure from Pearson's sales staff for the greatest possible number of beds that forced the decision upon him. In any case, most Triton owners have had to fend for themselves. Most use portable stoves, which is not a solution for a deepsea voyager. Others have bolted a gimballed, single-burner to a bulkhead. That works, but it isn't exactly clever or efficient. It's a sad thing, but the galley of the Triton will never be recognized as Alberg's magnum opus.

The rig

Most Tritons are Bermudian sloops, but a yawl rig was available, and a few were built. Some sloops — in fact all the early ones — were fractionally rigged, with the forestay joining the mast about three-quarters of the way up, where the mast was beefed up with jumper struts. Later, Pearson offered a masthead rig with a shorter mast. The earliest Tritons, the first 100 or so, had only single lower shrouds, but after

A trailer allows the Everinghams to go just about anywhere they want to go at highway speed.

complaints that they were inadequate, Pearson changed the rig to double lowers. The sail area of the fractional sloop is 371 square feet, with 231 square feet of that in the mainsail and 140 square feet in the working jib.

The aluminum mast is stepped on deck and therefore prone to the usual problem of crushing the cabin beam supporting it. The narrowness of the gangway below makes it difficult to slide past a keel-stepped mast, but if

"The original rudders were wooden, made of mahogany, and while they have many advantages, they do tend to deteriorate over lifetimes as long as those the Tritons appear to be enjoying."

you're thinking of buying a Triton for long-distance voyaging, you might want to consider installing a solid compression post from directly beneath the mast step to the ballast keel, even if you have to suck in your tummy to get past it. It's the quickest, easiest, and strongest solution to a vexing problem.

The boom is 14 feet long and covers most of the cockpit, so the anchor point for the mainsheet is conveniently far aft, on the little lazarette deck, where the sheet is out of everybody's way.

Performance

As the Triton heels, her long overhangs dip into the water and lengthen her waterline. As the maximum speed of a displacement boat is directly related to her waterline length, the

Triton should be capable of faster maximum speeds when she's well heeled over than when she's upright. That is the theory, anyway, and it is frequently propounded by shallow thinkers.

Deeper thought will reveal the fact that, in practice, she'll rarely reach hull speed under sail while heeled far over (except occasionally on a broad reach, when everybody else is going fast, too) and her performance at less than full speed might even suffer from heeling because she's immersing more hull area and creating more drag. No matter. Suffice it to say that the Triton is a reasonably fast boat if she has good sails and you sail her well. Her performance to windward is probably better than that of most cruisers, and as for the rest of them, it simply isn't fair to compare her with racers

or modern coastal cruisers of similar size. They're faster, but they pay for it in other ways. Her PHRF rating, for what it's worth, is about 246.

She seems to be a little tender at first, which is the sign of a comfortable sea-boat. She heels over quite easily to 10 degrees or a little more, after which gravity wakes up the sleeping ballast keel and puts it to work. She becomes increasingly more difficult to tip over, and owners report that it's not easy to submerge the toerail.

She does carry weather helm as the wind pipes up, however, and your first move to cure it is to reef the mainsail. If you have to go down to a working jib or a storm jib, you will need a deep double reef in the mainsail to keep her balanced.

Apart from that slight weather helm, she appears to have no vices,



Protégé: An unusual love story

Gary Everingham, of Chatham, Ontario, bought *Protégé* a 1962 masthead-rigged Triton that had been wasting away in Windsor, Ontario, for his wife's birthday. Brenda Everingham is the proud owner of Pearson Triton hull #241. Gary gave his wife the boat of her dreams for her 38th birthday. He was able to "hide" the boat for six days. On the night before her birthday family members moved the boat to the driveway. In the morning they blindfolded Brenda and had her follow a 200-foot anchor rode out of the house to the bow of the boat. There her blindfold was removed, and the new proud owner burst into tears. "This," Gary writes, "was the start of a love affair with her boat."



Protégé had been neglected for two years. The Everinghams soon stripped and replaced the interior woodwork, poured epoxy into all the holes in the deck, repainted the deck, redid the teak, and sewed Sunbrella covers for all the exterior teak. Many other projects also occupied the couple: a dinner table for two in the cockpit and saloon and a major keel repair to restore a section of the keel which was missing (Gary inserted a stainless steel T-beam glassed it over and painted it).

Gary notes, "Stories abound about the strength of the Triton, and I can tell you they're true. The first year we sailed north on Lake Huron to Godrich, home of the Gozzard, where we entered the harbor and were directed to Dock C5. Now Triton owners will remember that forward is backward and backward is forward. I'm talking about the five-pound brass shifter handle in the middle of the cockpit floor. On that day I got mixed up and rammed the dock full throttle. The paint was scratched off the bow, but the dock looked like a beaver dam."

and steering control remains good because she doesn't lift her rudder out of the water when she's heeled excessively, like some IOR racers we know — and their derivative coastal cruisers.

Under power, with the Atomic 4 slaving away in the bilge, she will easily reach her top speed of 6 knots under almost any conditions. With more than 8 hp per ton of displacement, the Atomic 4 provides twice the power she needs.

Known Weaknesses

- Check the decks and cabintop decks for delamination caused by a balsa core saturated with water. Delaminated areas sound dull and hollow, or flex excessively, when you tap them with the handle of a screwdriver or jump on them.
- If you have an early model with an external ballast keel, check the keel bolts for corrosion.
- Mast compression: Look for signs of cracking, bending, movement, or crushing in the mast-support beam and the timbers that transfer the thrust to the main bulkhead. If the beam has failed, you'll either have to replace it — a major repair — or ignore it and fit a new compression post.
- Check the whole rig. There have been reported failures of tangs.
- Inspect the wooden rudder for rot or woodworm.

Owner's opinion

Probably the most famous owner of a Pearson Triton is Dan Spurr, editor of *Practical Sailor* and a former senior editor on the staff of *Cruising World* magazine. Spurr lived aboard his Triton, *Adriana*, and put up with her little faults for five years. Then he launched a program that involved major changes to her interior.

If you own a Triton and want to make similar changes, you are lucky. Spurr gives detailed instructions and descriptions of all the improvements he made to *Adriana* in his book, *Upgrading the Cruising Sailboat*, (International Marine Publishers, 1991), which is lavishly illustrated by the well-known marine artist Bruce Bingham, designer of the Flicka 20.

"Those of us who studied the Triton's lines on paper for years before we saw a real, live one, were belatedly surprised by her good looks."


With a few basic tools and a few basic skills, you can convert the V-berth to a comfortable double bed, install a new engine, improve the much-maligned galley, and make all kinds of beneficial changes to your Triton.

Spurr also cruised many hundreds of miles in *Adriana* in the U.S. and the Bahamas, so he knows the boat as well as anybody. If you're considering taking a Triton for a ride over the horizon, *Upgrading the Cruising Sailboat* (otherwise known as *Spurr's Boatbook*) is not just a good idea; it's compulsory reading.

Conclusion

The last Triton was built in 1967, so they're all getting a bit long in the tooth. Nevertheless, if you buy one that has been reasonably well maintained, you'll have a boat that's still capable of crossing oceans.

Practical Sailor magazine calls the Triton "the smallest, most affordable offshore boat you can buy. At least one has circumnavigated — Jim Baldwin in *Atom* — and we know of many others that have made safe transoceanic passages."

Carl Alberg probably never dreamed his creation would one day earn such a flattering epithet. 



John Vigor is a professional journalist. The author of The Practical Mariner's Book of Knowledge, The Sailor's Assistant, and The Seaworthy Offshore Sailboat, he

has worked for major newspapers around the world and is a frequent contributor to leading sailing magazines. He has sailed for more than 40 years in boats 11 to 40 feet in length and logged some 15,000 miles of ocean voyaging. In 1987 he and his wife, June, and their 17-year-old-son sailed their 31-foot sloop from South Africa to the U.S. This series of boat reviews is based on articles from John's book: Twenty Small Sailboats to Take You Anywhere, which is available from Paradise Cay (800-736-4509).

In short

Pearson Triton 28

Designer: Carl Alberg (1959)

LOA: 28 feet 6 inches

LWL: 20 feet 6 inches

Beam: 8 feet 3 inches

Draft: 4 feet 0 inches

Displacement: 8,000 pounds

Sail area: 362 square feet

Ballast: Lead, 3,019 pounds

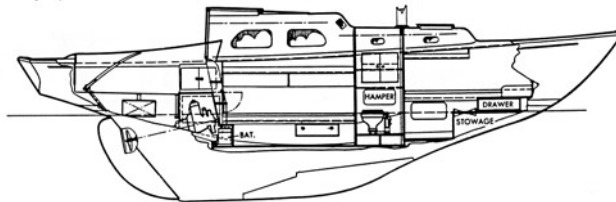
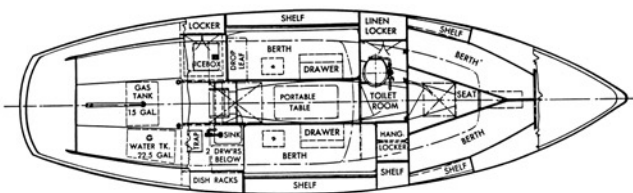
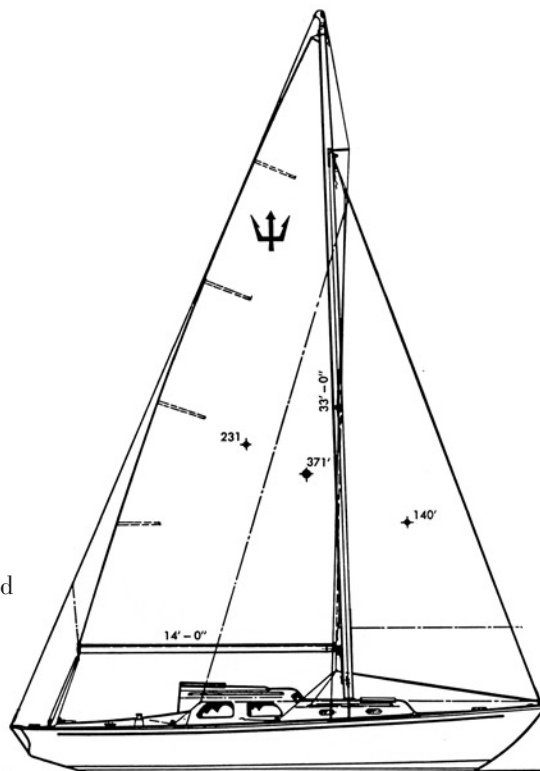
Spars: Aluminum

Auxiliary: 30-hp Universal Atomic 4 gasoline

Designed as: Coastal/ocean cruiser

In comparison

- **Safety-at-sea factor:** 7 (Rated out of 10, with 10 being the safest.)
- **Speed rating:** Average PHRF rating of 246 makes her sound slower than she really is, but she's not a flier.
- **Ocean comfort level:** One or two adults in comfort, plus two kids in a squeeze.



Resources for Pearson Triton Sailors

Pearson Triton (National Triton Association)

Dorothy Stevens

300 Spencer Ave.

E. Greenwich, RI 02818-4016

suter@ix.netcom.com

<<http://www.netcom.com/~suter/nta/>>

Pearson Triton One Design Fleet of San Francisco

Larry Suter

suter@ix.netcom.com

<<http://www.netcom.com/~suter/todsf.html>>

Larry manages the sites for the San Francisco One Design Fleet and for the National Association.

Pearson Triton Site

Tim Lackey

tlackey1@maine.rr.com

<http://www.geocities.com/triton_glissando>

The story of the refit of *Glissando*.

Pearson Email Discussion Group

<<http://www.sailnet.com/list/pearson/index.htm>>



Two tines or three?

The early Triton symbol had three tines like the one in the illustration above. Later boats had a two-pronged triton on their sails following a trademark infringement complaint from Merriman, a company which supplied most of the hardware used by the Pearson Company.

WHY I LOVE MY TRITON

MORE THAN OTHER NEWER/FASTER/ BIGGER BOATS

BY MIKE FREEMAN: "GOOSE" HULL #58

- ① Pearson Triton's hull thickness is considered overbuilt by today's standards. The strength encourages owners to seek out less frequented anchorages more conveniently located near shore — rocks, sandbars, mud, etc. Triton owners are fond of bragging about how easy it is to careen in order to change zincs or check the propeller or paint the bottom because of our wealth of experience. We are experts at diagonal coffee pouring between tides.



- ③ Six feet of headroom below keeps owners from getting that typical stooped posture of owners of similarly sized good old boats.



- ④ Spiffy looking standing rig with jumper struts allows Triton skippers to tinker with tuning endlessly. Those of us blessed with yawl rigs have even more strings to pull, shrouds to walk into and things to trip on.

- ⑤ Being readily recognized by boatyard gas bags, it's a magnet for wasted afternoons spent talking on the dock instead of doing maintenance.



- ⑥ Less stowage room below induces owner to purchase less boat junk... or to purchase a second dock box for the boat junk he buys anyway.

- ⑤a. Since they are so very old, it is pretty easy to make your Triton look better than the other guy's Triton. (See 5 above.)

- ⑦ The smaller transom means a shorter name & less money spent on stick-on letters.



- ⑨ Being much narrower compared to her length than most sailboats of her size, the Triton's lack of space below means that everything is close at hand. Stowed items, guests, linguine with clam sauce have a shorter distance to fly before hitting you.

- ⑩ Low free-board allows guests to more easily empty stomach contents over the side.



Coming to terms with sailing

“**Y**ou’re not *thinking* sailing!” my husband once admonished me after a particularly stupid error on my part. Not only was I not thinking sailing, I was resenting what had come to seem a sort of imprisonment imposed on me — not by my husband, but by my sense of duty and loyalty. Though I loved the man, I did not at that juncture love the sport that absorbed him so utterly. After eight years and some months of boating — three in company with our children aboard our 31-foot cabin cruiser, *Lady Mary*, four as crew (my husband and I) on two large yawls owned in succession by a friend and his wife, and later as owners of our Sabre 28-foot sloop, *Serena* (shown on Pages 54-56) — I found myself suffering from a kind of “cruise fatigue.”

Instinctively, some of us shrink from all but agreeable experiences — and what a myriad of discomforts one encounters on the water. To rude weather and sea conditions, add anxiety, ennui, physical crotchiness, and complaints. Add, for me at that point in time, maternal concern over children old enough to be left alone at home, but only just. In addition, there had been, perhaps, just too much frustration resulting from confinement; too much exhaustion, both mental and physical; too many stretches of days

without a shower (so that even my soul felt grubby).

I was like Somerset Maugham, who once confessed that it was one of the faults of his nature that he suffered more from the pains of life than he gained enjoyment from the pleasures. Where boating was concerned, I was too uncomfortable, too continuously, to be an enthusiast. Indeed, I was conceiving something like aversion for the activity.

Challenged and nourished

I had always known that I was not a real sailor. Real sailors, I recognize, have a spring in their step as they advance toward the water. Real sailors are challenged and nourished by everything they encounter, from line squalls to

idyllic weather. Real sailors need the

ocean as a painter needs his palette, a composer his keyboard. And among real sailors I include women, some of whom are as competent as men aboard a boat; though the majority of women, I believe, are like myself, neither natural sailors nor completely disaffected by the sea. Though I admired and envied those real sailors, I understood that while the ocean was their essential element, mine was the earth in all its gracious variety.

by Mary Jane Hayes

*A wife and mother analyzes
her fears and joys — and becomes
a happier first mate*

Some wives, I’m aware, will never go aboard; others, only under perfect conditions, and thus infrequently. Since, at that (or any) stage of our life together, I didn’t want my husband going one way and me another, I sailed on a regular basis. A boat is too expensive a possession not to use, not to mention its being the skipper’s glory. So for us, six months of every year were affected, including weekends, several three- and four-day junkets over the season, and a two-week cruise.

If I was weary of the pastime, I knew I couldn’t just “jump ship.” My husband was completely supportive of me in all my personal endeavors; how could I be less generous toward him? As long as he was committed to the water, I was too. That being the case, it was clear that some taking of stock and some positive actions were in order.

Inordinately proud

I knew I possessed some definite strengths as a mariner. I trusted our sloop, to begin with, and the skills and judgment of its skipper. I was inordinately proud, in fact, of the latter’s expert

seamanship and the respect in which he was held by other sailors. I was not in the least discomfited by heeling. Going forward to take down sails in high winds and rough seas didn’t reduce me to jelly. On many

an occasion I enjoyed the ride. Not for anything would I have missed the challenge and excitement of those sails that were a sail-and-a-half; or the tense milling just



“Some wives, I’m aware, will never go aboard; others only under perfect conditions, and thus infrequently.”

prior to a race, even an informal one, which was about the only kind we entered.

I could suffer fog, rain, and cold without complaint, though steam-bath conditions were a bit of a trial. Even in a heavy sea I could steer a good compass course. Blessed with good eyes and ears, I was a good lookout, and eternally vigilant for lobster pots. I was also a willing worker, pitching in with all the ordinary work of the boat as well as the extraordinary tasks of commissioning our vessel and laying her up. I took pride in tying fenders and docklines properly, and in being able to pick up moorings.

Boating as a spectacle was a constant delight, from all those wonders “marvelous and strange” you encounter while cruising, to the life in our homeport of Scituate, Mass. I was moved most profoundly, perhaps, by the aesthetic side of life at sea — by a flock of terns veering and swooping over the water; by the high, proud arch of a spinnaker or the solemn loom of spruce; by those days that had an austere yet opulent beauty, the sea a deep blue and stippled with whitecaps, the sunlight almost like moonlight as it gleamed on its swells.

Not instinctive

As for sea-sense, I wish I could say that I functioned instinctively, but I didn’t. What I did well is what I was told, however that might horrify the

feminists. (“Put the tiller that way,” my husband directed me from the bow as I stood by the helm while anchoring. “Back her down. Come forward a little.”)

If I could count on some positive traits in myself, I had also to admit to some liabilities. I didn’t like steering in a busy harbor or when we were running — though I never minded the helm while beating. I didn’t like wallowing, either, and would have chosen a beat over a run on almost any passage. Motion at an anchorage or on our mooring was a strain on my muscles and nerves. Clare Francis or Margaret Roth I was not.

Whatever the conditions during the day, at night I liked to sit on a vessel that was as solid as a rock.

Since being below for any length of time while underway disturbed my equilibrium, I wasn’t enthusiastic about cooking en route to a port.

My need for air was yet another limitation. I couldn’t sleep in a shut-up cabin. Even when it was raining, the hatch had to be cracked at least an inch. If the hatch absolutely had to be shut, I moved from the

V-bunk to the main cabin, sleeping as near that hatch as possible, with the hatchboards placed so as to deflect the rain. Heat was the

most disabling circumstance. For me, sultry weather was insufferable weather. When temperatures and humidity were extreme, my whole soul went slack, and I was practically useless aboard a boat.

Compassionate

One of the chief factors in helping me to become a happier sailor wasn’t my character at all,

but that of my husband. I am blessed with a considerate helpmate. As I wanted to enjoy boating, he also wanted me to enjoy it and did all he could to ensure that enjoyment. A man of compassion and common sense along with his practical aptitude, my husband always puts the security and comfort of his crew uppermost. Once we owned a boat, we had far more choice, obviously, as to cruising in this condition or that, though we had never deliberately put out in bad weather when crewing aboard our friends’ boats. If wind and wave weren’t to our liking, we canceled our plans or changed them. We also tried never to sail ourselves into weariness.

Neither were we purists. Not content to make half a knot for six straight hours, we’d “fire up the iron monster” when our speed fell below three knots. To combat my sensitivity to the sun, my husband had a canopy custom-made for our sloop. He also had a mooring service install a pickup buoy with a long spindle to make it easy for me to reach and pull aboard every time.

Both of us enjoy listening to the Red Sox baseball games, and when I grumbled one night about the weakness of the radio signal after sunset, he showed up the next day with a dandy AM-FM transistor radio.

“Surprises” of another sort he was careful to avoid, giving me adequate notice whenever possible about plans to take a day off, or about boarding our boat on a Friday night instead of a Saturday morning, since some preparation and planning have to go into even a weekend spent aboard.

Soft pillows

I, too, feathered my cruising nest with as many comforts as possible. I love to read, so I always had an absorbing book with me. I also like to embroider and found that I had more time to work on my samplers aboard than at home. Long ago, I had purchased small, soft pillows to wedge against our backs when reclining in the cabin or sitting in the cockpit.



I replenished my cruising self by going ashore and taking daily walks, if possible. At our mooring, on weekends, I hailed our boat club's launch when it was running and once ashore walked downtown for a paper or just strolled along the harbor. If the launch wasn't running or if we were off cruising, my husband dinghied me in and picked me up later. I even walked in the rain, appropriately garbed in my foul-weather gear. If the rocking and rolling at an anchorage were pronounced, and I could get off the boat, I did. If I couldn't, I lay down in my bunk whenever feasible, since prone and with my eyes shut, I felt better.

When hot, we swam off our dinghy to cool off. When cold, we donned warm hats, sweaters, and ski-type socks kept aboard even in summer, along with mittens and lined rubber gloves. Other permanent gear and stores included suntan oil, aspirin, a well-equipped first-aid kit, extra sunglasses, binoculars, coffee, and soup.

If there was comfort in comfort, there was also comfort, I discovered, in competence and consistency; in knowing exactly what you had to do, and when, and doing it time and again. Of necessity — since we were almost always sailing by ourselves — my husband and I had developed a system. When first we went aboard, I went below and put away the stores while my husband warmed up the engine, removed the sail cover, hanked on the genny, and readied the sheets. Setting out, I was at the helm while the sails were being raised.

Returning, I went forward to guide and contain the sails and then back to the helm while my husband furling and

tied the main and bagged the genny to get it out of the way for my next task, picking up the mooring. En route, we spelled each other at the tiller, although my husband always had the helm while tacking, each of us responsible for a particular sheet.

Losing my husband overboard was the thing I most feared at sea. I knew that if I should accidentally go into the water, he would be able to pick me up; but I didn't have the same confidence in my own skills of retrieving him. I knew that the two most important actions I would have to take, should he go overboard, were to throw him a life ring and then get the engine started, while not, of course, losing sight of the skipper. Decidedly unmechanical, on almost every cruise and even daysailing, I practiced starting the engine, turning the key with one hand, while keeping the other on the tiller. I was more sure of myself about the other aspects of the man-overboard drill: tightening the mainsheet, turning into the wind, dropping the jib, and so forth.

For the following season, and at my request, we purchased one of those life rings with a flag and light attached, my husband having promised me in the meantime — and teasingly! — not to fall overboard. A second source of anxiety used to be the double-threaded main halyard shackle “freezing” when I was trying to unscrew it and take it to the lifeline, usually at the worst possible time, in a stiff wind while we were

entering a crowded harbor. To allay that concern my husband now kept it well lubricated with regular squirts of WD-40.

Mindful that other emergencies might arise, I also familiarized myself with our VHF radio and with the location and manipulation of our seven seacocks.

The conflict of children who remained at home, partly because they were students bent on paying their own way through school, was

partially resolved by nightly phone calls, from dockside pay phones if possible, because they were less expensive, or through the marine operator, if necessary. (Today, of course, cell phones are used increasingly.) In this way, our offspring always knew where we could be reached if the need arose. Along with emergency numbers for immediate help, we also left a safety checklist at home: “Iron unplugged? All stove buttons off? All doors and windows locked when leaving the house?” All of us are human, and young people don't have these measures and precautions cranked into their consciousness as absolutely as their parents have.

Organized zombie

Since seven day's worth of home and yardwork had to be compressed into five over the summer, and since I was usually a zombie on my first day out on any extended cruise, (from having left the house clean, the yard in order, provisions, money and instructions for those remaining at home, not to mention food and other supplies for the boat), I learned to be organized, resorting to master checklists against which to



“Clare Francis or Margaret Roth I was not. Whatever the conditions during the day, at night I liked to sit on a vessel that was as solid as a rock.”

check items, from week-end sailing to our two-week cruise.

Basically I am not a negative person. I don't fancy myself in the role of grumbler, complainer, or martyr, I might add. Nothing blights your joy like the company of an unwilling companion. But each of us is many people and one of my selves is timorous. To that persona I addressed from time to time a line from Herodotus: "It is better by noble boldness to run the risk of being subject to half the evils we anticipate," that ancient traveler once wrote, "than to remain in cowardly listlessness for fear of what may happen."

Another self is lazy, which self was made to perform — being sent below to get coffee or snacks or to turn on the radio or fetch the camera — since the less you do on a boat the less you want to do or are even capable, perhaps, of doing. My stick-in-the-mud self that would never cross a forecast, or veer in any way from routine or the known, is under permanent orders to defer to judgment more mature than her own.

One self, however, I never had to lecture. That is the self that enjoys my husband's happiness when afloat. On the decks of a boat his character and abilities come into perfect focus. I watch his tensions dissolve. (Sailing has its own tensions, of course, but those rise out of an activity freely chosen.) I see a man quite at ease or fully engaged. Through all of the substance of boating, through the delights when conditions are right and everything is working on the boat, through the

"On the decks of a boat [my husband's] character and abilities come into perfect focus. I watch his tensions dissolve . . . I see a man quite at ease or fully engaged."

finest things life has to offer — the sight of a soul fulfilling itself.

Today, on balance, and largely due to the foregoing, boating is much more fun for me than it is endurance. Oh, it's still sweet, sometimes, after endless miles at sea to close with a coast and then pick up a mooring or drop the hook. To exchange

solitude for society, to breathe not brine but the fresh smell of trees. I can still be peevish when constricted too long and can still view boating more as a rigorous discipline than as an adventure and romance. But I've passed, thank goodness, through the "narrows" of the cruising experience — never, I think, to return.

Mary Jane and her husband, Warren, have been boating for more than 25 years. She found ways to enjoy the water as a photographer and writer (who has appeared often in Good Old Boat). She is the author of Eye on the Sea:

Reflections on the Boating Life, which was just awarded First Prize by Boating Writers International in their contest for the best book on recreational boating published in the years 1998 and 1999. It is available from Breakaway Books, 800-548-4348.

frustrations, the challenges, even the drudgery — drudgery, I hasten to add, for which he is eager — I bear witness to one of the

Aye! But

In the March 2000 issue of *Practical Sailor* editor Dan Spurr describes how he came to sell his Tartan 44, *Viva*. He concludes that he has lost money on the five boats he has owned, considering the purchase price, cost of upgrade parts, and selling price (in the analysis, his labor was not valued). He asks the question: "Is upgrading a smart investment?" and reasons that it is not. His evaluation suggests that you can expect to lose about 30 percent of your investment when you sell your boat.

We like Dan Spurr. We asked his advice when we started *Good Old Boat* and again several times since then. His advice was valuable and freely given. In addition to his contributions at *Practical Sailor*, Dan has written several books. The most notable and most recent of these is *Heart of Glass*, which is a well researched and well written history of good old fiberglass boats (see review in this issue on Page 74).

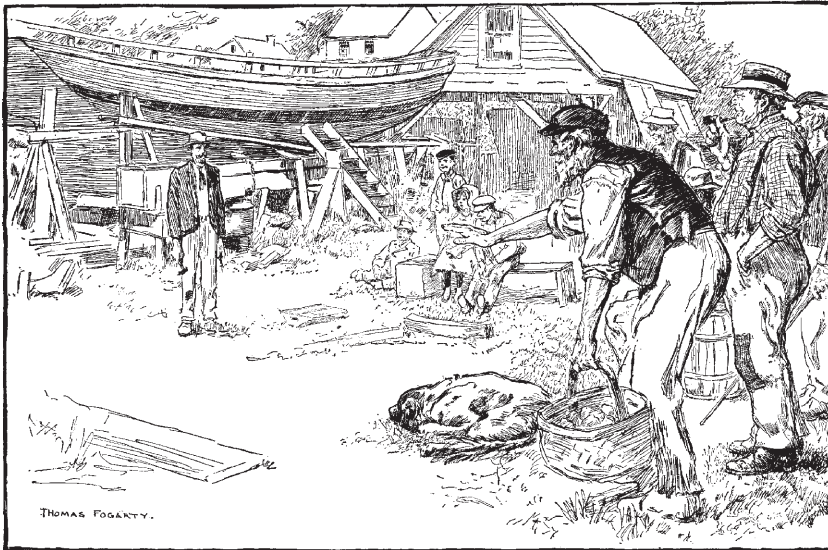
Nobody ever said that owning a cruising boat was a cheap hobby. No matter how you do it you are going to spend a significant amount of money. You can buy a new boat or a used one. You can look for one that is so far gone it won't pass survey, take out a second mortgage for it, and fix it up, or you can buy one in sailing condition. No matter what the situation, you are not done spending money after the initial purchase. Dan adds that you are not going to recover what you spent either.

Karen and I have a concept we call the "carpeting and wallpaper budget." Owner A buys a home and immediately papers the walls and carpets the floors. He believes he has increased the value of the home. Owner B buys the home from A and tears off the wallpaper and pulls up the carpeting. He likes hardwood floors and painted walls. He also believes he has increased the value of the home.

We believe you should make a distinction between maintenance and upgrades. Maintenance is essential. Upgrades should be viewed as optional and discretionary. Upgrades are most valuable to you if they are in harmony with the intended and most common use of your boat. The upgrades you make may be very important to you and not at



will she pay?



Reproduced from the 1905 edition of Sailing Alone Around the World, by Captain Joshua Slocum (The Century Co., New York). Art by Thomas Fogarty.

(With apologies to Joshua Slocum)

all important to the next owner, depending on what he values and how he uses the boat. Upgrades are simply the carpeting and wallpaper budget. The minimum equipment list for most boats is a compass and lead line. As you add equipment beyond that, you add cost and complexity, so choose wisely. You won't recover your investment in upgrades.

If Dan's experiences are typical, and you do lose an average of 30 percent on your investment, there are some things you can do to minimize your loss. Don't buy so many boats. Two-footitis is time consuming and expensive. Pick out a boat that will serve you well for several decades, fix it up, maintain it, upgrade it according to your tastes, and sail it. Sail it often. Minimize the maintenance and upgrading hours consistent with having a safe and enjoyable boat, and maximize the sailing. You are not going to get back some of the money nor any of the time. Go for the smiles, not the gleaming varnish or the equipment list.

While you are picking a vessel that will serve you for several decades, be careful to pick one whose size, cost, and complexity do not exceed your actual requirements. Take it easy now.

Are you really going to sail around the world, or just around *in* the world, or more likely just around in the bay? Using a large expensive globe-circling voyager for coastal cruising is an expensive mismatch. The wrong machine for the job. My good friend Steve Dorsey would equate that to "a Porsche pulling a plow." If you want to keep the dream of sailing over the horizon alive by having a boat that is designed and equipped for bluewater work, at least understand that this is not the lowest-cost option.

Picking the right size is important. The cost of most things associated with boats goes up roughly as the cube of the length on deck. With a big boat you will lose 30 percent of a big boat price.


With a small boat perhaps the same by percentage but obviously less. Big boats are more comfortable, but not as easy to sail.

We bought *Mystic* in sailaway condition. She has since been reasonably well maintained and extensively upgraded. If I added up the cost of the discretionary upgrades, they might equal the original cost of the boat. (I won't do that.) When I worked for corporate America and received steady

paychecks, that kind of foolishness was easier. There were at least two expensive fiascos. First we equipped her to receive weather fax (there is no good weather fax broadcast for our cruising area), and second we barrier coated a bottom that did not have blisters (until *after* we barrier coated it).

Will we make good on our investment? We already have. Will we get our money back? I doubt it, but *Mystic* is not for sale. I don't want my money back. I want my boat.

Older boats are a fine way to get on the water for a lot less money. Dan Spurr does not dispute that. But they do cost money. For an investment, try stocks or bonds or T-bills. For efficient and economical transportation, fly coach class or take a bus. For pure smiles, pure pleasure, and priceless memories, a good old boat is a good buy. It is a buy, an involvement, a process, and a commitment, not a financial investment.

We like and respect you, Dan. We hope you get a little boat and go sailing purely for the pleasure of it. We suspect that you already know that differential GPS and radar are no help on the *Real Voyage*. Even the boat is a metaphor. 

Jerry is Good Old Boat technical editor.

by Jerry Powlas

In or out of gear?

Do you sail with the engine in gear, or out of gear? The experts say the issues are lubrication, heat, and clutch plate condition.

All boats should have the means to prevent the propeller shaft from rotating when the boat is under sail. This can be as simple as putting the transmission in reverse while sailing forward, or as complicated as providing a separate shaft lock or brake to prevent rotation. Some transmissions use oil pressure from their own oil pumps to control shifting. There is no pressure when the engine is off, so these types require a separate shaft lock. These transmissions are sometimes called hydraulic transmissions but, in reality, they are only transmissions with hydraulically controlled shifting. Other transmissions control shifting by purely mechanical means. Some of these are splash lubricated, and have no oil pump. These transmissions are sometimes called mechanical transmissions. Both these names, hydraulic and mechanical, refer only to the method of shifting. The method of transferring power in both cases is mechanical. True hydraulic drives are not part of this discussion.

Although the forward motion of the boat makes the propeller shaft rotate, some gearboxes may not be well lubricated because the oil pump isn't being driven, and the gears that accomplish the splash lubrication are not turning. Overheating and damage to the marine gear may result.

Some offshore sailors add a pulley and a belt to their coupling, and use the free-turning shaft to produce electricity for battery charging. This power is not free, though, as it comes with increased shaft wear, speed reduction, and increased mechanical and electrical complexity.

The Hurth HBW transmissions, which are commonly married to marine power plants, are wet-plate clutch types with rotating clutch units, one for forward and one for reverse. The shifting of these units is controlled mechanically, and they are lubricated

Stories abound, but what's the truth? Should you leave the engine in gear or not when sailing?

by a splash system. In all but the smallest models, when the engine is running, the transmission fluid is cooled by the heat exchanger, but when the engine is not running, the fluid heats up with rotation of the clutch units and there is no way to dissipate the heat, so there's a chance of damage to the transmission.

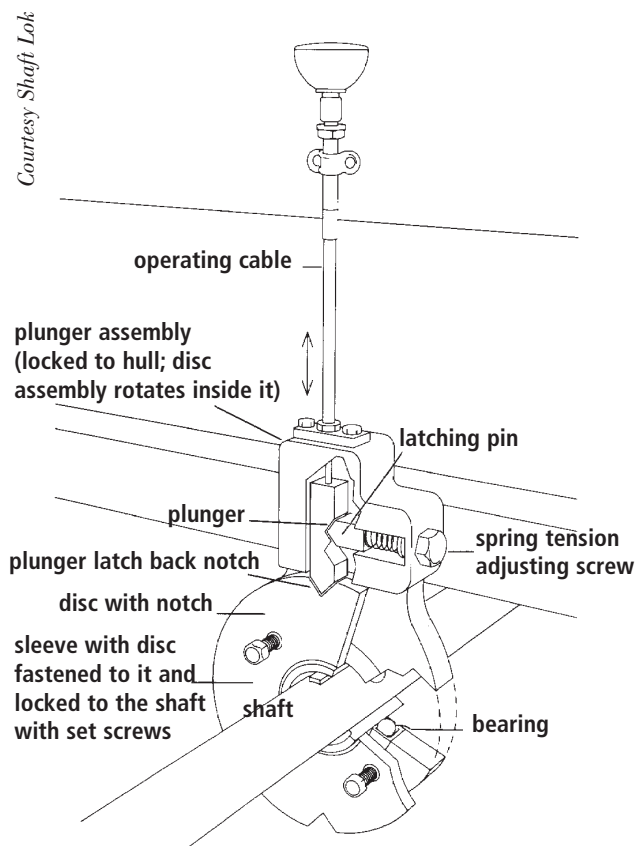
Considerable torque

The way to avoid this problem is to place the transmission in gear opposite the direction of travel (normally reverse). The only problem with this approach is that if the transmission clutch plates are worn, the clutch plates might slip, making things much worse. The propeller generates considerable torque, even at 3 knots under sail. If the propshaft cannot be completely stopped by putting the transmission in reverse, the better choice is to put it in neutral because the friction from slipping clutch plates can generate even more heat and accelerate clutch plate wear. The solution in some cases may be to use a shaft lock. The transmission can then be in or out of gear and no damage will be done. Or you

may wish to simply check your shaft and coupling occasionally to make sure that when sailing with the transmission in reverse, the coupling and shaft do not rotate at all.

Not all transmissions operate like the Hurth HBW. Check your manual. We specifically asked Don Moyer of Moyer Marine what was the best way to treat the Atomic 4 transmission, and he said that since the transmissions will not lock in reverse, the choices are forward and neutral, and as far as he could tell, the transmission would not be harmed in either case.

Why lock the transmission in reverse

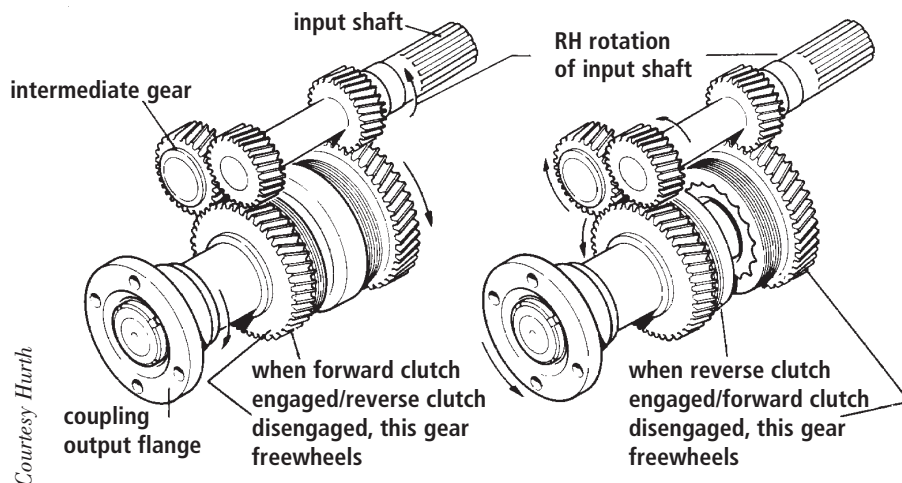


A manual shaft lock.

when going forward? In the case of the Hurth HBW transmissions this is the recommended practice. That is the simple answer. The complicated answer is that the mechanical servo shifting mechanism in these transmissions has a ball ramp device that uses the transmission's own output torque to lock up either the forward or reverse clutch. This servo mechanism works properly when the engine is driving the prop but does not help in clamping the clutch plates when the prop is trying to drive the transmission. By selecting the reverse clutch pack instead of the forward one, the ball ramp servo system works to clamp up the reverse clutch pack and prevent the shaft from turning. Something analogous and easier to understand (but in no way mechanically similar) is to thread a nut onto a bolt. With the bolt turning clockwise (viewed from the bolt head end) if there is drag in the nut it treads up onto the shaft and stops when it runs out of threads (clamping imaginary clutch plates). Keep turning the bolt and note which way the nut turns. Now stop turning the bolt and keep turning the nut in the same direction.

The nut now unthreads itself from the bolt (loosening imaginary clutch plates). If you could at this point magically change the nut and bolt from clockwise to counterclockwise threads while continuing to rotate the nut in the same direction as before, you would drive it back up the shaft and again clamp the imaginary clutch plates. Selecting the reverse clutch pack accomplishes something analogous to this, although the actual mechanisms are not the same.

My old Atomic 4 had a manual transmission that could only be locked in forward. Reverse would only work with constant pressure on the shift lever, so my options were limited to forward or neutral. I always locked the gear in forward, and it prevented shaft rotation. This boat had a two-bladed propeller that created much less torque



A two-shaft transmission. With the forward clutch engaged, at left, the output shaft rotates in the direction opposite to the input shaft. With the reverse clutch engaged, at right, the input shaft drives the output shaft in the same direction via the intermediate gear.

than the three blades on some good old boats. My current boat, a 31-foot sloop, has a three-bladed propeller and a Westerbeke Short-Profile Sailing Transmission. I lock it to minimize wear on the gear, stuffing box, and cutlass bearing. According to the Westerbeke manual, I can allow the shaft to rotate freely with no potential for damage, but I prefer to prevent it from rotating under sail.

As is apparent, there is no one answer to the question “in gear or out?” under sail. I thought of trying to compile a list of transmissions, but there are too many makes and models. The best advice is to read the owner's manual for your own transmission and follow the recommendations.

If there is any doubt in your mind about the specific

requirements of your particular transmission, lock the shaft. If you want to reduce propeller drag and you have a two-bladed prop and a full keel, mark the shaft when the blades are vertical behind the deadwood and lock the prop in that position. With a fixed three-bladed prop, we're stuck with drag. In most cases, with a three-bladed prop, the drag is a little higher locked than with it rotating, but it's a trade-off in terms of speed loss versus transmission wear. I do not have to pay for speed lost, but I will have to pay for transmission wear someday, so I lock my prop.

Start in gear?

If the transmission is kept in reverse while sailing, in some cases the torque

from the prop may make it difficult to shift it into neutral. If that is the case, it may be necessary to head up, lose speed, then shift out of gear and start your engine. This does not seem to be a problem with all boats and transmissions.

In my research, I found there were as many opinions as there were people asked. It is an issue, so it is best to consult the owner's manual and know what is appropriate for your transmission. If in doubt, call the motor manufacturer or transmission builder and ask them; then follow their advice. I called several marine transmission distributors and in certain instances they gave advice contrary to that in the manual. Don't rely on someone else's opinion. Read the manual or call the manufacturer. If you cannot do this, lock the shaft.

Personally, I much prefer to lock the shaft, because I find that the sound of rotating gears with little lubrication ruins the peace of a good sail.



Bill Sandifer is a marine surveyor and boatbuilder who has been living, eating, and sleeping boats since he first assisted at Pete Layton's Boat Shop in the '50s. He's worked for Charlie Morgan (Heritage) and Don Arnou (Cigarette). And he's owned a



commercial fiberglass boatbuilding company (Tugboats).

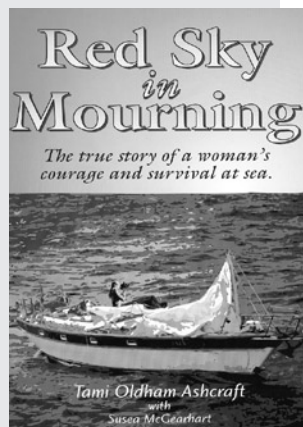
Hurricane Raymond rewrites cruisers' love story as tragedy

Red Sky in Mourning: The True Story of a Woman's

Courage and Survival at Sea,

by Tami Oldham Ashcraft (Bright Works Publishing; 1998; 235 pages; \$18.95).

Review by Tony Polizzi, Port Townsend, Wash.



We have all stood safely ashore as storm winds rage, wondering if anyone was caught out there. Try to imagine a very competent sailing couple in the middle of a late-season delivery from the South Pacific to San Diego running off in a hurricane under bare poles. The winds have pegged at 140 knots. The 50-foot cresting seas rise from behind like freight trains as they overtake the 44-foot yacht.

In her book, *Red Sky in Mourning*, Tami Oldham Ashcraft tells a compelling story of love and survival. The book tells of events that led to Tami's meeting Richard Sharp, an experienced sailor who had built and cruised in his own 36-foot cutter. She tells of their love-filled courtship spent in a South Seas paradise and of Richard's marriage proposal as they set out together on a delivery in the fall of 1983. *Red Sky in Mourning* is also the account of her survival after *Hazana*, the Trintella 44 they were delivering, was pitchpoled, dismasted, and rolled by Hurricane Raymond.

The D-ring of Richard's harness parted, and he was lost at sea while Tami was knocked unconscious in the cabin below. Left alone, the 23-year-old Tami was confronted with the unimaginable task of making her way in a wrecked vessel under jury rig to Hilo, Hawaii.

Red Sky in Mourning is guaranteed to hold the imagination of anyone who has sailed offshore or wanted to. Tami provides technical information with a comprehension and directness that will remind you why you have taken the time to learn celestial navigation and why you have endured the expense and frustration of making your vessel as seaworthy as possible. She will convince you that, when heading offshore, it is imperative that all on board possess fundamental skills enabling them to navigate and sail that vessel.

Make no mistake about it: this is an awesome read. *Red Sky in Mourning* carries with it a subtle tribute to a man Tami loved deeply and who was partly responsible for saving her life. Above all, the reader is left in awe at her strength, courage, and ability.

Tami's bravery is ultimately a confirmation of the belief that, in a defining moment, each of us is capable of much more than we realize. We are reassured to learn that the pain and loss this young sailor suffered did not defeat her; rather it served to deepen her understanding of what is truly important about life.



Tami will be at the Pacific Sail Expo authors' corner April 26-30.

Survival at sea introspection,

I met up with Tami Ashcraft at the annual Seattle Boat Show, a monstrous building filled with the newest, flashiest, glossiest boats to emerge from this year's molds. Every conceivable marine-related merchandiser is represented in a series of booths, selling eye-glass defogger, foul-weather gear, and navigation software. If it is remotely associated with boats, it is there and for sale at boat-show pricing.

It struck me as more than ironic that this would be the backdrop for the interview I had scheduled with a woman, who at 23 had bravely survived a trip to the edge of human isolation. I made my way through the crowds to the booth where Tami was signing her book. It was interesting to watch and listen as people filtered by, saw her book, and asked questions. They started out casually as if inquiring about a certain feature on a piece of marine hardware. Once Tami responded with her personal insight about what 140-knot winds feel like, for example, the truth dawned on these casual passersby that the story they were discussing was no fiction. Slowly they began to realize that this woman had bravely faced more than they were capable of imagining.

Red Sky in Mourning is the artfully crafted story of Tami's sailing experiences, intertwined with a romantic relationship she shared with Richard Sharp, her fiancé. In the course of a delivery, they were run down by a hurricane in the Pacific. The vessel they were delivering was pitchpoled and capsized, throwing Richard from the cockpit. It was later determined that the D-ring of his harness had separated. Moments before, Richard had sent Tami belowdecks. In doing so, he probably saved her life. Below in the overturned vessel, she suffered a head injury that left her unconscious, possibly for 27 hours. After regaining consciousness, Tami was confronted by Richard's death and the aftermath of a dismasted vessel: no radio, engine, or emergency positioning radio beacon, still she managed to navigate the crippled vessel to Hilo, Hawaii, under jury rig.

Deep contrast

It is the story of her determined approach to Hilo that I found so compelling. Alone, Tami finds her way through her grief into a survival zone. Her ability and bravery stand as a testament in deep contrast to the vapid inexperience our culture eagerly attributes to 23-year-old women.

Thinking of all this, I reached out my hand and introduced myself. I asked Tami what she was doing these days. As she put it, "Having two daughters (ages two and five) is easily enough to fill one's days." Tami has moved forward with her life: she and her husband are raising their daughters in Friday Harbor, Washington. They own a Bob Perry-designed 26-footer that they sail on weekends and in Wednesday evening races. She has given up her

brings growth

brightwork business to devote time to being an author and owner of Bright Works Publishing. The company is distributing a cookbook by another woman sailor, Amanda Swan, and a collection of stories about whales.

Tami is also actively involved in the Take the Helm program, sponsored by the Women's Sailing Association. She presents seminars about seamanship and sailing methodology in a setting devoted to women sailors. According to Tami, this allows all involved to relate more openly about sailing a vessel. Her emphasis is on helping women sailors gain the knowledge they need in order to increase their confidence on the water. I asked her which of her own experiences, as she related them in her book, she felt most compelled to pass on.

Learn to lead

"Women need to know at least the basics," she said, "to be able to pick up the VHF and call for help, to handle the sails alone, to start the engine, to dock the boat, and to take part in a man-overboard drill, for example.

These may not be things a spouse takes the time to relate to his mate.

Knowledge is key. Don't be a follower. Learn to lead, and find out as much as you can. You will feel better, be more confident, and enjoy sailing more. This knowledge will make a more confident you."

Tami has earned her U.S. Coast Guard Captain's license, with sail and radar endorsements. She was a skilled and experienced sailor prior to her ordeal in the Pacific, but she points out, "You're never fully prepared for this kind of event." Her presentations to sailors focus on safety and preparation. She recommends learning celestial navigation, saying, "I love electronics, but even a cheap plastic sextant will suffice if your electronics die. The celestial navigation versus electronic navigation is a silly debate; both are useful. If you are heading



In happier times, Tami Oldham and Richard Sharp aboard Mayaluga, the 36-foot ferroconcrete cutter he built himself.

offshore, learn celestial navigation." She also tells people to screw the floor boards down, to eliminate one-way hinges (which allow doors and cabinet doors to fall off when the boat is capsized), to eliminate as much glass as possible, to carry cable cutters, to look for double D rings or O rings when purchasing safety harnesses, and to snap on when moving about the boat. "Invest

in good personal safety gear," she says without hesitation, "because when you need it, you

need to have the best."

Long-term effect

I asked her what effect her ordeal has had over the long term. How had it affected her personally?

"I have self-acceptance," Tami said. "Not just in a physical sense — it's more like I like who I am. I also am more accepting of others. I have greater patience with my fellow human. Being alone for 41 days taught me how important human contact is. I used to sail to get away from everybody. I wanted to go to remote places to experience different cultures as well, but mainly to get away from people and society. I now feel that we, as humans, are interconnected. To live together peacefully on this planet, we all need to be a lot more tolerant and understanding of each other."

I was curious to learn whether Tami was still interested in sailing offshore. I veiled my question by concluding with the ultimate loaded sailor question: "What is your dream boat?" Was there more than a daysailer in the future for Tami and her family? I was surprised by her response.

"There are a lot of good capable boats out there. I think boats between 35 and 50 feet are easiest for a couple to handle by themselves and still have enough room to be comfortable. At 50 feet, sail areas are still manageable for a couple. I would like a round-bilged 50-foot stays'l schooner with all the toys. If they break, we'll have manual backups." I could tell by the sparkle in her eye that this boat had been thought about and discussed before.

It is true that we all face our own tragedies and personal storms. It is comforting to know that we are capable of more than we may realize. It is also exciting to know that personal tragedies can serve to prepare us better for future challenges.

Tony grew up as a liveaboard in California. He later discovered the Northwest School of Wooden Boat Building in Port Townsend, Wash., and fell in love with carpentry and other traditional crafts. He is restoring a Thunderbird for racing.

by **Tony Polizzi**

Kretschmer flirts with our imagination

Flirting With Mermaids, by John Kretschmer (Sheridan House; \$23.95)
Review by Kirk C. McAnsh, Ossineke, Mich.

“At sea, it’s vital to keep your romantic illusions intact as long as possible.” This gem, as well as numerous other great one-liners, helps make John Kretschmer’s new book a worthwhile, as well as an entertaining, read.

The book is an extremely interesting chronological narrative about John’s life and experiences delivering sailboats of all sizes, types, and ages all over the globe. Along with the expected general sailing information and tales of sailing adventure, I was pleasantly surprised to find that John also included a little geography, history, politics, culture, psychology, religion, and romance.

While sailboat delivery is usually considered to be an extremely serious profession, I also appreciated the fact that *Flirting With Mermaids* contained just enough humor to keep a grin on my face. One story in particular was so

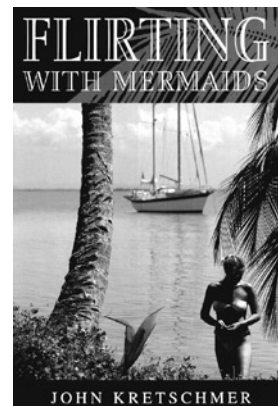
fascinating that I actually had to re-check the cover of the book to make sure I hadn’t picked up a James Bond 007 novel by mistake!

Although I knew little about John before reading this book, I felt as though we were friends in spirit after reading his colorful introduction. We have never met even though we both grew up at the same time (’70s), in the same neighborhood (metro-Detroit), and sailed on the same lake (Lake St. Clair). These facts, along with John’s open and down-to-earth writing style, helped me relate to who he is — not only as a delivery boat captain — but also as a human being.

Flirting With Mermaids contains 224 pages, divided into 10 chapters of just the right length. Each chapter begins with a carefully selected and intriguing quote designed (successfully, I might add) to whet the reader’s appetite for the contents of the chapter. The book also has 29 black-and-white photographs scattered throughout, which I thought were helpful, although it might have been a nice touch to have had those

photographs in color to match the colorful tales they were intended to enhance. I read one chapter each night before I went to sleep and thoroughly enjoyed every minute. I found the book to be well rounded and easy to read. John gives the reader a good feeling of what it is like to be a sailboat delivery captain — the good, the bad, as well as the ugly.

I would highly recommend this book to anyone who enjoys the idea of bluewater sailing and who has a sense of adventure and romance. Do yourself a favor; pick up a copy of John’s new book and plan to spend some relaxing and enjoyable time plying the oceans of the world — if only in your mind (not to mention the comfort and safety of your living room couch).



Esterle has video solutions for cramped spaces

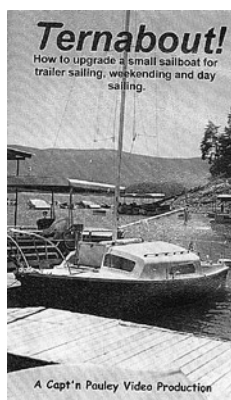
Ternabout: How to upgrade a small sailboat for trailer sailing, weekending, and day sailing, by Paul and Pat Esterle (A Capt’n Pauley Video Production; 1999; 70 minutes; \$24.95)

Reviewed by Mike Keers, Hereford, Ariz.

Getting the most use out of every available nook and cranny is an interesting exercise on any boat. Anyone who has ever owned a trailer sailer or small cruising sailboat is especially aware of the challenges presented by the limited space and storage possibilities.

Husband-and-wife videographers, Pat and Paul Esterle, have spent many years sailing their 20-foot sloop, *Ternabout*. This tape documents the many ideas and solutions they’ve arrived at to make life aboard easier, safer, and more comfortable.

In spite of Paul’s disclaimer that they are not professionals, this 70-minute video is very well done — definitely not an amateur production.



The quality of the production is professional, while Paul’s presentation (Pat does most of the filming) is home-spun, like a friend showing you around his boat.

There are no whirring power tools and no sawdust flying. Paul simply displays and describes the many innovative solutions and methods he and Pat have developed. For example, *Ternabout’s* ground tackle and several spare rodes are stored and organized in a unique, homemade bucket sort of thing. Paul’s concise explanation is all you’d need to make your own. Paul illustrates installing Deck Mate flooring, and the proper method of installing hardware on a cored deck is diagrammed and explained.

Like many camper cruisers and trailer boats, things are kept simple. There is no plumbing — drinking water is kept in plastic bottles, frozen at home and stored in the carry-on coolers — and the small built-in icebox has been converted to a battery box. Cooking is done on a propane camp stove. Their

simple, yet functional, electrical system uses AC and DC.

From a tour of cabin improvements, storage solutions, and the electrical system, the tape moves on to exterior matters: the hull, deck, and cockpit. Paul discusses installing new portlights, deck hardware, running gear, sail stowage, screening hatches, and an awning. He also discusses anchor rode storage and deployment.

There are segments on safety, including jacklines and a swing-down boarding ladder that can be deployed by a swimmer. The ladder scheme alone could save a life. The tape ends with tips for raising and lowering the mast and for transporting and storing the boat.

There are many good ideas here. The Esterles have opted for simplicity aboard in all things and, whether camp-cruising or voyaging, I think most viewers will come away with at least a few ideas. I know I did.

Available from Capt’n Pauley Video Productions, PMB 253, 1101 Volunteer Parkway #5, Bristol, TN 37620; <<http://www.captnpauley.bigstep.com>>.

BACK ISSUES, SUBSCRIPTIONS

Some copies of back issues of *Good Old Boat* are available. Use the coupon below to order. If you're reading someone else's magazine and want to subscribe, you can use a copy of the coupon for that also.

November/December 1999

Technical articles: Repowering, replacing your diesel (part 1); Pushpit seats; Pressure cooking; Building your own holding tanks; Helm balance

Boats: Bayfield 40 feature boat; Pacific Seacraft Flicka boat review

Features: Vessel in the fog; Why?; Christmas Eve on Kinery Rock; Scott Kennedy, artist

History: Pearson era and the birth of fiberglass

Small Boat Journal Remembered: Removing immovable objects

January/February 2000

Technical articles: Repowering, replacing your diesel (part 2); Bottom paints; Riding sails; How we keep time (and why); Heating and cooling your boat; Restoration of an Alberg 30

Boats: C&C Redwing 30 feature boat; International Folkboat boat review

Features: The Git-Rot boat; Good old consignment shops; Iceboating photo essay; Sailing women role models; Georgetown wooden boat challenge

Small Boat Journal Remembered: Whisker poles

March/April 2000

Technical articles: Sealants; Boat stability; Riding sails; New swageless fitting; Fiberglass production overview; Building a stitch-and-glue dinghy; Restoration of an Allied Seabreeze (35); Stove fuels and baking on stovetop; Tahitiana (a steel classic)

Boats: Tanzer 22 feature boat; Pacific Seacraft 25 boat review

Features: A mariner's celebration of the sea, art essay; Boat Economics 101

We're sold out of many of the early issues. Copies of previous articles are available for \$2.50. Looking for an index of articles in previous issues so you'll know what you missed? A searchable index has been posted (at long last) on the *Good Old Boat* website <<http://www.goodoldboat.com/articles.html>>, or you can request an abbreviated printed version by phone or email.

Enclosed is \$7 for each back issue I've ordered (\$8 for Canadian addresses, \$9 for overseas addresses). Mail me:

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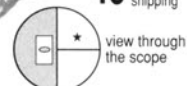


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Continued from 3

Help!

I recently purchased a good old 1971 Ericson 32 with a recently installed Universal Diesel to replace an Atomic 4. In reverse she goes immediately hard to port. This makes it impossible to back out of the slip, even with the tiller hard over. Once you have momentum, most boats are maneuverable, but not this lady. Is this characteristic of the boat?

Bill Shane
Bellingham, Wash.

Sometimes another owner will have a technique that works. We'll welcome suggestions in future Mail Buoy columns. I looked your boat up, and she looks like a fin keel with (perhaps) a skeg rudder. Questions:

Is the prop shaft angled to one side to miss the skeg (if there is a skeg)? Does the prop shaft rotate in the same direction it did before you changed engines? Did you recently change the prop?

I ask because some Universal engines are made from the Kubota diesel short block and have the flywheel at the transmission end of the engine. The Atomic 4 had the transmission at the other end of the engine. (Kubota was designed as a tractor engine, and the A4 was designed as a true marine engine.) In some cases an engine swap results in a prop shaft that turns in the opposite direction.

It is then necessary to change props or run in reverse to go forward. This is not the best option. Some transmission manufacturers say it's hard on the transmission. I asked ZF Marine (Hurth), and they said not to do that.

If the shaft is angled to miss the skeg, it's likely that it was angled so the prop P factor tended to be canceled by the off

angle of the prop going forward. The P factor business can be complicated. Think of the prop as digging into a solid at the bottom of the arc. Then you can predict the direction of the prop walk. In your case, the boat backs to port from prop walk. If the shaft is also angled that way, the new rotation direction in reverse will aggravate that tendency.

In some cases this improves backing; in others it makes it worse. The technique I like best when confronted with a boat that has a lot of prop walk is to gun the engine in reverse to get some speed on and then put the gear in neutral while steering in the direction I really want to go. If I figure I'll need to gun the engine again, I'll oversteer a bit so when the prop walks again, things will line up. It may also help to snub on a dock post with a mooring line while leaving the slip to force the boat to twist or even go straight.

Bill responds:

The engine was changed before I bought the boat. I'm hauling the boat for bottom paint and other work April 10, so I will have more info then. The engine turns clockwise when facing the front of the engine. It's a Universal Atomic, designed to replace the old Atomic 4.

Oops! One important correction

Larry Hawkins points out that in our March 2000 issue the "Is your Boat Stable?" article incorrectly states that the capsize screening formula is the maximum beam divided by the cube root of the displacement in pounds.

The correct formula is the maximum beam divided by the cube root of the displacement in cubic feet. To find the displacement in cubic feet, divide the displacement in pounds by 64. The intent of this formula is that boats with

calculated screening numbers less than 2.0 are considered safe for offshore voyaging.

This screening formula was developed by the Joint Committee on Safety from Capsizing of the Society of Naval Architects and Marine Engineers and the United States Yacht Racing Union. It is somewhat simplistic and may not reflect all the attributes of a particular boat. It favors narrower, heavier boats, and considers recovery from a capsize to a completely inverted position.

Getting a loan

In the March 2000 Mail Buoy, Dennis Lancaster wrote about the problems of securing a loan for an old boat. This is not rocket science, but if you own your home, you can get an equity loan. If you've owned the home for a while, you probably can get a sizable amount of equity without a bank appraisal. You should be able to get 50K with no problem. We have done this for years, and the interest is tax-deductible. We have bought cars, and the interest is usually about equal to other loans, when you consider the tax break, and normally a lot lower than a loan for recreational homes, boats, etc.

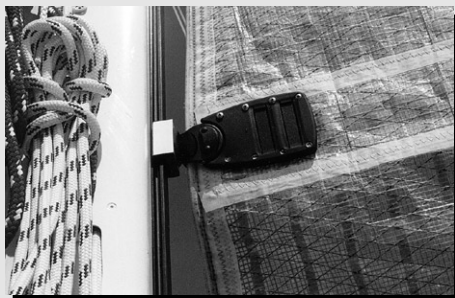
To all you good old boaters, my wife and I are managing Bucks Harbor Marine at Bucks Harbor in South Brooksville, Maine, on beautiful Penobscot Bay. (Not the Bucks Harbor Down East). If you are up our way, please come and see us. We love good old boats, and we will take very good care of you. Check out our website: <<http://www.bucksharbor.com>>.

Jerry and Hope Bates
South Brooksville, Maine

Mizzen riding sails



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THE ATOMIC 4 PROP

Many "Good Old Boats" have Atomic 4 engines. But this engine presents tough problems for prop designers. Most Atomic 4s have a direct drive transmission in forward and a 1.3:1 reduction gear in reverse. The trick is to match the available power with a prop able to convert the torque produced into forward thrust, while still providing some reversing performance. Standard props just don't make it.

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propeller goes a long way in solving the vast majority. Owners report much better powering ahead and sometimes unbelievable performance astern. "For the first time, I could back up!" All this for only \$175.



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Responding to the January 2000 riding sails article, Bill Hess of New York wrote to say that he has a slightly different way to keep his Pearson Vanguard yawl from "horsing around" at anchor: a "wedge" riding sail. This is a small square sail, folded diagonally, with the fold becoming the luff, the top corner of the fold the head, and the bottom corner the tack. The other two corners become clews. If you hoist the sail aloft and sheet the clews aft to opposite quarters, you get a riding sail that is even better than a single flat sail at keeping your boat head-to-wind, without the need for a pole or batten to stiffen the sail.

This is a great design for use in front of the mizzen mast on ketches and yawls. Bill rigs his by running a line from the mizzen spreaders to the head of the wedge, attaching the tack to a fitting just in front of the mast, and running sheets from the clews aft to the corners of the stern pulpit. You can then vary the load on the rig by changing the angle between the clews, with a larger angle being more effective, but also creating more overall windage for the boat.

This wedge design isn't as useful on

a sloop, where there is seldom a convenient way to hoist the sail aloft at the stern. But if you have two sticks, you might want to give it a try.

Steve Christensen
Midland, Mich.

Not just any charcoal will do

Regarding the Mail Buoy in the March 2000 issue, I don't believe grilling charcoal is activated. It contains impurities which will probably inhibit absorption of the diesel smell. I believe fish tank charcoal is activated and will work far better at removing odors. Activated charcoal is cleaned thoroughly with live steam to remove resins and other contaminants in plain charcoal. This opens up the pores so the charcoal can absorb and trap large molecules.

If the source of the stench is hard to access, you could put the charcoal in a very porous bag, such as one made out of cheesecloth, with a line tied to it. Push it as far as possible into the offending space. When the odor returns, pull the line and replace the charcoal.

Tom Medin
Minneapolis, Minn.

The Universal M-25

Great article (referring to the Ericson 35 article in September 1998 issue). If you ever update it or write another, here are a few points about the Universal M-25. Ours is a 1984 model, so we hope they have solved these problems.

1. The original alternator bracket was prone to breaking. There is a factory fix, which costs less than \$200 and will keep the engine in one piece and the oil inside.
2. The old Kubota engine was designed for a tractor and had a simple Charlie Noble-type air cleaner. Actually, there was no air cleaner element; it just kept your fingers from being sucked into the engine. The problem is with the four curved sheet metal tabs that slide down over the air intake. One of the tabs vibrated off our air cleaner and was sucked into the engine, where it bent a valve and was hammered into the thinnest piece of metal imaginable. The net result was about \$2,800 in repairs: replacing the injector pump and rebuilding the injectors. It runs like a champ again, but with a soft foam air cleaner and foam element on top of the intake stack.
3. The original starter fuse and fuse holder are 12-volt automotive type (old

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Buss cylindrical fuses). The fuse holder hangs down almost under the engine where water, oil, and anything else liquid can be dripped into it. The wires hang free and are subject to vibration damage. Ours failed during a passage, and when we went to turn on the engine at the end of the voyage, there was no sound and no power from the engine compartment. A harbor patrol boat pulled us to our mooring. The next day we replaced the wires and fuse holder with a new automotive type. It has the two-pronged type fuse (don't forget spares) and wire leads long enough to mount the fuse itself on the bulkhead, away from vibration and fluids. Again, works like a charm but potentially deadly to the unknowing.

4. Be sure to replace all through-hulls at the time of repowering. This thing sucks a lot of sea water and will fry itself and the raw water exhaust in no time if there is too much restriction in the system. We know . . . we did it and spent \$1,800 on a new exhaust hose, proper vacuum breaker, cleaning impeller parts from the heat exchanger, and other minor fixes.

5. The fuel filtering is totally inadequate; a large external fuel filter is

recommended. You wouldn't believe what collects in the bottom of a 30-year-old fuel tank.

Other than that, use a mix of approximately 25% Soy Gold fuel and just be impressed with the adequate power, excellent reliability, and smell of popcorn coming from your exhaust hose!

Jim McGillis
Santa Monica, Calif.

Sailrite is on the team!

Just thought I'd let you know that one of your advertisers is doing a great job of getting the word out about *Good Old Boat*! I ordered a big box of remnants, needles, and thread to start learning how to sew canvas and sails. When it came, to my surprise, I found a copy of *Good Old Boat* tucked in the invoice envelope! How nice (now I have two, as I am an enthusiastic subscriber). I'm going to take one to the local coffee shop and leave it in the reading basket in the hope that others will find this wonderful treasure. I suggest an article on Jim and Connie Grant of Sailrite, what they've done and how great they are at helping the new and uninitiated. I met them at the Chicago Strictly Sail (you need to be at those things), and they assured me

that I could sew anything if I'd give it a try – and they were right! These are good, down-to-earth folks who'll stop what they're doing to take a phone call that could last an hour on tuning up your machine or getting the stitches right. They have the same commitment to quality and fun that ya'll do at *Good Old Boat*.

Adam Meyer
Chicago, Ill.

Thanks Adam. No wonder we like the Grants so much (they're a lot like us!). We did feature Sailrite in our second issue, which may have been before your time. Let us know if you'd like to see a copy of the article. And we were at the Strictly Sail show giving a presentation every day, but we didn't have a booth. Sorry we missed you.

Leap year

In the article "It's about Time," in the January 2000 issue the author states, "every 400 years, the extra day in February would be eliminated on a leap year. Wow, they finally had it all straightened out." As I understand it, every 400 years we **do** have a leap year, it is the other centennial years that **don't** have one! Also I don't believe the

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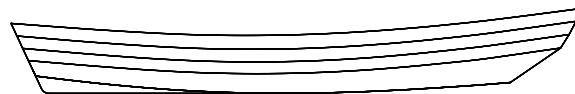
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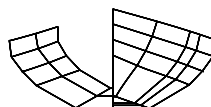
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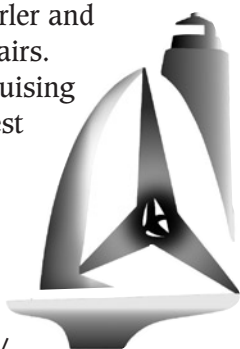


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author mentioned the difference between UTC and GMT. I believe that UTC has end-of-year leap seconds added, and GMT does not. I'm not sure on this last point, however.

Raymond Perry
Newport, R.I.

Pulling the prop

By the time you have to pull the prop shaft out of a good old boat, the flange on the forward end of the shaft tends to be very hard to remove. It's usually so firmly fixed that you may think it's welded in place. The job could be done with a gear or propeller puller but, more often than not, there is insufficient room to insert the puller in the space between the flanges on the shaft and gear box.

An effective way to do the job is to place a brass nut (soft metal), slightly smaller than the diameter of the shaft, between the flanges and progressively tighten the bolts. As the flanges are pulled together, the brass nut will break the grip between the shaft and the flange. It may be necessary to temporarily use longer bolts between the flanges.

This technique avoids the risk of bending the shaft or the flange, something which would occur if you tried to hammer them apart. In a particularly stubborn case, the flange body can first be warmed up with a propane torch.

Alan Porter
Victoria, British Columbia

Recommendation

We can recommend Brands Marina 419-734-4212 in Port Clinton on Lake Erie for doing work on old boats and for appreciating them. They did a wonderful job of taking our 1974 41' Dickerson ketch down to the wood (hull) three years ago. They did such a good job that everyone who saw the boat could not believe it was a wood one and a 1974 vintage! We had to show them inside to see under the sole to believe it!

Don Wogaman
Galloway, Ohio

Heroes at Marine Exchange

Just a line to comment on the folks at Marine Exchange, Kevin Montague in particular. I picked up the '99 catalog at the Strictly Sail show and emailed them to have my name added to their catalog 2000 list. I mentioned that I was interested in a roller furling system for my O'Day 25. Within an hour I received an email from Kevin giving me the correct part number for the CDI system I had asked about. He gave me prices, options, and even figured the cut length of the sail luff so I can run my genoa to the loft down the street. I placed the order with them; they beat any other price I had by up to 200%, and two days later they shipped my unit complete. Kevin gave me some other ideas to consider and added that if I ran into any difficulty at all in the installation to give him a call.

In the 30-some years I've been involved in various levels of customer service, I have never received such outstanding attention, and Marine Exchange has won a new long-time customer.

Bill Christ
Chicago, Ill.

Another recommendation

The article on sealants was precise, pertinent, and long overdue. This old dog learned a number of new tricks from Scott Thurston for which I thank him. However (isn't there always a however), there is one great hole in all sailboats that was not addressed. It is an opening which, despite heroic efforts for centuries, funnels

unwanted water below. It is the great hole in the deck through which our mast pokes and which, until recently, defied efficient sealing. Now we have an easily installed seal system, Spartite, which I absolutely guarantee will interdict water. Properly installed (by any 6-year-old), it not only seals those randomly irregular openings into which the mast so imperfectly fits, but it also acts as a wonderful and tough additional support. Besides . . . it is a pretty shade of blue.

Reese Palley
Key West, Fla.

Yet another recommendation

I wanted to mention a product called Anti-Bond 2015. It does an incredible job of opening the bond that holds cured 3M 5200. It is virtually not-toxic and does a great job in clean-up. It is a bit pricey (\$18/can), but that beats the heck out of breaking things when you try to remove objects bedded with 5200. It's available from JWB Environmental, 877-800-7971, <<http://www.antibond2015.com/antibond2015.html>>.

John Rohland
Rumford, R.I.

Pardey time

We will be doing only one all-day seminar in 2000: the day before the Annapolis Boat Show, Oct. 4. If a lot of people sign up early, we'll schedule another day, Oct. 3. Price will be approximately \$60 per person, \$100 per couple for 9 a.m. to 5 p.m., including morning coffee. (If demand exists and we can find a room, we might also do an evening storm tactics talk.)

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Larry and I will be at the Annapolis show at the *Sail* magazine booth. And we'll be at the Port Townsend Wooden Boat Festival Sept. 8-10 doing a Saturday night talk with slides.

For Annapolis presentations, contact *Sail* magazine, 617-720-8606. For Port Townsend information, contact the Festival Office at 360-385-3628.

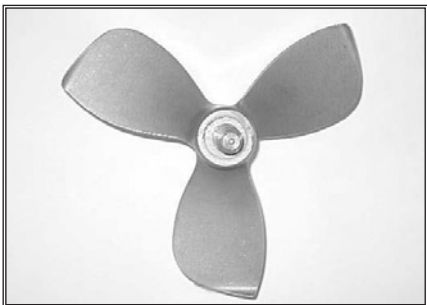
Lin Pardey
aboard *Taleisin*

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Bill Mosher

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the zincs I installed on the strut (by drilling a hole in the center of the strut and through-bolting the zincs in place as well as the zinc on the end of the prop shaft), are almost completely gone. Interestingly enough, the zinc I installed on the prop shaft just ahead of the prop is still in good shape!

While I'm keeping ahead of the

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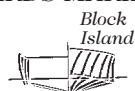
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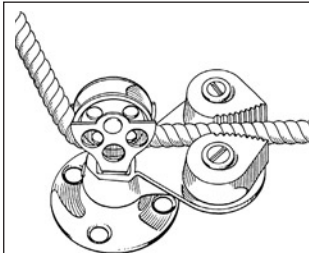
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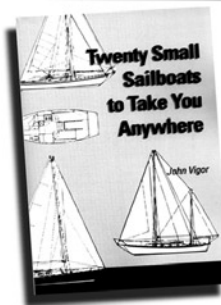
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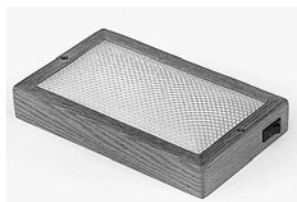
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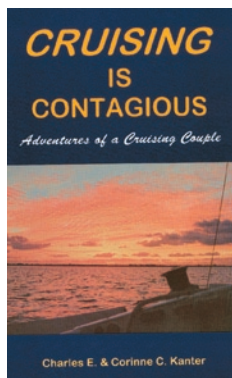
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Kanters tell of Cuba, Tristan Jones, and making money

Cruising is Contagious: Adventures of a Cruising Couple, by Charles and Corinne Kanter (SAILco Press, 1999; 208 pages; \$14.95).

Review by Molly Welsh, Bradenton, Fla.



Charles and Corinne Kanter have taken a look at equipment needs and checklists, put them together with some personal cruising stories, and come up with a book that makes for interesting reading.

Admitted “frugalphiles,” they take a look at cruising with the idea that “if you haven’t got it, it can’t break!” It is refreshing to read about someone who is living the cruising lifestyle without all the high-tech, expensive gadgets some say are essential.

The Kanters live in the Fabulous Florida Keys (their words) and cruise up and down the East Coast and to Cuba and the Bahamas. The section on Cuba was particularly interesting. As journalists, the Kanters had special permission to be there and to spend U.S. money. The authors subscribe to the theory, “when in Rome . . .” and live, eat, and travel like the local folk do. The look into the lives of the people of Cuba was most enlightening.

Another section talks about Tristan Jones, who became a friend of the Kanters, and includes a list of the books written by him.

The book closes with a chapter designed to help readers choose good, seaworthy boats that will fit their needs. Not only does the authors’ cruising experience come into play here, but also Charles Kanter’s years as a marine surveyor.

The authors do make it sound a little too easy to earn money while cruising, and they admit to having a source of backup income. They also are biased toward catamarans, but if the reader can look past personal preferences — and one chapter that was in need of some proofreading — they will find an interesting and entertaining book, written by experienced cruisers.



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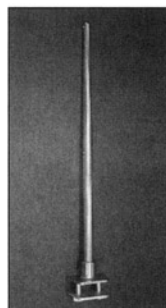
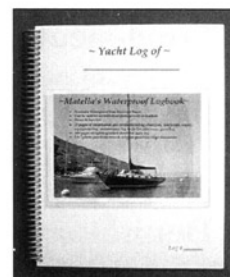


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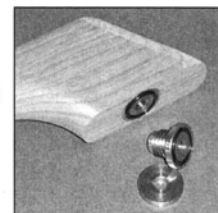
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The book good old boaters are waiting for

Heart of Glass: Fiberglass Boats and the Men Who Made Them, by Daniel Spurr (International Marine/McGraw-Hill; 2000; 388 pages; \$27.95).

Review by Karen Larson, Minneapolis, Minn.

Dan Spurr, editor of *Practical Sailor* magazine, has written the book good old boaters (indeed, perhaps the world) awaited. *Heart of Glass* is the text that belongs on good old reference shelves everywhere. Dan threw himself heart and soul into this 11-year research project, a labor of love which benefits all of us.

If you've wondered about the family relationships between the many boats designed by Carl Alberg, Cuthbertson and Cassian, or Phil Rhodes . . . if you've had trouble unscrambling the messy relationships of Cals, O'Days, and Rangers, or of Albergs and Ericsons . . . if you've pondered the origins of fiberglass and the first sailboats to come out of the molds . . . the answers to these and other questions can be yours with the help of Dan's extensive research and exhaustive interviews.

Dan writes, "The timeline of fiberglass boatbuilding is a long passage of many legs on which the waypoints are the names of those who dared to buck convention, who dared to risk their careers and reputations — Herbert Muscat, Ray Greene, Taylor Winner, Carl Beetle, and John Wills, to name a few. These are men who, as children, made leaky boats from materials found on the beach and who, as their sophistication grew, blew up their mothers' mixing bowls trying to catalyze a new resin . . . Those first boats were crude by today's standards, but they had no seams and did not leak . . .

Gradually, boat buyers overcame their skepticism of plastic and accepted the risk — first in dinghies, then on runabouts and daysailers. Americans took to the water in unprecedented numbers, effecting a fundamental change in recreation and leisure-time activities."

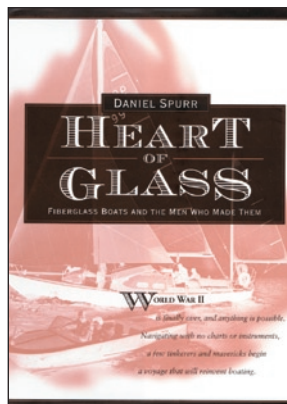
It was Dan's mission to save as much of this history as possible before more is lost. A good old boater himself, Dan knew the rest of us would rely on this book as a reference tool, so he thoughtfully provided a historical timeline, short bibliographical information on companies, and an index so we can look up and find references to designers and types of boats.

Is this the final word on fiberglass? Probably not. Someone else will have to spend 11 more years answering the inevitable questions which arise from this book: more of the intricacies of who, what, when, and why. But Dan has given us a valuable foundation. It may be one of the members of the good old boat community who

invests the time and takes our communal knowledge to the next level. Or it might be Dan himself. He invites our participation: "On the chance that the book merits a second edition, however, I invite any readers with information about boats or persons omitted from or included in this book to write me in care of International Marine, P.O. 220, Camden, ME 04843.

"Heart of Glass," Dan says, "is for all the people who brought fiberglass boats to life. Few, to my knowledge, got rich. Most got by. Nearly all did it for the love of boats."

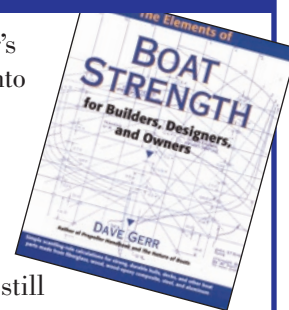
Dan can count himself in the group of those who did it for the love of boats. The rest of us who love these boats thank him from the depths of our hearts.



Good Old Bookshelf Expands!



At last! We couldn't delay any longer. We were so impressed with Dan Spurr's new book, *Heart of Glass* (see review on this page) that we were "spurred into action," so to speak, and we've put the pieces into place to offer his and other books to our subscribers. The other book we have selected to offer, beginning with this issue, is Dave Gerr's *The Elements of Boat Strength*, from which we excerpted a chapter in our March 2000 issue, Pages 25-33. It's the best single book we've seen on construction methods for fiberglass, wood, wood-epoxy composite, steel, and aluminum. And we're still very fond of Ivar Dedekam's book, *Sail Rig and Tuning*. Now you can order all three.



Heart of Glass, Dan Spurr \$27.95

Boat Strength, Dave Gerr \$34.95

Sail Rig and Tuning, Ivar Dedekam \$22.00

Shipping/handling (\$2 for Sail Rig; \$4.95 for others)

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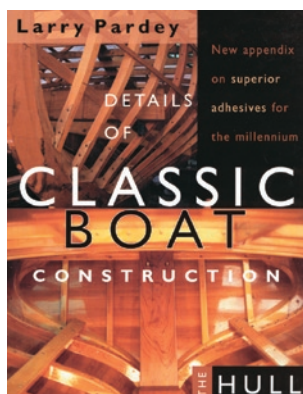
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How to build wooden boats

Details of Classic Boat Construction — The Hull (2nd Edition), by Larry Pardey (Pardey Books and Videos; 1999); Distributed by Paradise Cay Publishing, P.O. Box 29, Arcata, CA 95518.
Review by Dave Gerr, N.A., New York, N.Y.

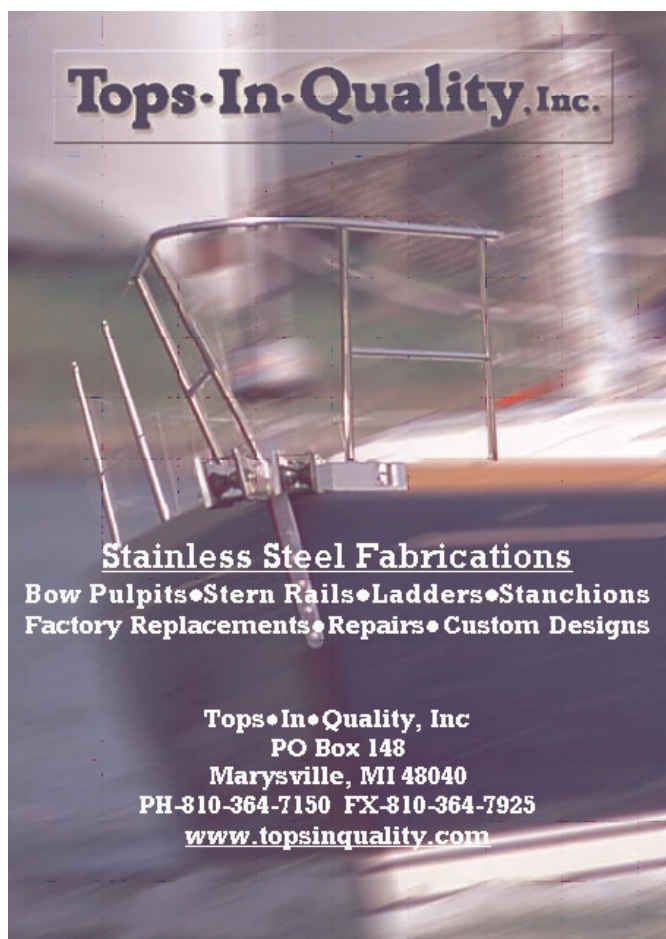
So, do these two reservations detract seriously from the book as a whole? Not at all. The explanations of plank-on-frame construction are so clear and comprehensive that everyone who owns a traditional wooden boat, is repairing one, or is building one really should have a copy of this book for reference. Even builders of modern wood-epoxy boats will benefit from the superb construction information in *Details of Classic Boat Construction — The Hull*. I consider it a must-read and hope Larry will go on and write future volumes on the cabin and fitting out. 

In 1991, when *Details of Classic Boat Construction* first appeared (published by W.W. Norton), I rushed to get a copy. I wasn't disappointed. Larry Pardey and his wife, Lin, built their cutter, *Seraffyn*, themselves, the old fashioned way — plank on frame. And what a beautiful job they did on her. What's more, they've lived aboard and cruised extensively for many hard ocean miles. This combination of practical boatbuilding combined with practical voyaging gives Larry a unique and valuable perspective.

The current, slightly revised, edition is very similar to the first edition of the book. It provides one of very finest step-by-step explanations of the hows and the whys of traditional carvel boatbuilding ever published. Extraordinarily clear process photos and line drawings make things plainer still.

I did have reservations about a couple of items. Larry includes lists of the pros and cons of various construction methods and options. I found these lists to be weighted toward traditional techniques. Such traditional techniques are excellent, but I could redo many of the pro-and-con lists quite differently, reaching substantially different conclusions.

The other reservation is that Larry comes out full-bore and guns blazing against the use of modern marine epoxy for virtually any boatbuilding application. Indeed, this — he stated — was one of the reasons he revised and reissued *Details of Classic Boat Construction*. He provides examples of epoxy failures and lists many epoxy shortcomings. As with his comparative lists, however — strong as his condemnation of epoxy is — I, and the boatbuilders I work with, can't agree. I have designed several entirely wood-epoxy craft, now many years old. One 42-footer, for instance, has over 10,000 miles on her, 70 percent of them in southern waters, and she's good as new. Yards like Rybovitch Spencer, Covey Island Boatworks, Van Dam Marine, and many others have built literally hundreds of wood-epoxy vessels, which have proven incredibly tough, long-lived, and maintenance-free.



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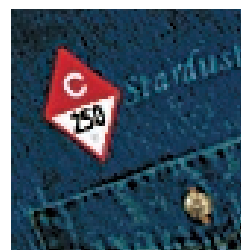


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front with the Good Old Boat logo or in back. Tell us how you want yours. (See photos for examples.) We'll choose the best color for personalization. If you've got a special color in mind, ask us. Circle the typestyle of your choice on the list below. We'll do the rest!

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We know, we know. A lot of you got shirts for the holidays, but your boats weren't exactly in the water at the time. We had the same problem. But now we want to hear from you and to see your smiling faces! Launch that boat! We're waiting!



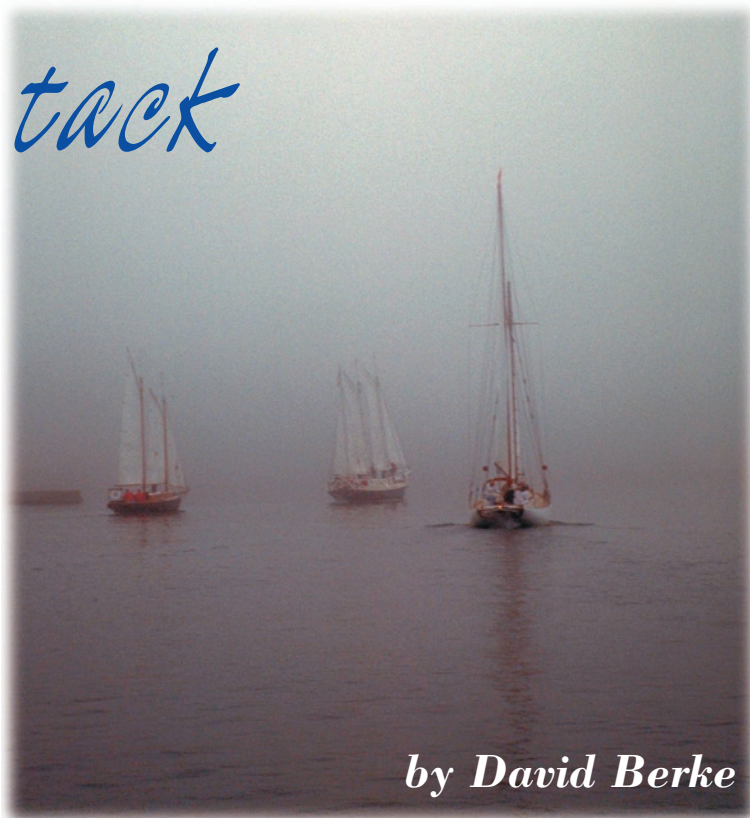
Jim McCarty, left, sails *Dutch Treat*, a Hurley 22. Jim's the Hurley contact person on the *Good Old Boat* website associations page. Check it out. **Tom Vandervoort**, right, races and cruises on a C&C 27, *Escape*.



Michael and Patty Facius, left, sail a C&C 30, *Callisto*. **Ken Kloeber**, right, sails *Positive Impact*, a Catalina 30. **Jerry Powlas**, above, is another C&C sailor. Could this be a trend?



Last tack



by David Berke

A landlubber goes to sea

On January 6, 2000, he went sailing for the first time. He stepped off the dock and shed the shackles of the land, experiencing for the first time the noiseless serenity and freedom we sailors live for. As this was his first sail, he was unsure what to do, which lines to pull, where to sit; but he was unconcerned about such trivial details. He was sailing, and he was reveling in it.

There was no destination, no next port, just a day on the boat. His mind was freed of all mundane matters, and his only thoughts were about how to make the day last longer; about why had he waited so long; and about sailing for the rest of his life. The interaction between wind, water, and sail was intoxicating. The swish of the hull through the ocean was a symphony, his deafness defeated; his old ears could hear every note, detect every nuance of sound.

He sang aloud in three-part harmony with the boat and the wind. His voice raised, he sang his favorite hymn, *Eternal Father Strong to Save*. It seemed appropriate for the occasion with the lines of the song:

*Thus, ever more shall rise to Thee,
Glad hymns of praise from land and sea.*

*“This first sail had captured
his heart, and he knew
no reason to return”*

At that moment, he decided not to return. The boat was provisioned well. The wind was fair and the sea calm. This first sail had captured his heart, and he knew no reason to return. Yes, there were people on shore who would miss him, but those people were proud of his freedom and would understand his decision. He knew he would remain in their hearts.

No longer a landlubber, he steered by the stars. No charts were needed, there were no obstructions on his course, and he knew the way. His freedom was boundless, and his journey an inspiration to me. He set sail on January 6, the day he died.

He was my father.



David Berke tells us, “During the last years of his life, Dad asked to sail with me. His health was failing, and I was worried that something might happen on the boat, so I never did take him. This story was written because I know he is finally sailing now. This year, come hell or high water, I’m taking my mom sailing. I am not living with the regret any more.” Dave sails a Bristol 27 in New York waters and has appeared in *Good Old Boat* as the author of a refit article on that boat.



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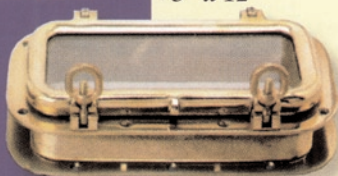
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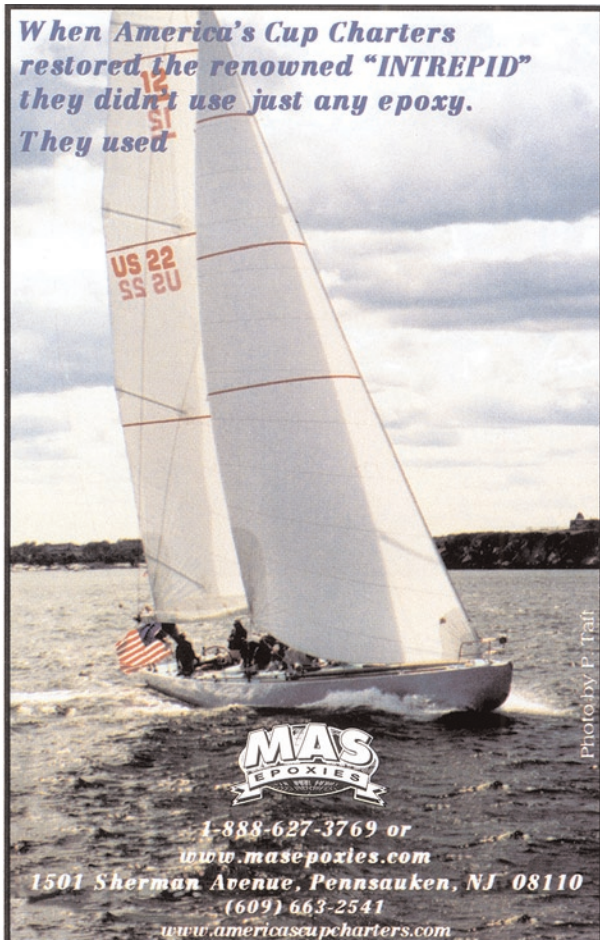
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Reflections

I had the opportunity to visit Lime Island this summer on my annual cruise. It's an old coaling station in the Saint Marys River, between Lake Huron and Lake Superior, just a few miles north of Detour, Michigan, and right on the freighter channel. The huge old coal dock, no longer big enough for the modern lake boats, has been abandoned. The Michigan Department of Natural Resources, which now owns it, has removed all vestiges of coal from the dock, restored the old wooden docks for small craft, and added some primitive amenities like portable toilets. You're welcome to tie up for as long as you want for \$6 a night.

There's something about a place where there is no water or electricity. It tends to keep the casual cruisers away. You find the well-prepared and serious cruisers at these places. I had the entire place to myself, until one other boat showed up late in the day. Here, there was real solitude, that quality we look for when we take one of these old sailboats and spend all of our leisure time, and sometimes more, to bring them back.

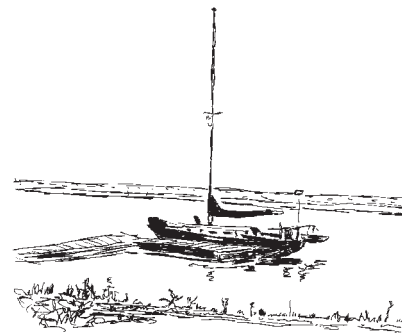
I was thinking of this as I sat on the hill above the coal dock and watched the sun set over Devil's Dream II (my gently aging 1971 Tartan 34). It had taken me three years of concentrated work on her to get here. I worked on everything from the tiller to the deck pipe, from the windvane to capping off the still-operational overboard sewage discharge, a strict no-no here on the Great Lakes. Was it all worth it?

I picked up a twig from the ground under the oak tree where I was sitting and looked down at her again. She glowed in the low sunlight slanting in across the wide expanse of river. I couldn't see the half-painted deck from here, where I ran out of energy before I ran out of project. Nor could I see the imperfect repair I had made on the port-side Dorade box. From up here, it looked perfect. From the sharp overhang of the bow, to the graceful curve of her stern, her classic lines were pleasing to the eye.

A sweet sense of accomplishment slowly crept over me on that silent hill under the ancient oak. Damn, but she's pretty, sitting all alone at that primitive dock in the sunset. Yep, she is a good old boat. Worth the effort? You bet.



Ken Miller has been cruising for more than 17 years. Beginning with a 19-foot Mirage with two holes in the bottom, Ken progressed through several boats to his present 34-foot Tartan. Each was in poor shape when he bought it and has been restored to safe running condition for cruising.



**Story and art
by Ken Miller**

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