GOOD OLD BOAT

THE SAILING MAGAZINE FOR THE *REST* OF US!

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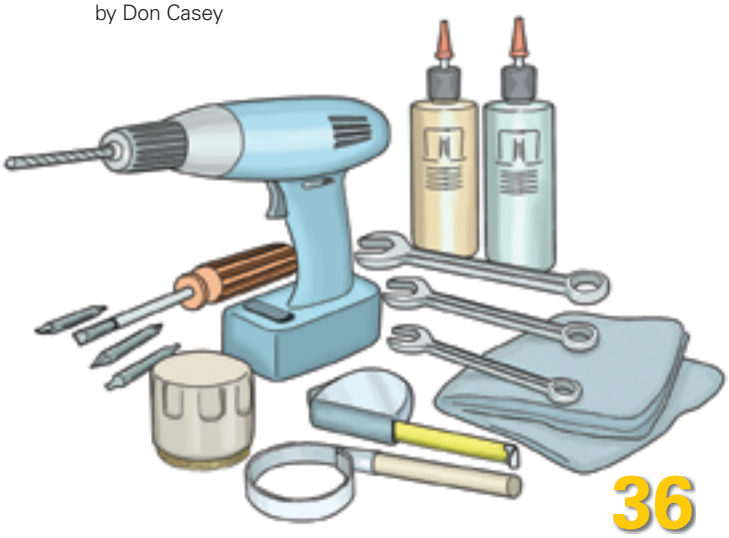
Speaking seriously



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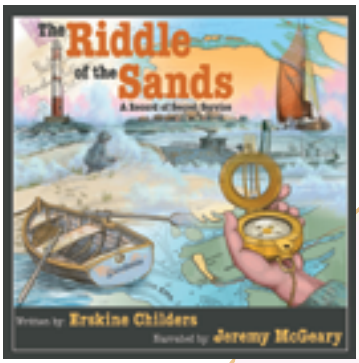

The Riddle of the Sands
by Erskine Childers

Davies has summoned his friend Carruthers from London to help him unravel a mystery. While cruising together aboard the *Dulcibella* in the waters of German Friesland, the two men think they have stumbled across activities that pose a threat to Britain. Carruthers knows the "who," he thinks, but not the "how" or the "when." The pair then weave two delicate courses, one in the *Dulcibella* among the treacherous sandbars and the other between the social and business worlds of the locals ashore and afloat. Another great sea story brought to life by the talented voice of Jeremy McGeary.

Telegram from the Palace
by Geoffrey Toye

Jack the Ripper in the 1880s. The sinking of the *Lusitania* during World War I. The British Royal family. Modern-day lovers enmeshed in a series of life-threatening events over which they have no control and of which they have even less comprehension. You won't be sure until the very end who the good guys are and what motivates the heroes and villains. Sail along with narrator Jeremy McGeary on this adrenaline-filled thriller by Geoffrey Toye.

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by Jule Miller

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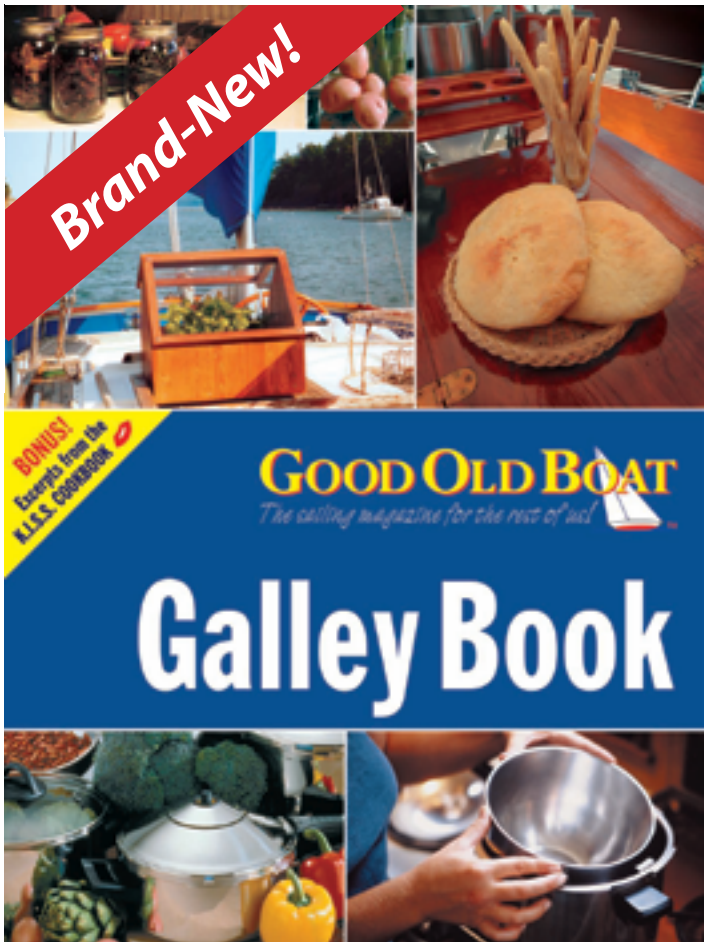

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For some, the path less chosen

Deflecting the dreaded midlife malaise

by Karen Larson

In this issue, Graham Watt puts forth a convincing argument that a wonderful education is available to the young person who invests his or her college-tuition funds in building, and then cruising aboard, a sailboat. I agree wholeheartedly. There's no reason for youngsters to go to college until they're ready to buckle down and until they have some clue about what it is they'd like to study. Until then, why not go out into the world and earn a few practical experiences in the school of hard knocks? The best lessons are the ones we learn by figuring things out for ourselves, especially if we make a few mistakes along the way.

The young people who choose sailing over college will almost certainly find out what's really important to them, learn where their natural gifts lie, and come to understand themselves in a way that those who join the herd and follow the prescribed path never will. It's much more likely that they will also learn to think independently.

Clearly, this is not the choice for everyone. If they all made this choice, the lessons would be diluted beyond reason. So for those young sailors who already have a marine-related career goal in mind, BoatU.S. has just put together a terrific guide to selecting colleges. View it at <http://www.boatus.com/colleges>.

It's the perfect time

With the job market the way it is today, however, perhaps this is the perfect time for those few who have the right set of inclinations and interests to take an early sabbatical. If I were to counsel today's young people, I would tell them that learning how to use tools and creating something with their own hands are highly valued and very satisfying goals, and the skills acquired will serve them well over the years ahead. How very rewarding it would be to celebrate an accomplishment such as building a boat by making a world cruise aboard the product of your labor.

> **"My hopes ride on all young people who will march to a different drummer."**

It's very possible that if some of today's youngsters were to go forth to see the world now, they might deflect the midlife malaise that affects many who come to realize that they have been committed to a bad career decision made at age 18. After all, those who delay college can always attend later, when they understand their goals and are committed to pursuing them. It will only get more difficult to get away later when adult responsibilities tie them down.

My hopes ride on all young people (whether sailors or in some other independent endeavor) who will follow the path less chosen, who will select their own education, who will march to a different drummer.

Solid-fuel heat, cost-effective

Solid-fuel stoves on boats

We certainly share Phillip Reid's enthusiasm for woodstoves on boats, "Warming up to Winter Cruising" (September 2009), and appreciate being listed as a resource. However, there are a few piping/shielding details we feel need to be improved for a truly safe installation, in particular where the uninsulated 3-inch pipe passes through the bulkhead. It looks to me as if the pipe is very nearly touching the edge of the ply bulkhead. Scary! Best advice overall is to study ABYC's A-7 and NFPA's 302 publications that detail an exhaustive set of recommendations pertaining to the use and installation of solid-fuel stoves on boats. Our online stove manual includes many references to these two documents and would be well worth looking at.

Charlie Noble is supposed to have been a ship's captain who had a fanatical desire to see his chimney cap polished to perfection. So, in his honor, his snickering crew gave the pipe fitting his name. But seriously, smoke heads are commonly blamed for being the cause of downdrafts when it's usually air passing over a hull and a combination of open hatches and vents that induces a negative pressure in the boat. The smoke head in this situation just happens to be the point of entry for air trying to equalize the pressure in the boat. Upward chimney convection is overcome and the flow is reversed. A well-designed Chuck Noble should do its job in winds far greater than 20 knots, as that's when you're going to need the stove more than ever. Mapping your cabin's flow dynamics with a lit stick of incense in times of high wind can do wonders for finding the source of the negative pressure. Stay warm.

– Andrew Moore, Navigator Stove Works LLC, Eastsound, Wash.

Wood-burning stove cautionary notes

I installed a heating stove like Phillip Reid's in my Ranger 33. More recently, I installed the propane version in my Freedom 36. Phillip's article was well written and informative, but I would like to make several points. First, and *most* important, is that I have read of carbon monoxide poisoning from exhaust blowing back along the cabin, then, because of turbulence aft of the dodger, getting sucked back in through the hatchboard. After reading about this, I always let air in *forward* of the Charlie Noble. The next point is that many, many times, I was happily curled up in my warm cabin in gale-force winds. I never had blowback because I used a Nicro suction vent that's also used as a stove exhaust. It was a four-sided affair around the pipe designed to create suction in the wind. No matter how it blew, I never had any blowback. It came with the same deckplate that the Nicro Dorade vents used so, when not in use, the Charlie Noble could be unscrewed and the deckplate screwed in for a flat surface.

Another thing concerns fuel. I tried coal. I couldn't get it going and Dickinson (the stove's manufacturer) said it would be too hot for the stove's construction. Charcoal is cheap, easy to find almost anywhere, and a small locker under the port V-berth was the right size. Because of good draft, I never had any fumes. I spoke with Dickinson before and made sure my installation exceeded the minimum length required. My present boat has propane, so I installed a stove that uses the same fuel. It has a double flue; fresh air down the outer tube and exhaust up the middle. Other stoves also use this principle, hence, theoretically, no possibility of CO in the boat. Three of my friends installed this same stove after seeing mine. All are happy. I enjoyed the article and think it is in keeping with the high-quality material presented in *Good Old Boat*. I just think the issue of smoke vs. invisible gas coming in the companionway should have been addressed.

– Len Lipton, Norwalk, Conn.

Those fabulous staples!

As an avid reader of your magazine, I always keep a few old copies on my good old 1978 Tartan 30 that I keep moored on Isle La Motte, Vermont. My sailing partner and I recently purchased a used Yamaha 3-hp outboard for our inflatable dinghy. It would start right up but stall out at idle speed. Being a MacGyver-type person, I took the carburetor apart and used your magazine to repair it. Literally.

I found the carb filthy and the idle fuel port completely blocked. Having nothing aboard small enough to clean it, I thought long and hard and finally used a pair of long-nosed pliers and one of the staples holding a back issue of your magazine together. I was able to clean out the port, and the motor runs like new — all thanks to *Good Old Boat* and its good old staples.

– Dennis Schuller, Montreal, Quebec

Cost-effective furling

I enjoyed Beth Leonard's article, "Cost-effective coastal cruising," (July 2009). Have you considered external mainsail furling? I have a 1975 Alberg 37 with a very old Hyde Streamstay furler and think it is fantastic. I singlehand almost all the time and recently made a trip from Toronto to North Carolina on a low budget, so I really relate to your story.

I have only seen one company promoting the external main-furling system, CDI Inc. <http://www.sailcdi.com>. Its system would be a small fraction of the price of an in-mast or in-boom furling system. If or when my old Streamstay gives up, I plan to use CDI. I reef easily and instantly from the cockpit. I don't bother to turn into the wind, I just drop the traveler a bit and it works great.

furling, and GOB staples

The Stuart Knockabout, *Grey Ghost*, sailing in the Edey & Duff Boatbuilder's Cup.

My previous boat, an Alberg 30, had a conventional full-battened main and, after several homemade attempts at lazy-jacks, I bought the EZ-JAX system. It worked great. The lazy-jacks are pulled out of the way for raising the sail and deployed for lowering it. Before that, I always had battens catching in the lazy-jacks. Happy sailing.

– Gord Martin, Toronto, Ontario

Beth Leonard responds

Thanks for the feedback on the article and the interesting suggestions. I had not seen the CDI system. It looks like a reasonably priced solution to the mainsail reefing/furling problem and I would be very interested in trying one out sometime. It turns out they're located about 20 minutes from my parents' home, so I will investigate further.

– Beth Leonard, Provence, France

Mooring Buoy Pickup 101

Good article (in the May 2009 issue)! However, your readers should be aware that just threading a mooring line through the metal ring on top of a mooring buoy is a surefire way to have your line chafe through at about 3 a.m. Don't ask how I learned this. If you must attach to the metal ring, better to use a metal hook or shackle. Keep these 101 articles coming.

– Larry Thackston, Charlottesville, Va.

Edey & Duff Boatbuilder's Cup Race

Saturday, July 18, Edey & Duff featured the Boatbuilder's Cup Race for boats built by E&D and sailed by those who know good boats. The day began with fog, but by the time the race started at 1300 hours, the sun had broken through and the southwest wind piped up to make for typical Buzzards Bay sailing conditions. The scene was awesome with these Edey & Duff boats: five Beetle Whale Boats rowed by club members from Buzzards Bay Rowing Club and New Bedford Rowing Club, five Stone Horses, two 28-foot, yawl-rig Shearwaters, a Doughdish, a Stuart Knockabout, and a new catboat, Hull #1, recently built and launched that day, all sailing about. Also bobbing on moorings were several Fatty Knees that seemed to be waiting contently for their crews to finish the race. The Stone Horse race was competitive and the scene of all these good boats in view was a special sight to behold. The winner, *Young America*, crossed the finish line only a few seconds before *Windfall* and the rest of the boats.

– Bill McBrine, Malden, Mass.

St. Petersburg Good Old Boat Regatta

Are you one of those good old guys or gals who lied for years by telling everyone you were at Woodstock? Here's your chance to actually be at the First Annual Good Old Boat Regatta in Florida! The St. Petersburg Sailing Association will host a GOB Regatta the weekend of January 23, 2010. We expect to generate plenty of memories, exaggerations, and scuttlebutt to last for years, or at least until the 2nd SPSA GOB Regatta. The average January St. Pete air temperature is 70F and the average wind is 9 knots.

If you sail a good old boat, plan to attend this event. As it happens, the really serious racing folks will be sailing sport boats at Key West Race Week that weekend, leaving Tampa Bay to us for the GOB invasion! We anticipate boat-boasting, partying, and fun for all. An official notice of race and schedule will be available later. Boats will be placed in logical divisions and will race around fixed navigation aids. Typical courses are 7 to 12 miles. Interested readers can send email to me at <bay_woof@yahoo.com> with questions and to get on the "who's coming" list.

– Steve Lang, Clearwater, Fla.

David Helgerson was up a creek (Saint Patrick's) off St. Clements Bay, Maryland, when he spotted this thriving family of ospreys. We sent him a T-shirt for sharing his image with "the rest of us."

Birthday girl

Bruce Perry took this aerial photo from a kite camera as Bill Litke and Joanne Zanella-Litke were sailing back from Block Island last summer. *Tumult 2* is a 1970 Ericson 30 that has had many upgrades over the 11 years they have owned her. One of the workers wrote the date 8-7-69 underneath a hatchboard, so Bill and Joanne used this date to celebrate her 40th birthday. Congratulations, to *Tumult 2* and her crew!

Send your sailboat photos to <jstearns@goodoldboat.com> and we'll post them on our website. If we publish yours here, we'll send you a good old T-shirt or ball cap.

Good news, bad news, good news

Sandy Yarbrough wrote a good news/bad news letter to the editors recently. In summary, it goes like this:

The good news is that Sandy and her husband, Chris, rediscovered sailing as a result of stumbling upon a copy of *Good Old Boat* in a Florida bookstore. Having long ago lived aboard a Bristol 24, they went for it all over again in a big way: buying a boat and selling the house.

The bad news is that Chris was later hospitalized in critical condition and sentenced to ongoing rehabilitation and dialysis.

The good news is that Sandy has been inspired to singlehand the boat, a Cape Dory 25 named *Jenny*, from Fairfield, Connecticut, to Cocoa, Florida, so they can all be together again. Her crew will be their Jack Russell terrier, Greenie, their cat, Ralph, and their parakeet, Bird.

Sandy says she lives by the words "Dare to be brave." We're rooting for her. While she may be singlehanding, Sandy will not be alone. Sailors up and down the ICW will be looking out for her. If you see *Jenny*, be sure tell Sandy hello and lend a hand if her crewmembers don't appear to be doing their share.

– Editors

All good old boaters

My wife, Sue, and I are now on our fourth good old boat, a 1979 C&C 36. She was preceded by an O'Day Mariner, a Pearson 26, and a Pearson 30, which we raced and cruised all over Long Island Sound, north to the Vineyard and south to Annapolis. We've done most of the grunt work on all our boats, so I think we qualify as good-old-boat people.

For the most part, I look forward to each issue of *Good Old Boat* with pleasure, knowing I will read it from cover to cover. The articles on DIY projects, even though I'm getting too old to tackle them, are absorbing and informative, as are your reviews and commentaries. Keep it coming.

However, an element is seeping into your magazine that I find hard to take. For want of a better term, I'd call it reverse snobbery and I don't think it belongs in our wonderful sailing community. A classic example is the piece, "Small is bountiful" by Dale Phillips (March 2009). His hardly disguised mockery of the well-heeled couple anchoring nearby is really quite pathetic. Maybe if he and his wife had called over and invited them for margaritas, instead of snickering at their boat, he

might have found some delightful people who simply have a different way of enjoying their time on the water.

Over the course of our sailing life, Sue and I have met many sailors, from an America's Cup financier (who came for a dinner sail with his wife on our good old boat), to Tom Watson and Walter Cronkite, to friends who built their own wooden dinghies. We have joined journalists from around the world sailing the Yugoslav coast. Members of our club (The Norwalk Yacht Club) have million-dollar yachts, but our vice commodore is a great lady who, with her husband, has restored a 1974 Tartan 30. What we've found is that it doesn't matter how much you have to spend or want to spend, how much work you want to do yourself or have done by others, or if you have a zillion-dollar yacht or a 26-foot, hand-rebuilt, good old boat, sailors are mostly great, helpful, friendly people.

One more thing, in the 30 years we sailed our Pearson 30, we did a lot of racing. There is a fun-loving group that go around cans on weekday nights in their good old boats and gather for pizza and beer after the race. That's part of the good old boat world too.

Thanks for letting me get that off my chest. Now I can get down to the issue that just arrived in the mail.

– Jay Castle, Briarcliff Manor, N.Y.

Thanks for the much-needed perspective, Jay (we intend to take it to heart).

– Editors

Speedseal just got better

A new version of the Speedseal Quick Impeller Change Cover is now being launched, giving two to three times the normal life to cooling-pump impellers and virtually eliminating run-dry impeller burnout.

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Full details are on <http://www.speedseal.com>. Or call 800-675-1105.

– Alex Parker, Speedseal, Kent, United Kingdom

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Cal 2-27

A solid, well-behaved mid-'70s cruiser/club racer

by Gregg Nestor

Designer Bill Lapworth had an eye for a sweet sheerline, which Ken and Vern Cline's Cal 2-27, *Miss Ruby Louise,* shows off proudly.

Around 1956, Jack Jenson started one of this country's most successful fiberglass boatbuilding companies. Located in Costa Mesa, California, which in the 1960s and 1970s would become the Mecca of fiberglass boatbuilders, Jensen Marine brought fast, comfortable, ocean-going sailboats to the American working class.

At first, Jensen built his boats outside, in an open field. The near-perfect Southern California climate lent itself nicely to construction outdoors and the company soon earned the nickname "backyard boats."

Jensen Marine's meteoric rise began with the introduction of the California 24, designed by C. William "Bill" Lapworth. This flat-bottomed centerboarder seemed to blow the doors off most of the competition. Originally named for Jensen's home state of California, the name was shortened to "Cal." It stuck, and eventually Jensen Marine and Cal yachts became synonymous.

The Jensen-Lapworth collaboration lasted many years. In fact, Bill Lapworth designed all of Jensen's boats. These ranged from the flush-decked Cal 20 to the Cal Cruising 46. Included in this selection were three different 27-foot models, each of them distinct although all from the same drawing board.

The company was sold to Bangor Punta in 1973, which moved it first to Florida and then to Massachusetts. The doors closed in 1987.

Design evolution

The first Cal 27, launched in 1970, was the smallest of the three, having a 9-foot beam, a convertible pop-top, and a displacement of 5,400 pounds. Introduced in 1974, the Cal 2-27 sported a 9-foot 3-inch beam, standing headroom, and more creature comforts, including a decent galley with an icebox and an alcohol stove. The last of the Cal 27s was the Mark III, often referred to as the Cal 3-27. It was launched in 1983. Compared to the Cal 2-27, the Cal 3-27 was narrower, 1,500 pounds lighter, had a longer waterline and a deeper fin keel, and carried less sail area.

Unlike its sister 27s, which had relatively flat underbodies, the Cal 2-27 was designed with a beamier and fuller hull. With a displacement of 6,700 pounds, its displacement/length ratio increased from 218 to 278, while its sail area/displacement ratio dropped from 18.2 to 16.8. Combining these elements with a beam 3 inches greater and a waterline 3 inches shorter, the Cal 2-27 was well situated in the "family sailing" category.

Even with its conservative sail plan, the boat still performed well enough to appeal to the club racer. In fact, the Cal 2-27 was the major competitor to the Catalina 27. Under PHRF, the largest Cal 2-27 fleet rates 198, while the Catalina 27 rates from 204 to 219, depending on fleet.

Other design elements include a deck-stepped mast, fin keel, and spade rudder. In common with many of Bill Lapworth's designs of that period, the rudder on the Cal 2-27 is partially supported by a vestigial skeg.

Construction

The hull and keel of the Cal 2-27 were molded with solid hand-laid fiberglass as a single unit. A 3,100-pound lead casting was lowered into the keel and encapsulated with additional fiberglass and polyester resin. The deck is of sandwich construction with a core of marine plywood, which adds strength without adding unnecessary weight. The hull-to-deck joint is sealed with adhesive putty, glassed over on the inside, and covered on the outside with a two-piece rubrail of vinyl and fiberglass.

In the interior, a partial fiberglass pan comprises the sole and various hull stiffeners, including the support structure for the compression post under the mast. The plywood-and-teak bulkheads are bonded to the hull and to the deck, stiffening the boat significantly. Overhead, the headliner is padded vinyl in the saloon and fiberglass forward of the main bulkhead. All the exposed surfaces of the hull are covered with teak except outboard of the V-berth, where the liner is carpeting.

> **"The forward cabin is truly a mini-stateroom, owing to the fact that it incorporates the head compartment."**

The vinyl headliner allows for easy access to deck fittings. On our review boat, the stanchions and pulpits are mounted with backing plates; however, most of the other deck hardware — cleats, winches, and genoa tracks — lack such reinforcement. The stainless-steel chainplates are quite impressive and are fastened to the bulkheads with 14 bolts each.

Deck features

The combination of a turtle-shell-shaped coachroof, the lack of an anchor locker, and mooring cleats mounted well outboard results in a large, obstruction-free foredeck. The two-tone deck is easy on the eyes and the molded-in non-skid and toerail make for sure footing. For added on-deck security, there's a bow pulpit, dual lifelines, and four teak handrails.

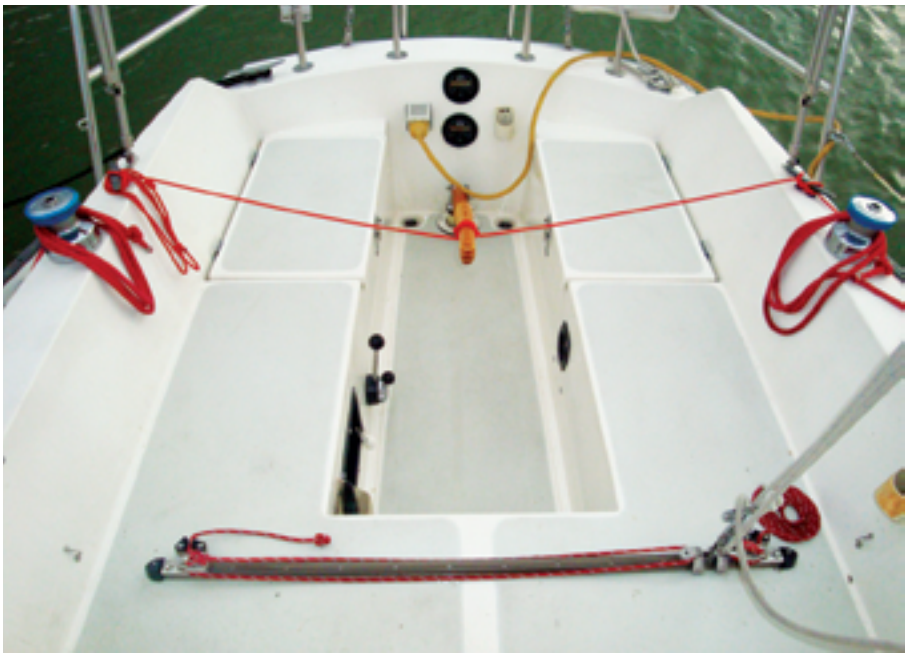
The sidedecks are 14 inches wide and the cabintop, aside from the handrails and the forward hatch, is free from clutter. There is no sea hood. Exterior wood trim is limited to the handrails, the companionway hatchboards, and the companionway slides.

The cockpit is a generous 6 feet 6 inches long, is surrounded by 12-inch high coamings, and has a substantial bridge deck forward. The coamings are properly angled to give good back support and the footwell is narrow enough to offer solid foot bracing. It drains through a pair of 2-inch scuppers. Beneath each of the cockpit seats is a cavernous locker offering access to the stuffing box, the engine, and the batteries. A stern pulpit with an integral centerline swim ladder encloses the aft end of the cockpit.

Accommodations

Our review boat *Miss Ruby Louise*, a 1980 Cal 2-27 owned by Ken and Vern Cline, is an excellent example of the major interior improvements found in the 1974 and later models. The interior is quite roomy, and attractive teak woodwork and joinerwork abound.

The forward cabin is truly a mini-stateroom, owing to the fact that it incorporates the head compartment. As such, it is much less claustrophobic than cabins found in other boats of similar size. Separating the V-berth from the head compartment is a partial bulkhead, with a wooden "basket weave" accordion door that provides a degree of privacy. The V-berth measures 6 feet 4 inches deep by 6 feet wide and has a generous 44 inches of sitting headroom. At its foot, a solid teak door closes off a small locker that could easily be converted to a chain locker with the addition of a deck pipe. Above and outboard are shelves with teak sea



Tiller steering was standard on the Cal 2-27. The mainsheet traveler is mounted on the bridge deck. This is convenient to the helm but can obstruct access to the companionway.

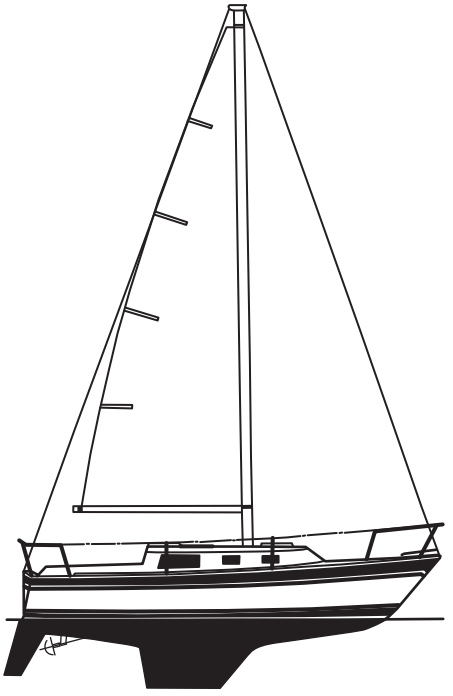
The galley, at left, extends athwartships under the bridge deck, so one of the steps used when entering or leaving the cabin is in the middle of the counter. In spite of this, it's an efficient use of space in a small boat. Most Cal boats have fiberglass pans or inner liners that form the sole and berth flats and include an athwartships beam that supports the mast's compression post. The interior is finished in teak-veneer plywood.

rails, and beneath are storage bins and the 20-gallon potable-water tank.

On the port side of the head compartment is the forward-facing toilet and a teak vanity featuring a white plastic-laminate top, stainless-steel basin with manual cold water, and several stowage spaces. Directly across from the vanity is a hanging locker and a large stowage alcove or sail bin. A pair of deck prisms, a translucent fiberglass overhead hatch, and a pair of opening portlights provide excellent illumination and ventilation.

A teak-veneered bulkhead and teak door separate the forward suite from the saloon. The solid-teak compression post is incorporated into the bulkhead and cleverly performs double duty: it provides support for the deck-stepped mast and serves as the jamb for the teak-paneled door. Mounted to the bulkhead is a drop-down table, behind which are three shelves. The two-position marine-plywood table is veneered with teak on one side and faced with a white plastic laminate on the other.

Opposing settees take up the bulk of the saloon. The port settee measures 6 feet 4 inches. On the starboard side, a foot cubby extends forward through the main bulkhead to make up the length, for sleeping purposes, taken up by the galley at the aft end. The port settee converts to a double. Both settees are made up of three cushions, an arrangement that allows for easy access underneath. Since much of the area beneath the port settee is taken up with a bladder holding tank (possibly Bangor Punta's easy answer to the Clean Water Act of 1972), most of the saloon's stowage is located under the starboard settee. Behind each settee is a teak-fiddled bookshelf and above, a pair of teak grabrails.



Cal 2-27

Designer: Bill Lapworth
LOA: 26 feet 7 inches
LWL: 22 feet 1 inch
Beam: 9 feet 3 inches
Draft: 4 feet 3 inches
Displacement: 6,700 pounds
Ballast: 3,100 pounds
Sail area: 374 square feet
Disp./LWL ratio: 278
SA/disp. ratio: 16.8
Fuel: 15 gallons
Water: 20 gallons

The galley is an athwartships L-shaped affair. While its cabinetry is teak, its work surface is plastic laminate with a wood-grain pattern. There's a dual cooktop that combines pressurized-alcohol and 110-volt-electric burners (which the Clines think was a factory option), a single stainless-steel sink with manual cold water, and a 3-cubic-foot icebox that can handle about 60 pounds of ice. Other features include a set of three drawers, a dry stowage bin, a pair of shelves, a dish rack, a utensil bin, and a condiment rack. For entertaining, there's even a dedicated liquor locker and crystal cabinet with a leaded-glass door.

While this arrangement may sound inviting, using the galley can be awkward. Crewmembers will step on the counter when passing through the companionway. This cuts down on counter space for food preparation. Obviously, any companionway traffic will interfere with the cook. Also, because the icebox and dry-stowage bin are somewhat recessed beneath the bridge deck, viewing their contents involves some bodily contortion.

Besides the companionway opening, four portlights (a pair of large fixed ports and a smaller pair that open),

provide the saloon with light and cross-ventilation. Headroom is a comfortable 6 feet 2 inches.

Rigging

The Cal 2-27 is rigged as a masthead sloop, with a sail area of 374 square feet. Standing rigging consists of a pair of cap shrouds, single airfoil spreaders, a pair of lowers, a forestay, and a split backstay. The chainplates are inboard and securely mounted to the forward bulkhead.

Sail controls include a pair of Barient #10 halyard winches mounted on the mast and a pair of Barient #8 two-speed primaries positioned on the cockpit coamings. The headsail sheets are led aft through cars on outboard genoa tracks. The mainsail is sheeted mid-boom and affixed to a traveler mounted on the bridge deck. Other controls include a vang and two reef points with jiffy reefing. Tiller steering was standard.

Performance

The Cal 2-27 is a fairly stiff boat and behaves well in all but the most severe conditions. It'll heel to about 20 degrees and then settle right in. Both upwind and off-the-wind performance are above average. When the wind begins to freshen, it's time to reef or weather helm may become a problem.

"The Cal 2-27 is well mannered and possesses sufficient room for a cruising couple or a small family."

The original auxiliary was the ubiquitous Atomic 4, with the single-cylinder 12-hp Farymann diesel available as an option. Later engines included the MB10A Volvo diesel and the Universal 5411 diesel. A very few boats were even fitted with outboards — not the best option.

Miss Ruby Louise is a late-model 2-27 and is fitted with the 2-cylinder, 11-hp Universal diesel. While this power plant moves the boat along nicely under most conditions, the boat is a bit underpowered when trying to punch through rough seas. Fuel is contained in a 15-gallon tank mounted directly aft of the engine. The controls for the engine are located on the starboard side of the cockpit, low in the footwell. Access to the engine is fair.

What to look out for

While the overall design, construction, and finish of the Cal 2-27 can be considered above average, there are a few detractions. None of them appear to be major problems, however, and most can be easily corrected. They include such things as missing backing plates, leaking ports, leaking chainplates, gate valves on through-hulls, gelcoat crazing, and the lack of a convenient stowage system for an anchor rode.

Conclusion

Overall, the Cal 2-27 is well mannered and possesses sufficient room for a cruising couple or a small family. Its design, construction, and finish are above average. When contemplating the purchase of a Cal 2-27, age and condition are everything. Consider paying $9,000 to $15,000 for a nice one. By the way, when introduced, a bare Cal 2-27 listed for less than $12,000.

Gregg Nestor is a contributing editor with Good Old Boat. *Having recently sold both their O'day 222 and their Pearson 28-2, Gregg and his wife, Joyce, find themselves boatless. They are currently searching for that perfect good old boat. Gregg's third book,* The Trailer Sailer Owner's Manual: Buy-Outfit-Trail-Maintain, *was released earlier this year by Paradise Cay Publications.*

Leaded glass standard on a production boat? You bet! It's in the door to the liquor and crystal cabinet, at left. When viewed from the saloon, the forward cabin with its V-berth appears unusually spacious, center. This is because of the way the head compartment, at right, is included as part of its area. When guests are aboard, an accordion door offers privacy between the V-berth and the head.

Best forefoot forward

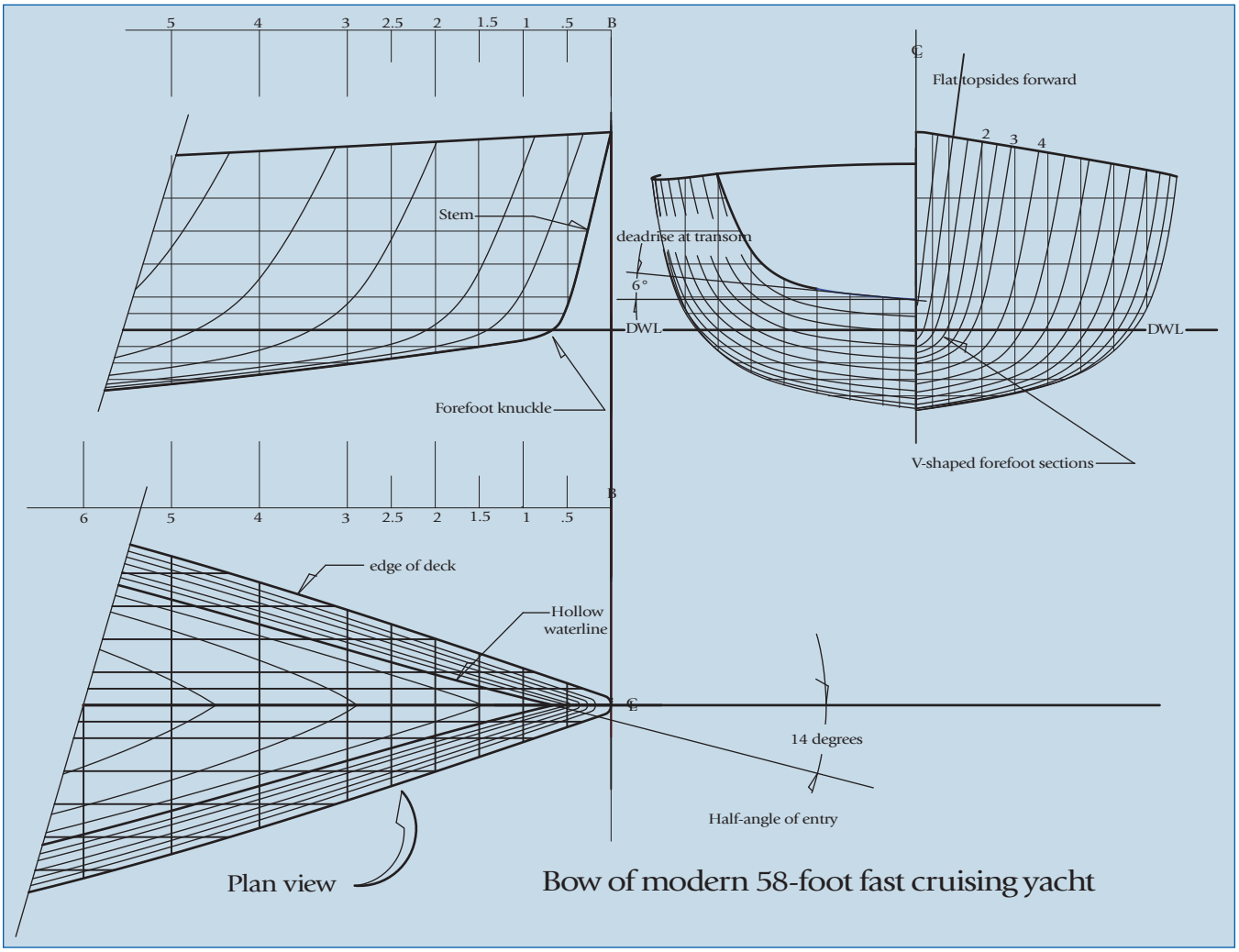
A boat's bow says a lot about its behavior

by Robert Perry

In my first column (September 2009), I established the terminology I will use. In this issue and the next, I will apply those terms to the bow and stern to touch on how their shapes affect performance and handling. This is a complex subject and there is some danger in looking at parts of the boat independent of the whole boat, but I will try to tie it all together. I'll focus on the shapes we're likely to find in the typical good old boat built in the last 30 years.

The hull shape of today is the scientifically perfected shape we see on most of the box-rule boats like the Trans Pac 52s. The simplest box rule dictates the dimensions of a box into which the hull must fit — like an open shoe box. The type of rule we usually see today is a box within a box where the outer and inner boxes dictate the maximum and minimum allowed dimensions of the hull. In both cases, limits are added to cover draft and sail area. With the specific allowable dimensions that form a box rule, designers very quickly find out what works and what doesn't. In Europe, where the International Rule (IRC) is now the dominant handicap or rating rule and a static, at-rest waterline is measured, designers have been getting the best results by putting almost all the overhang in the stern. The hull shapes of today are very effective but I miss some of the more diverse, and sometimes wacky, older shapes.

We will start at the bow. We'll treat stern overhang in the January 2010 issue. I want to be certain that you do not lump bow overhang and stern overhang together. They do very different jobs. This is a touchy subject because I know many sailors subscribe to the theory that overhangs in general increase the sailing length of the boat once it heels over. That's true of the stern overhang but to a far lesser degree in the bow. That is why the near-plumb stem is so prevalent in today's new designs. If you want the maximum boat speed and volume for a given overall length, then bow overhang must go.



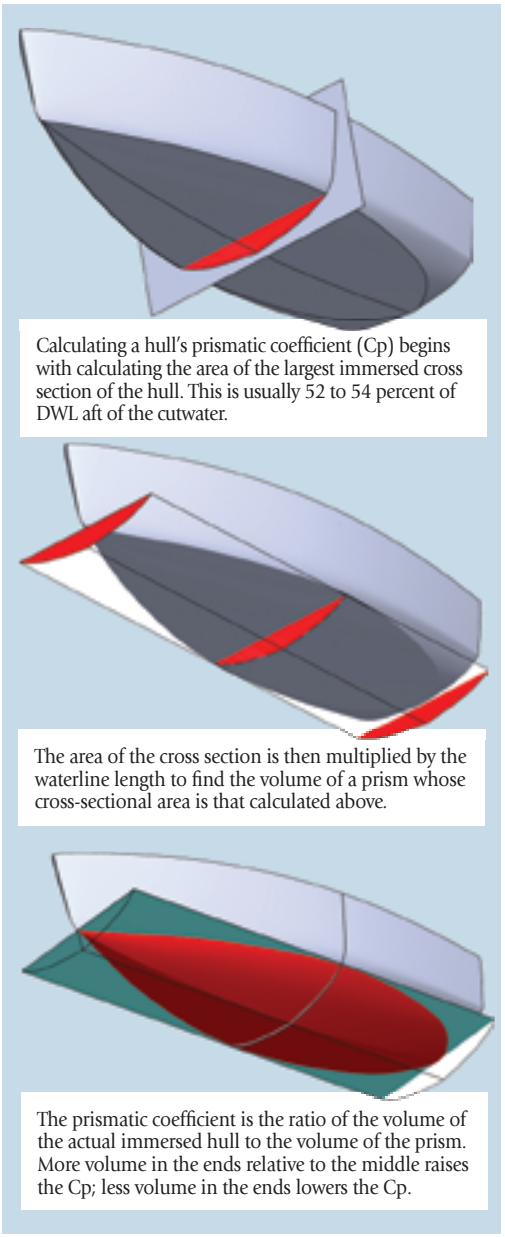
Bow of modern 58-foot fast cruising yacht

Prismatic coefficient

The effectiveness of bow overhang is a function of the distribution of volume along the length of the hull. You can identify the character of a boat's distribution of volume by its prismatic coefficient (Cp). This measures the fineness or fullness of the immersed hull. To quantitatively measure the effect of overhangs, you need a much more complex calculation involving "second moment lengths" at various heel angles. These were first used in the International Measurement System (IMS) rule and indicate how much more speed you get as you heel and overhangs immerse. That calculation is beyond the scope of this article, so we will rely on our eyes and some representative shapes.

Prismatic coefficient sounds complex but is simple. It's just a number, usually between 0.50 and 0.56 for sailing vessels, that indicates how much relative volume there is in the ends of the boat compared to the maximum volume near the middle of the boat. A low Cp of 0.50 indicates a boat with very fine ends. A high Cp of 0.56 indicates a boat with full ends. By "full," I mean more volume. The textbook "medium" Cp is around 0.54. The keel is not included in this calculation. In a boat with a wineglass mid-section and full garboards, this is a problem because there is no clear distinction of where the hull ends and the keel begins. Modern boats with distinct hulls and fin keels are easy. If it's a classic wineglass section, it's up to each designer to decide how he will calculate the Cp.

The important thing, as the Cp will be used to compare hull forms, is to do the calculation the same way each time. A low Cp means the hull will be easy to push through the water but your ultimate hull speed will be lower than a similar boat with a higher Cp. The higher the Cp, the higher the potential hull speed, as the bow and stern waves get pushed farther apart. Planing powerboats have Cps up around 0.7 but at low speed they are very inefficient as they drag their big fat transoms though the water, creating a lot of drag.



Calculating a hull's prismatic coefficient (Cp) begins with calculating the area of the largest immersed cross section of the hull. This is usually 52 to 54 percent of DWL aft of the cutwater.

The area of the cross section is then multiplied by the waterline length to find the volume of a prism whose cross-sectional area is that calculated above.

The prismatic coefficient is the ratio of the volume of the actual immersed hull to the volume of the prism. More volume in the ends relative to the middle raises the Cp; less volume in the ends lowers the Cp.

RICK BEDDOE

The primary problem with the Cp calculation is that it combines the bow and stern volumes in one equation. A boat could have a very full stern and a very fine bow but the Cp would not reflect this. I suppose you could cut the boat in half and do a Cp for each end, but I have never done this and I don't know any designer who does. Over the years, I have always compared the Cps for my designs and I now have a pretty accurate feel for what the Cp does, how it works, and how to use it.

Bow overhang and volume

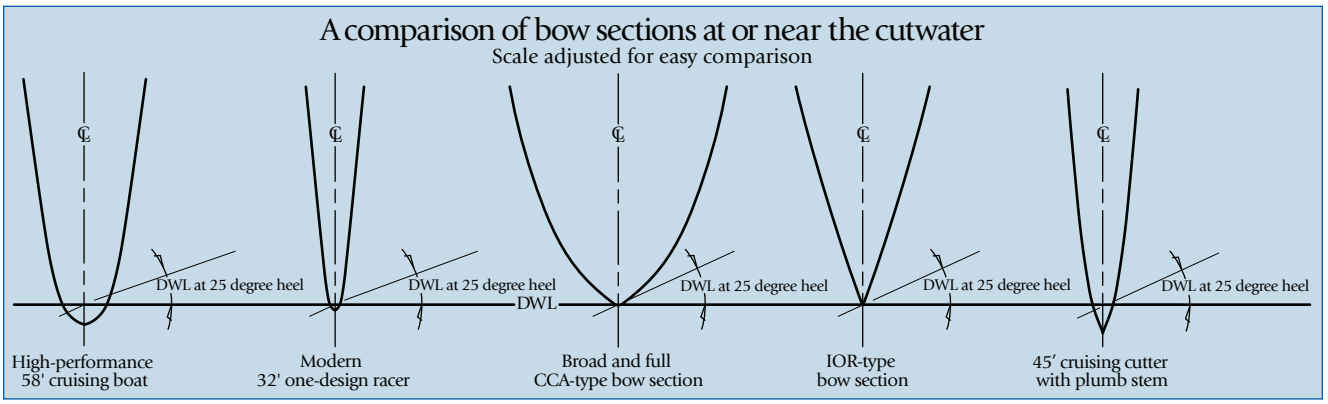
The problem with thinking that bow overhang extends the design waterline (DWL) when the boat is heeled is that most bows are relatively fine and there is just not enough volume in the bow of most sailboats to change the overall distribution of volume. If you heel over a typical bow from 30 years ago — say a hull influenced by the International Offshore Rule (IOR) with straight bow sections — the bow pretty much just lies on the water and does not move volume forward to any significant degree. If you go back farther than the IOR, to the days of the Cruising Club of America (CCA) rule, bows were much fuller and you could argue that they were more effective when heeled. You would be right, but not by much. Look at the odd bows of the last few America's Cup boats. Those shapes are rule-driven and an effort to push as much volume forward as the rule would allow.

Today, we know the bow should cleave the water and not shoot a plume of water up the stem face. The energy it takes to create that geyser of water at the stem, called affectionately by the old timers a "bone in its teeth," is drag — energy deducted from the boat's forward motion. The bow wave should peel cleanly off the hull immediately aft of the stem with as little fuss as possible.

The handicap rule influence

Bow shapes very often reflect the influence of the prevailing handicap rule of the day and exactly how that rule measures

When no measurement rule is in play, the designer can concentrate on giving the bow the features that best meet the boat's purpose. The bow of this fast cruising boat has a fine entry, for speed, and a short overhang, so the anchor clears the stem when it's lowered and raised.



The shape of a boat's bow affects more than just the boat's performance. Some shapes are a result of designers working within a measurement rule. Giving up a little performance potential at the bow might buy a greater benefit elsewhere — or vice versa. The bow sections above are just a few of the great variety seen on sailboats designed in the last 50 years.

"sailing length." The typical bow section of an older CCA type, like an Alberg 35, is quite full and rounded at the stem, a result of the way the CCA measured sailing length. The topsides bulge out in what they used to call "flam," as opposed to the bow sections of a boat like my own Valiant 40 that show concave "flare."

The IOR-influenced types, like a Tartan 37, show almost a straight line in section from the cutwater to the sheer — no flare, no flam. In "plan view," that is, looking down on the boat, the typical high-performance boat of today has a very fine bow with half-angles of entry (the angle made between the DWL in plan view and the centerline) of less than 16 degrees. You even see designs now that use a concavity, or "hollow waterlines," forward in order to reduce the half-angle of entry.

The half-angle of entry for older boats, like the famous Phil Rhodes racer, *Carina*, is 24 degrees. *Carina*'s bow section at station 0, the cutwater, shows considerable fullness or flam and the forefoot section is a deep, sharp V. The racer of today will have dead-flat, almost vertical, topsides sections at the bow and a rounded, bullet-like, shallow forefoot, a shape that retains a narrow half-angle of entry while volume is pushed forward. For reference, Bill Lapworth's Cal 40, the boat that marked the end of the CCA's dominance of American handicap racing, had a half-angle of entry also of 24 degrees. IOR boats brought the half-angle of entry down to around 19 degrees.

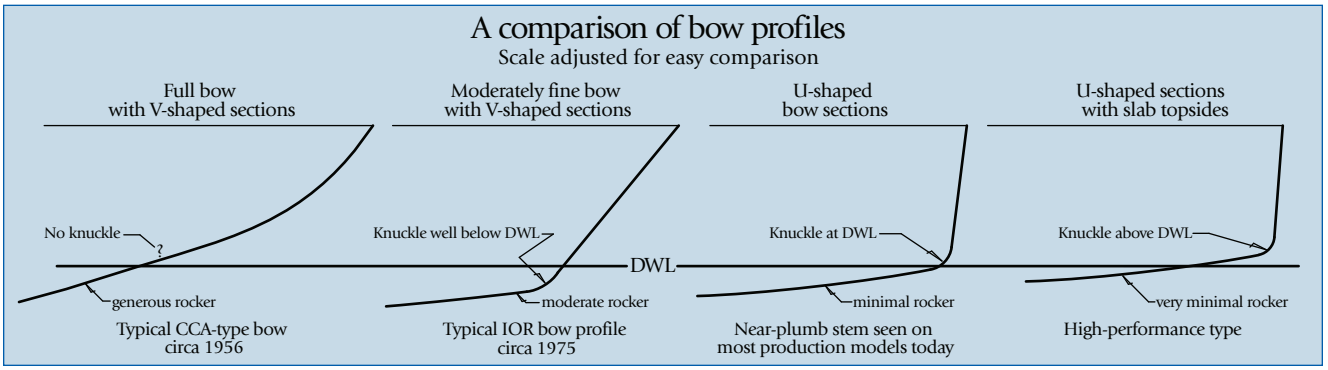
Benefits of full bows

However, there are definite benefits to bow overhang. Fullness forward can make for a dry boat when you are punching into waves. Back in the days of the America's Cup Class (***Note:*** *The future of the class, and the America's Cup, is currently cloudy.* ***–Eds.***), designers found that bows with overhang seemed to quiet down the motion of the boat compared to the chopped off "dinghy" or "destroyer" bow. But this is not your Grandpa's bow overhang. This AC bow had an extremely fine half-angle of entry of around 13 degrees.

I prefer some bow overhang to get the anchor and chain clear of the stem. A full bow will generally have more deck space forward, and this is handy for deck gear and working on the foredeck in rough weather. Given the pragmatic benefits of a full bow, I still think it is safe to say that a fine bow is faster. If you want to read more about bow shapes I devote an entire chapter to bows along with comparative VPP (Velocity Prediction Program) runs in my book, *Yacht Design According to Perry*.

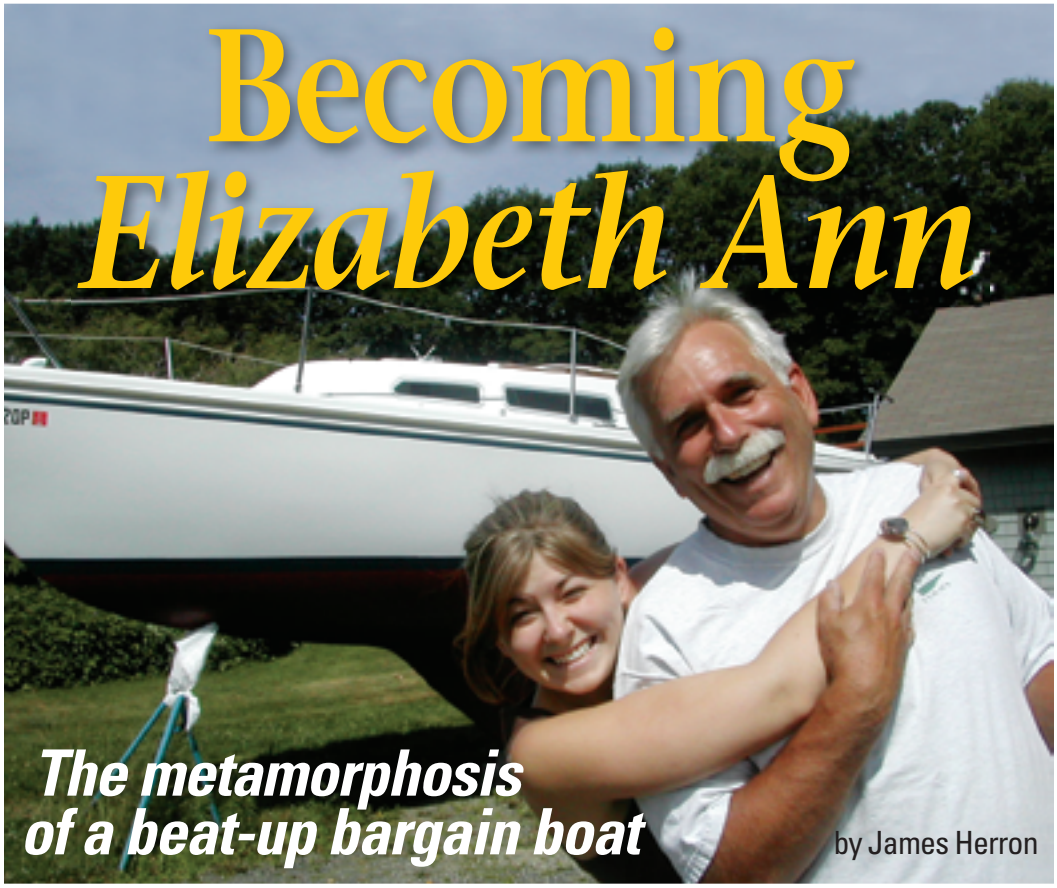
In the January 2010 issue, we'll look at stern shapes.

Robert Perry is the principal of Robert H. Perry Yacht Designers in Seattle, Washington. His best-known production designs include the Valiant 40, Tayana 37, and Passport 40. He has written numerous articles for various sailing magazines.



The longer the overhang, the more pronounced the flam at the cutwater. At one extreme is the CCA-type bow, at left above and at center in the top drawing. Compare this with the modern high-performance-type bows. The CCA boat might show a bone in its teeth when sailing at speed. The high-performance boat will cut the water more cleanly but could well give a wetter ride.

Becoming Elizabeth Ann



The metamorphosis of a beat-up bargain boat

by James Herron

Restoring the Catalina 27 was to a great extent a father-and-daughter affair, which is why there are two Elizabeth Anns in this picture.

Small-boat sailing on the Severn River and Chesapeake Bay was a part of my life growing up in Maryland in the 1960s and '70s. I never owned a sailboat of my own but had always longed to do so. Fast forward 35 years. When we moved to Rockport, Maine, I was immediately drawn to the romance of sailing these magnificent waters on my own 40-foot Hinckley . . . but supposed I would settle for something, say, about 25 to 30 feet in length and maybe 95-percent less expensive.

One day, while reading the *Camden Herald*, my eyes darted to an ad about the 2005 Penobscot Bay YMCA Boat Auction. The local YMCA raises money each year by auctioning boats that have been donated. About 12 boats apparently did not sell at the annual auction and were still available to the highest bidder.

Not really being in a position to acquire a boat, I had not attended the auction in previous years. But I was drawn to the picture of a 1978 Catalina 27 left over following the auction held in 2005. I remembered the Catalina was a popular boat on the Chesapeake, one known to be a very good sailing craft. "Everything works . . . great boat for little money," the ad stated.

I decided to have a look and invited my good friend and neighbor, Frank, to join me. Frank is a true Mainer, an amazing sailor, and one of those rare people who seem able to fix or build anything.

We climbed the ladder and looked in the cabin. Yuck! The water down below was at least 8 inches deep. Cushions were floating in the smelly mess. We grabbed some high waders from my trunk and climbed in. We opened the engine access panel to find what appeared to be a rusted pile of junk. "I wouldn't take this bucket of bolts if it was given to me," Frank stated matter-of-factly.

I made an offer. At $900, the offer was so low it was embarrassing. The man at the Y said, "We can't accept that."

"Of course," I said. "I understand." But I told him I would wait patiently in the hope that, if the YMCA received no other offers, perhaps they'd reconsider. Three weeks later, I brought *Blue Moon* home.

What had I done?

This sort of project means work, money, and an understanding wife. I scored two out of the three criteria. Money was my only challenge. I started the restoration fund by selling extra sails from the Catalina along with odds and ends no longer needed around the house. As the fund grew, I began work.

My daughter, Elizabeth Ann, loves sailing and, while college takes up most of her time, she jumped in to help me gut the boat and begin the

Stripped of loose and movable parts, the galley came out of the boat to be taken to the workshop, below. The saloon too was largely disassembled for refinishing, right.

restoration process. We began by pulling everything out and removing every part we could unscrew or unbolt. We removed all the brightwork inside and out. We took that and most of the galley to my basement for restoration over the winter. We also removed the old head and the Atomic 4. A neighbor's backhoe lifted the Atomic 4 and galley out of the boat. At that point, we were left with a grubby, stinky, moldy cabin. After I performed a thorough inspection, Elizabeth Ann and I began to scrub and prepare *Blue Moon* for repairs and paint.

The Atomic 4 challenge

We began to dismantle the Atomic 4. It was obvious the engine had not been run for several years. As it was a straight saltwater-cooled rig (no heat exchanger), I wondered whether it was worth rebuilding. Might it have a cracked block, head, or manifold? Perhaps it had seized?

Frank and I began removing parts, slugging away with chisels, heat, and enthusiasm. The head looked good, the pistons appeared to be virtually unused and moved freely. But the exhaust manifold was toast; we noted a large crack. Somehow it had overheated. Frank drizzled acid through all the water channels, and we reamed out each passageway.

I began to make a list of parts that would be required to restore the Atomic 4. The major part was the exhaust manifold. I'm a fan of eBay, and discovered and purchased a used Atomic 4 exhaust manifold in excellent condition. The list continued: gaskets, bolts, plugs, plug wires, distributor, and so on. I found the remainder of the parts through Moyer Marine and my local auto parts store.

We ground and seated the valves and, following a thorough cleaning inside and out, the engine was ready for paint.

The following spring, we completed the engine rebuild and the backhoe lifted it back into the boat. Remarkably, it cranked up immediately and ran cool and beautifully smooth. After just a few fine-tuning adjustments, it was "water worthy." What an amazing engine.

Ongoing beautification

The beautification program continued. Odds and ends in need of replacement included the head, plumbing hoses, and water hoses. I installed new cabin lights, rewired the panel, and installed a new bilge pump.

What was Catalina thinking, using that awful, cheap-looking, fake wood on the bulkheads, doors, galley top, and folding table? I took a page out of the Herreshoff design book and felt I could contrast the teak and other beautiful hardwoods with white. I began by replacing the galley laminate with white laminate. I trimmed the bulkheads and doors with white paint.

A key step in restoring *Elizabeth Ann* to working order was bringing the Atomic 4 back to life, left. The saloon received special attention — a new walnut table, white-painted bulkheads, and new carpeting, bottom far left, — while new white countertops freshened up the galley, bottom near left. Carolyn, the understanding wife, contributed new cushions, right, and the family enterprise is celebrated in a bright new name on the transom, far right. *Elizabeth Ann*, sitting pretty on her lines, has the last word, below.

I created a replacement table out of walnut from the leaves of an old table I found in a yard sale and crafted its leg from mahogany retrieved from a junk pile behind a local boatbuilder's shop. I fashioned a mahogany plaque to display the clock and barometer I snagged on eBay and crafted a dashboard for the radios and XM tuner using leftover lumber from the walnut table. This was fun.

My wife, Carolyn, is an amazing craftsperson and, most of all, she is generous. She set aside her passion for gardening while she created new cushions for the Catalina. We purchased new foam and fabric at half price from a local fabric store that was going out of business. Carolyn suggested that we use navy blue fabric with white piping. The cushions are beautiful.

I made a template out of paper for the cabin sole. I purchased outdoor carpet at Home Depot and took the template and carpet to a local carpet store to have it cut to size and the edges bound.

Bottom and topsides

Years of built-up bottom paint had to be removed. A sharp scraper worked best. Once all the paint was removed, I lightly sanded the bottom with 60-grit paper. The keel required a minor repair using a little fiberglass and Bondo. I taped the bootstripe and painted the bottom.

The hull itself was oxidized and in need of fresh paint. I had been talked into painting the topsides myself using the roll-and-tip method. I acquired Old Salem paint, along with brushes and rollers, on sale at Hamilton Marine. I sanded the hull lightly using 220-grit.

Josh, my next-door-neighbor, was kind enough to help with this step. Josh rolled while I followed up tipping. After a few passes, it was clear that something was not working. Our brush strokes were visible and the paint was drying too fast. We decided to regroup and start over.

I sanded off our first pass and then consulted with an old salt and paint expert at Hamilton Marine. When I described my problem, he said, "That will never work. You need brushing thinner, this brush, and these rollers. I've been painting boats for more than 40 years. If you follow my advice, your boat will look like glass. Thin the paint so it's almost like water. Tip with the brush at a 45-degree angle. Move fast, but smoothly."

Our second pass did the trick. The paint looked terrific. I applied a navy-blue bootstripe and she was completed.

A new name

Now she was restored, we decided to rename the boat. We chose *Elizabeth Ann*. The name acknowledges our daughter, my mother-in-law, and my sister . . . all wonderful women.

When my sailing friends learned that a name change was imminent, they impressed the fear of God upon me. "Don't launch her without the proper renaming ceremony," they warned. The needed ritual to ensure smooth sailing involved champagne and mumbo jumbo. (***Note:*** *For the details, go to <http://www.johnvigor.com> and click on "Denaming."* ***–Eds.***) Somehow, I think the champagne was the underlying reason for the celebration. Nonetheless, we duly carried out the renaming ceremony and successfully launched her in July 2008.

Elizabeth Ann looks terrific, and she sails like a dream.

James Herron is a voice actor who grew up in Maryland and, together with his wife, Carolyn, has made New England his home.

Resources

Moyer Marine
410-810-8920; www.moyermarine.com

Hamilton Marine
207-548-6302; www.hamiltonmarine.com

DIY boat cushions

Sleeping on the job is the best reward

by Mary Campbell

After a day of sailing in the Pacific Northwest's heavy mists, I love rocking to sleep in a warm berth as *Sirena* rides to anchor. But for the last few years, I was the one tossing and turning as I tried to find a comfortable position. Like all weekend warriors, I preferred to blame my morning backache on my bunk instead of my years. The clerk at the local upholstery shop supported my thesis that bad foam was the culprit, especially since the cushions had been on the boat since 1979. Maybe it *was* time for some new ones.

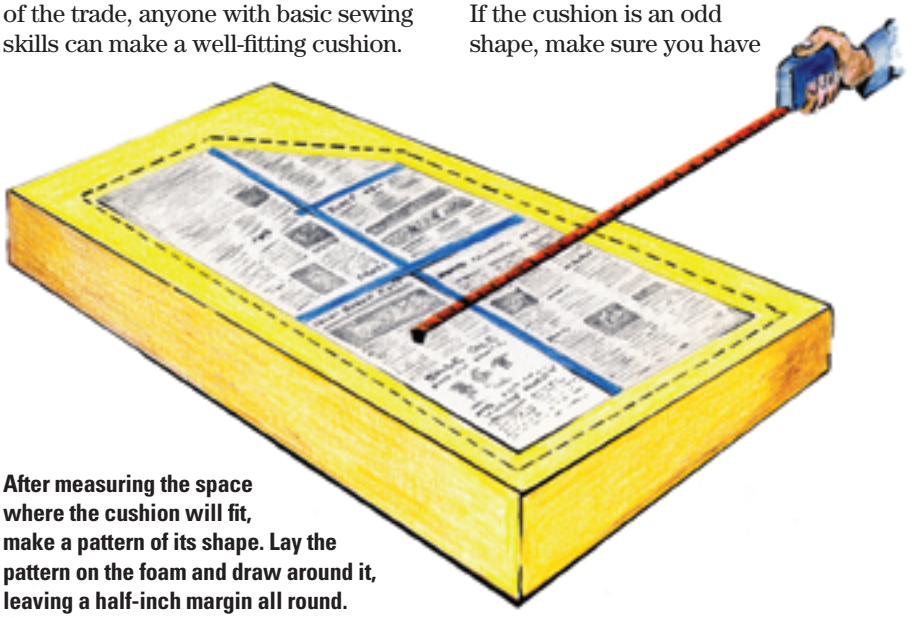
I left the shop with 20 yards of fabric and enough foam to fill the back of the Explorer. A few days later, foam and fabric were once again stuffed into the SUV, this time as cushions for the saloon and V-berth. Although I'd never built boat cushions before, they fit perfectly because I applied a few essential secrets of working with foam.

What worries most people about making boat cushions is getting a good fit, especially since the spaces to be cushioned are typically confined on three or four sides. A cushion that sloshes around in its berth is simply "not yacht," but by following a few tricks of the trade, anyone with basic sewing skills can make a well-fitting cushion.

New cushions make a big splash in any good old boat, and *Sirena*'s are no exception. They look plump and inviting because Mary cut the foam a little larger than the cushion covers.

Step 1: Taking measurements

Measure the length and width of the space you want to cushion, then draw it to exact scale on a piece of newsprint. If the cushion is an odd shape, make sure you have the angles right. Now add 1 full inch to the total length and 1 full inch to the total width of the cushion by tracing around your draft template with a ½-inch margin. For example, if the spot measures 24 x 36 inches, your foam pattern will measure 25 x 37 inches. The extra inch will ensure that the foam will be slightly compressed within the cover and will therefore fill the cover out completely. Cut out this oversized pattern and take it to the foam shop.



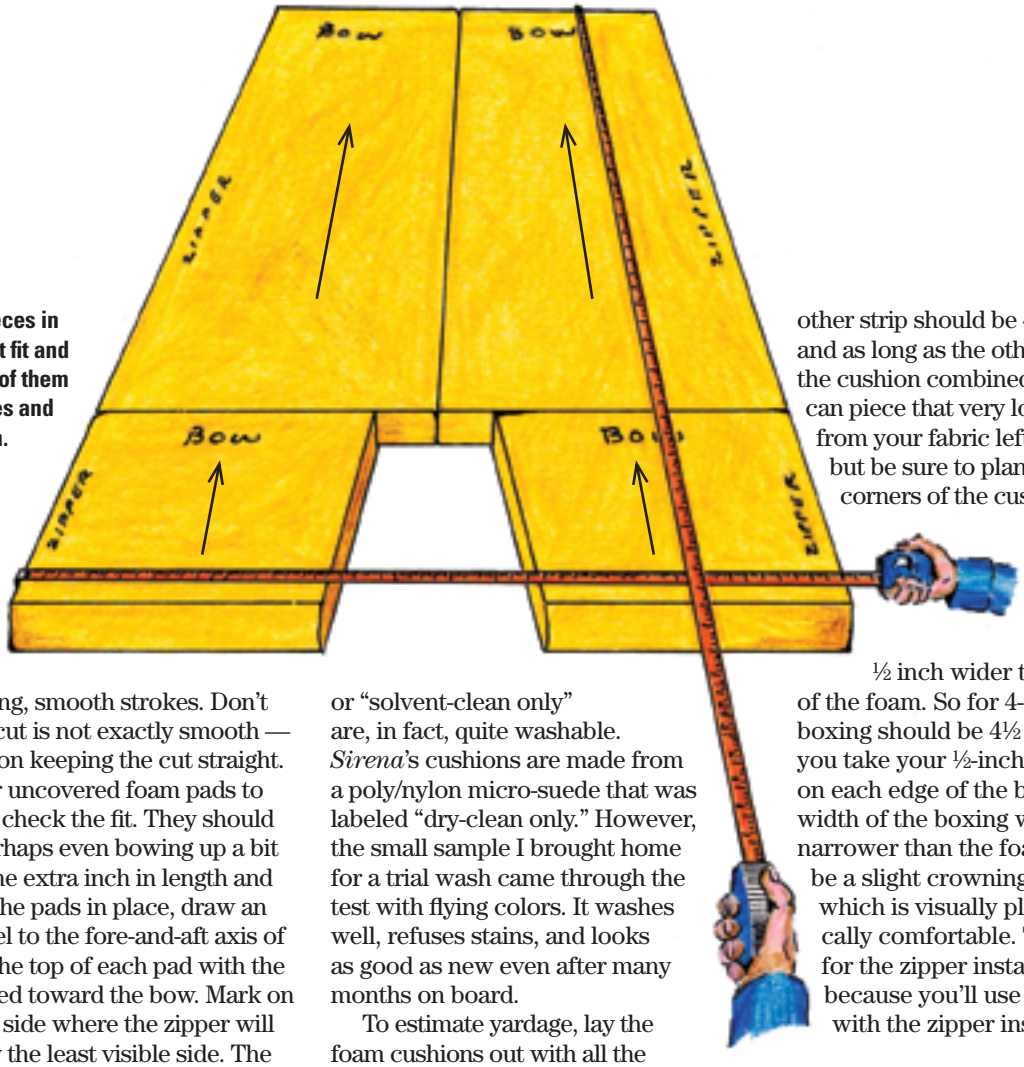
After measuring the space where the cushion will fit, make a pattern of its shape. Lay the pattern on the foam and draw around it, leaving a half-inch margin all round.

Step 2: Cutting the foam

For settees and sleeping berths, I recommend a good quality 4-inch foam. For backrests, 2 inches of lighter foam is sufficient.

The supplier of the foam will usually cut it for you with an electric knife. If you end up doing it yourself, use your template to trace the outline of the cushion on the foam with a marker. Then, using an electric carving knife or a serrated bread knife, slice through the

ILLUSTRATIONS BY VERN HOBBS



Lay the cut pieces in place for a test fit and mark on each of them the zipper sides and the orientation.

foam with long, smooth strokes. Don't worry if the cut is not exactly smooth — concentrate on keeping the cut straight.

Take your uncovered foam pads to the boat and check the fit. They should fit tightly, perhaps even bowing up a bit because of the extra inch in length and width. With the pads in place, draw an arrow parallel to the fore-and-aft axis of the boat on the top of each pad with the arrow oriented toward the bow. Mark on the foam the side where the zipper will be — usually the least visible side. The arrows will help you lay out your fabric.

Step 3: Buying fabric

Boat upholstery should be functional and aesthetically pleasing. I prefer fabric that can be machine-washed. This eliminates olefin blends and fabrics with rubberized backings that add shape to loose weaves like the famous orange plaids found on so many good old boats. Fabric with a tight weave holds its shape and the seams will not pull out or unravel. Nylon, cotton, acrylic, polyester, and their blends usually hold up well and feel good on your skin. (For more on boating fabrics, see "The right interior fabric" in *Good Old Boat*, July 2004.)

Most shops will provide a small sample you can test in the washer. Many fabrics that say "dry-clean only" or "solvent-clean only" are, in fact, quite washable. *Sirena*'s cushions are made from a poly/nylon micro-suede that was labeled "dry-clean only." However, the small sample I brought home for a trial wash came through the test with flying colors. It washes well, refuses stains, and looks as good as new even after many months on board.

To estimate yardage, lay the foam cushions out with all the arrows pointing the same direction. Arrange the cushions so the combined width does not exceed the width of the fabric you have chosen. Most upholstery fabric comes in 45-, 54-, or 60-inch widths. The overall length will give you the amount of fabric you will need to cover the tops of the cushions. If you plan to cover the bottoms with the same fabric, you will need twice that amount.

For the sides of each cushion, you will need two additional strips of fabric cut lengthwise, called "boxing." For 4-inch foam, one boxing strip should be 6 inches wide and as long as the side of the cushion where you will put the zipper plus an additional 6 inches. The other strip should be 4½ inches wide and as long as the other three sides of the cushion combined plus 6 inches. You can piece that very long strip together from your fabric leftovers if you want, but be sure to plan the seams for the corners of the cushion.

Note that the boxing strips for the sides of the cushion should be cut a total of ½ inch wider than the thickness of the foam. So for 4-inch foam, the boxing should be 4½ inches wide. When you take your ½-inch seam allowance on each edge of the boxing, the finished width of the boxing will be ½ inch narrower than the foam. The result will be a slight crowning to the cushion, which is visually pleasing and physically comfortable. The boxing strip for the zipper installation is wider because you'll use an inch of width with the zipper installation.

Everything else

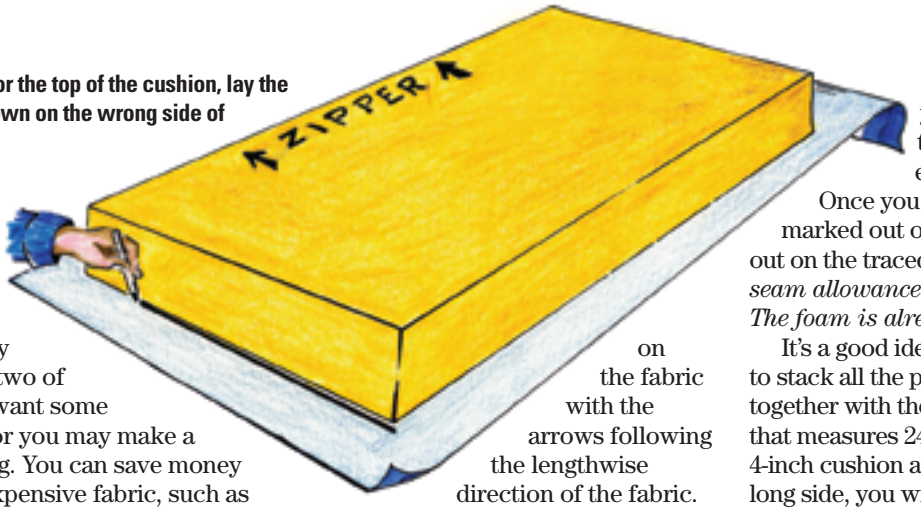
You'll also need to buy zipper pulls and continuous zipper stock, which is simply twill tape with zipper teeth that you buy by the inch, foot, or yard. Buy zipper stock the length of the cushion plus 6 inches and one zipper pull per cushion. The provider of these products should supply directions for making finished zippers from zipper tape and pulls. To avoid rust-stained cushions, buy zippers with plastic teeth (rather than metal ones).

Finally, don't forget upholstery thread. It's stronger and will keep the cushion seams from pulling out or breaking over time. These specialized

> **"Buy zipper pulls and continuous zipper stock the length of the cushion plus 6 inches."**

Resources

Sailrite
www.sailrite.com



To mark the fabric for the top of the cushion, lay the foam arrow-side-down on the wrong side of the fabric.

supplies are available from Sailrite and also from many fabric stores.

It's wise to buy an extra yard or two of fabric. You may want some throw cushions or you may make a mistake in cutting. You can save money by using a less expensive fabric, such as canvas, on the bottoms if the cushions will not be reversible. If you are using cotton fabric, preshrink it by running it through the washing machine and dryer before cutting.

Step 4: Cut out the fabric

Lay the fabric out on a long counter with the wrong side facing up. Using the foam fillers as your patterns, place them on the fabric with the arrows following the lengthwise direction of the fabric. If your fabric has a nap or pattern, make sure that all the arrows are facing in the *same* direction. To cut the *top* cover pieces, lay the arrow side of the foam filler against the *wrong side* of the fabric and trace around the foam with a marker. Then flip the foam over so the *arrow is facing up* and trace around it to mark the *bottom* pieces for the cushion covers.

Label the pieces as you trace them. Lay out the boxing pieces for each cushion as well.

Once you have all the pieces marked out on the fabric, cut them out on the traced line. *DO NOT add seam allowances to the foam patterns. The foam is already cut oversize.*

It's a good idea, as you cut them out, to stack all the pieces for one cushion together with their foam. For a space that measures 24 x 36 inches, with a 4-inch cushion and a zipper along one long side, you will have a piece of foam that measures 25 x 37 inches. You also will have a fabric top and a bottom that each measure 25 x 37 inches and two pieces of boxing, one 6 x 42 inches and one 4½ x 90 inches.

Step 5: Make the boxing

Take the wide boxing strip and cut it lengthwise in two strips that each measure 3 inches wide. Lay the two

Hints and insights

The typical V-berth cushion is unwieldy to move in and out and hard to cover. I solved the problem by dividing *Sirena*'s V-berth into five sections and constructing a cushion to fit each section. The smaller cushions are much easier to move outside for airing. I also made separate fitted sheets for each cushion, so making the bed is much easier now. When making these cushions, I cut each section 1 inch oversize for its space. They fit together so snugly that no gaps are perceptible to the sleeper.

On most boats, the hull slants outboard at the side of the V-berth. One solution is to make square cushions that fit the bottom of the V-berth properly but with gaps at the top. A more custom solution is to cut the foam pad and fabric for the top of each cushion wider than the bottom. I made a template for the bottom by measuring the length and width at the deck of the V-berth and adding ½ inch all around. Then I created a template for the top by measuring the length and width of the V-berth 4 inches up from the deck and adding ½ inch all around. I cut out the foam to the dimensions of the top, then laid the template for the bottom of the cushion on the bottom of the foam and cut the foam at an angle to fit the slope of the side.

Note that the boxing strips for the sloped sides will need to be slightly wider. To make it work, you'll need to seam the boxing at all four corners of the cushion.

I like to extend the zipper around the cushion by a couple of inches on each side to make the cushion easier to stuff.

But if this results in a zipper that is visible or if the zipper is on the sloped side of a cushion, you can simply make the zipper boxing to fit the length of one side of the cushion.

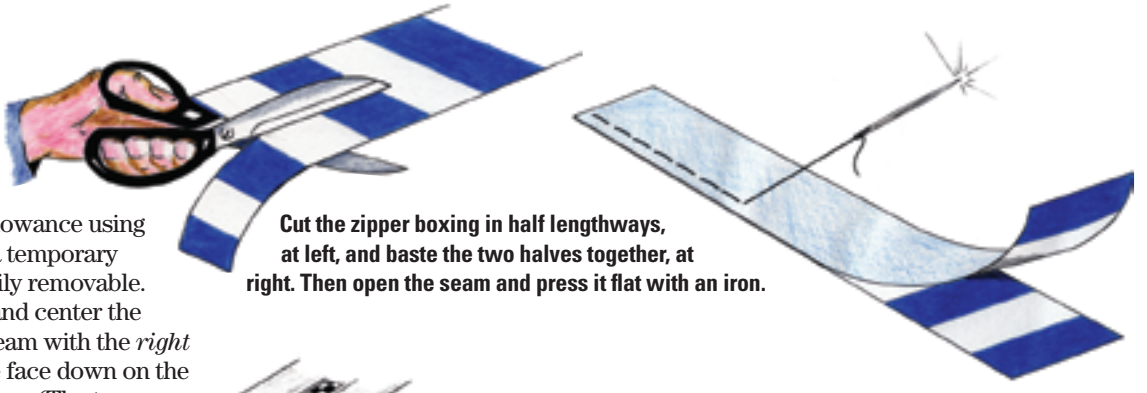
To keep the back cushions from littering the saloon floor when sailing, I included a short tab of twill tape in the side seam and installed snaps on the tape and the saloon seatback.

The mast (white) and hawsepipe made *Sirena*'s V-berth a challenge, above. Twill-tape tabs and snaps hold back cushions in place, below.

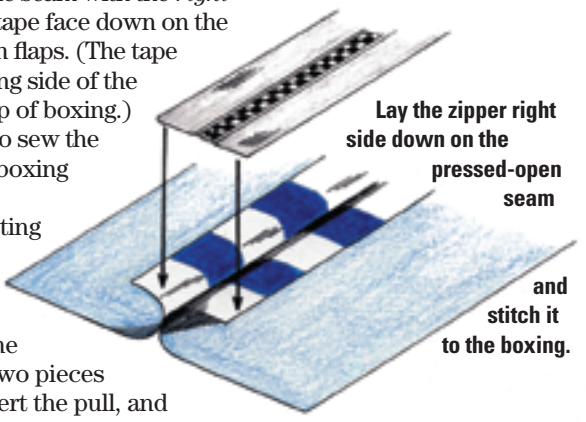
3-inch strips together with their right sides facing inside and sew them down one long side with a ⅝-inch seam allowance using a long basting stitch, a temporary stitch meant to be easily removable. Press the seam open and center the zipper tape over the seam with the *right side* of the zipper tape face down on the pressed-open seam flaps. (The tape will be on the wrong side of the sewn-together strip of boxing.) Use a zipper foot to sew the zipper tape to the boxing through all layers.

Rip out the basting stitch in the seam so you can now see the front side of the zipper. Open the two pieces of zipper tape, insert the pull, and zip the strip closed, making sure to keep the ends even. Check the width of the finish zipper boxing and trim it to 4½ inches if it is a bit oversize.

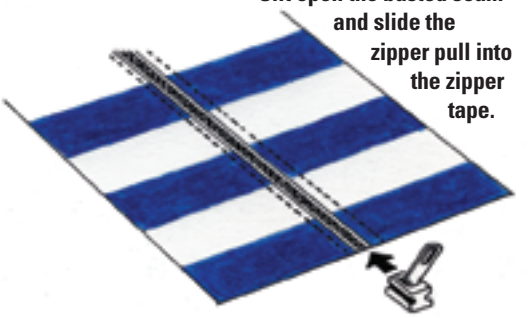
Now, take the other boxing strip and sew one end of it to the tail end of the zipper boxing strip (the end without the zipper pull) right sides together. Now you have one long strip of boxing that will go all around the cushion.



Cut the zipper boxing in half lengthways, at left, and baste the two halves together, at right. Then open the seam and press it flat with an iron.



Lay the zipper right side down on the pressed-open seam and stitch it to the boxing.



Slit open the basted seam and slide the zipper pull into the zipper tape.

Step 6: Sew up the cover

Center the zipper boxing on the zipper side of the top piece, right sides together. Note that 3 inches of the zipper boxing will extend around the sides of the cushion. This is designed to make it easier to stuff the cushion. Pin the boxing all around the top cover of the cushion.

When you finish pinning, you will have some excess boxing. Cut off all but 3 inches of the excess. Unpin the boxing. Sew the two free ends together to make a continuous loop of the boxing part of the cover. The ½-inch seam allowance will use up 1 inch of the excess you allowed. Now make a fold, 1 inch deep with the remaining two inches to cover the zipper pull and stitch that fold down across the zipper boxing.

Now pin the loop of boxing to the top fabric piece for the cover, right sides together, easing the boxing around the corners to fit. Sew the boxing to the top piece with a ½-inch seam.

"Your foam will last longer and your cushions will look better if you wrap the foam in polyester batting before stuffing."

Note that with a ½-inch seam allowance, the finished top and bottom each measure the same as the original measurement of the cushion space. The finished boxing will measure 3½ inches, ½ inch less than the thickness of the foam at the sides.

Open the zipper. You'll be working with a semi-finished cover that is inside out. Pin the bottom to the boxing, right sides together, being careful to align the top corners and bottom corners. Sew the bottom fabric piece to the boxing with a ½-inch seam allowance and turn the cushion cover right side out through the open zipper.

Step 7: Wrap and stuff the cover

Your foam will last longer and your cushions will look better if you wrap the foam in polyester batting before stuffing. Buy enough batting to wrap the foam and secure it to the foam with aerosol foam adhesive (available at upholstery stores, many craft shops, and from Sailrite). Insert the wrapped foam into the cover; the foam will compress slightly to fill out the cover once you zip it up.

Now take the finished cushion to the boat and see how snugly it fits the space!

Mary Campbell lives in Olympia, Washington. She explored the San Juans and South Puget Sound and circumnavigated Vancouver Island on Sirena, *an aluminum junk schooner built in British Columbia in 1979 and lovingly restored over a four-year period. Mary recently sold* Sirena *and bought a good old Cascade 36.*

Excess boxing, folded, covers the zipper pull.

Thanksgiving cruise

Counting blessings at the season's close

by Karl Westman

Yesterday's Thanksgiving dinner is still sticking with me as I contemplate breakfast. My morning ritual of checking the marine weather is more focused than usual today. A small-craft advisory has been posted. A dry cold front will pass at midday with southwest winds gusting to 25 knots, changing to northwest 15 to 20 knots tonight. By the looks of the gray sky and the frost on the car windshield, it's going to be a chilly one. It's never a good day to end the sailing season, but it's time to move *Karlito's Way*, my 1982 Pacific Seacraft Orion 27, to her winter home.

I sail out of Great Egg Bay Inlet. It lies between Absecon Island (the home of Atlantic City) and Ocean City, New Jersey. Although it can be a tricky patch of water, I can leave my well-protected slip and be in the open ocean in less than a half hour. That, my friends, is a beautiful thing.

My boatyard is on a back creek up Great Egg Bay River about 10 or so miles. I've made the trip more times than I can remember. What makes this particular trip a little more interesting is that I plan on spending the night on the hook to wait for the early high tide to fill the creek.

To go or not to go

Should I stay or should I go? I could get up really early tomorrow and run up with the tide and be done with it. But that's just it: I don't want to be done with it. I want one last fling, one last mini-adventure.

I can see plenty of reasons to cop out. It's going to be cold. I'll be fighting the tide and river flow. The wind will be veering with the approaching front and, because the river runs north and south, there'll be no sailing. And lastly, a stiff breeze at anchor can make for a fitful sleep. How negative can you get?

While still wearing my flannels, with a hot tea in hand, I steer my thinking to a new heading. I have a safe and capable boat. I have everything I need to stay comfortably warm at 30 degrees. So I'll see my breath while snug in my mummy sleeping bag; it's a good indication that I'm alive. Yes, I'll be pressing against the tide; what's the rush? I'll add an hour of travel time to arrive before dark. I love to sail, but it's good to know I have a well-maintained engine to push me there. Anchoring in less than ideal conditions will challenge my seamanship. It will build my confidence for the future. It's a go.

More than just a boat

They say boats have souls. If so, I found my soulmate while killing time on a dock in Charleston, South Carolina. Neglected and tattered, with lines that were hard and green, she looked to me like a pup at a kennel saying, "Take me home." Six weeks later, she was sitting at my boatyard. Three years later, and after more than 400 hours of TLC, she's a proper little ship.

I'm clad in long johns and have provisions for three meals and a new jug of stove fuel for my trusty Origo. I drop the docklines. I make my way out of the lagoon (which just two months ago was busy with weekend homeowners) then past the large dockominium (now mostly vacant) and out through the protective seawall. A few diehard fishermen are having a go at it. They toss about in the swell of the inlet hoping to bring home a striper or two. The wind is lighter than predicted, at least for now. To the north, a razor-sharp line contrasts gray stratus clouds and blue sky. The wind will come later.

I have to cross the bay and open two bridges before I get to the mouth of the river. My Wheel Pilot does all the work as I huddle behind the dodger. It's not so cold, but I want to ward off the cumulative effect of wind chill. As I make my way inland, the first bridge opens. I halt busy Black Friday shoppers at Somers Point, once a hot spot for vacationers because of its

nightclubs and beer joints. I pass under the Garden State Parkway and lift a little bridge at Beesley's Point. Once out of the shadow of the monstrous cooling tower of the coal-burning power plant, I enter a different world.

Mud, marshes, musings

The river winds its way to Mays Landing, a quaint town with a deep nautical history. At its widest, the river appears to be only a few hundred yards across, but the expansive marshlands flanking each side seem to go on forever before reaching the tree line. At low tide, the top of the brown marsh grass is at eye level. The dark chocolate-colored mud banks are exposed, and there's the familiar smell of low water. At the turns, it's not uncommon to find water a boat-length deep a boat-length from shore. This part of the river feels primordial.

I have a confession to make. Last winter, I had an affair with another boat. After a two-year refit of *Karlito's Way*, I got to thinking that a bigger boat would get me closer to sailing nirvana. A newly refitted 1985 Crealock 34 popped up on my radar. Oooh baby, my heart went pitter-patter when I saw her recently Awlgripped topsides. After two trips to Massachusetts, a survey, and the usual buyer-seller dance, I had myself a bigger hole in the water. The details are not important, but it never happened. All I can say is I'll be a lot more cautious about online boat financing. Hindsight being 20/20, the universe was looking out for me.

The afternoon sun is dipping; it's getting colder. The cloud line hovers to the north, and the wind has yet to kick in . . . so much for the forecast. I'm on schedule to drop anchor before dark; the weather is taking its time.

After the bigger-boat debacle, I kept *Karlito's Way* on the market. "Why not?" I thought, "this is a minor setback." It also motivated me to tackle two final projects. A new cabin sole was in order, which I left to a highly skilled marine carpenter, and some blister repair. The latter was something I could handle, and handle it I did. After I had the bottom powder-blasted, the project expanded exponentially. It took three months of grinding, filling, and fairing. I've read horror stories about DIY bottom jobs gone badly. I won't want to do it again anytime soon, but I saved a bucket of money that more than paid for the shiny new teak-and-holly sole.

The wind has completely died and I have the sensation of gliding on a mirror. The riverbanks become an odd double-sided illusion. Just ahead, a duck is taking off, its wings beating the water 1-2-3, 1-2-3, 1-2-3. The refection is pure and uncanny. Looking aft, my wake spreads out to each side of the river and rebounds. The sky kicks off reddish hues on the curvy lines that look like a psychedelic poster from my youth.

Faith restored

My broker said he had a buyer and the offer was just below asking. I was very happy to know that all my hard work had paid off. You can put thousands of dollars and hundreds of hours into a boat but you're lucky if you break even when it's time to sell. I was doing much better than that, but something didn't seem right. I had a beautiful little yacht, and although she was somewhat cramped below and not very weatherly, she had a lot going for her. And here I was about to let someone else sail off in her, leaving me on shore without a boat. I called my broker, "Don't hate me, but it's no deal."

> **"The setting sun is still masked by distant clouds, but in the placid water I see the reflection of Venus peering through a patch of blue."**

I find a spot just north of the boatyard at a bend in the river that will provide protection if the wind blows. For the last three hours, I have been alone on the water and, as the anchor splashes down, I am content to keep it that way. I go below, put on some water for tea, and revel in the moment. I slide open the hatch to get my bearings before darkness falls. The clouds are just now breaking apart and the leading edge of blue sky is overhead. The setting sun is still masked by distant clouds, but in the placid water I see the reflection of Venus peering through a patch of blue. To the northwest, the sky is on fire with colors that only nature can deliver. I take a sip of tea. All is well.

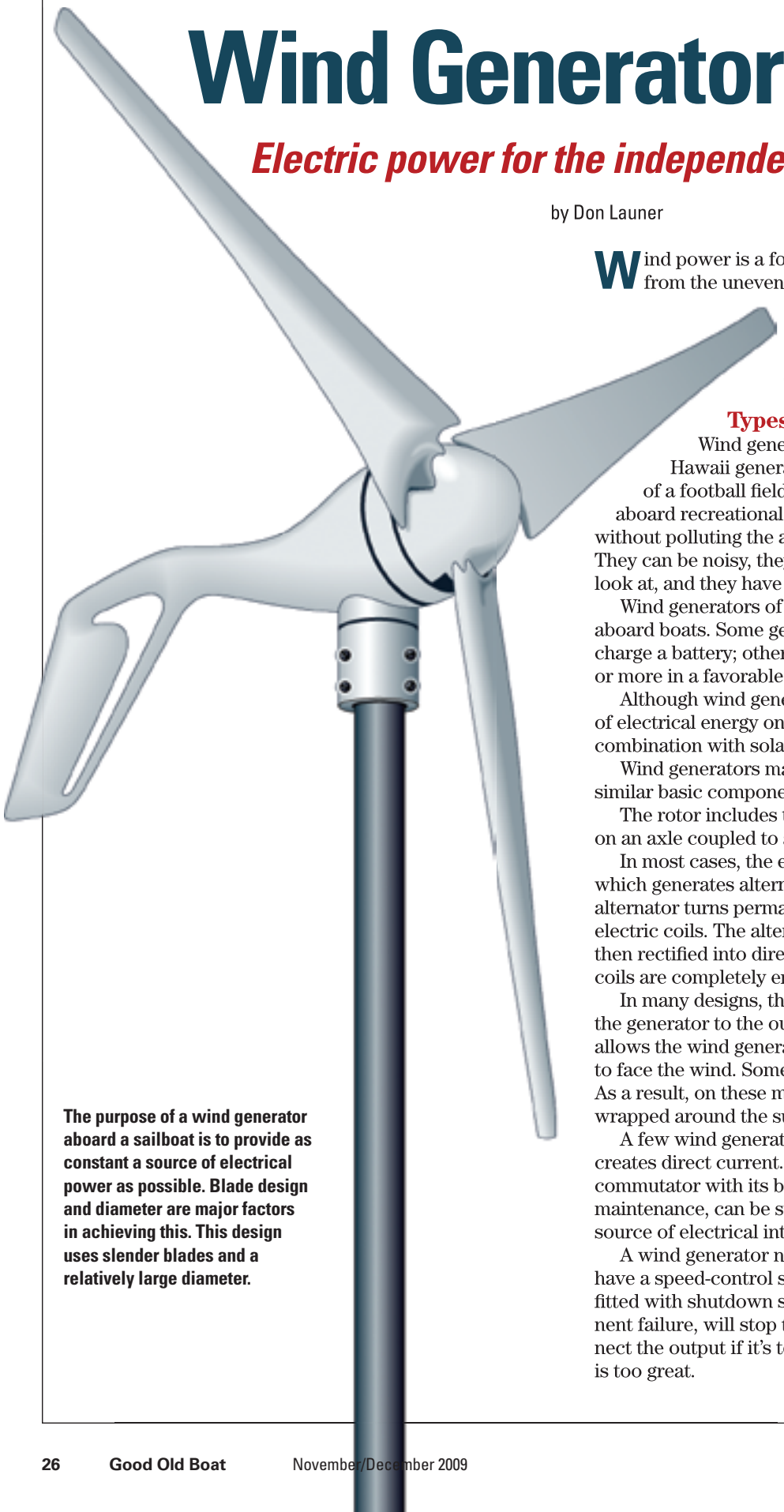
I have not crossed an ocean, but I have come a long way from the indecision of the morning and my musings about the winter that lies ahead. It has turned out to be a perfect day on the perfect boat. At night I sleep like a baby. The wind never shows up after all.

Karl Westman is an executive music producer for a large advertising agency in New York City. He is an aspiring solo sailor. He recently received his six pack or Operator of Uninspected Passenger Vessels (OUPV) license and completed a solo adventure to Block Island from his home port of Ocean City, New Jersey.

Wind Generators 101

Electric power for the independent sailor

by Don Launer



The purpose of a wind generator aboard a sailboat is to provide as constant a source of electrical power as possible. Blade design and diameter are major factors in achieving this. This design uses slender blades and a relatively large diameter.

Wind power is a form of solar energy — winds result from the uneven heating of the atmosphere by the sun. To generate electricity, a wind generator converts the kinetic energy of the wind into mechanical energy and then into electrical energy.

Types of wind generators

Wind generators vary in size from the 20-story Hawaii generator, with a blade diameter the length of a football field, to the relatively small ones used aboard recreational sailboats. They all deliver electricity without polluting the air but do have some disadvantages. They can be noisy, they are not always thought of as pretty to look at, and they have the slight potential to kill birds.

Wind generators of many different designs are used aboard boats. Some generate only enough power to trickle-charge a battery; others are capable of generating 100 watts or more in a favorable wind.

Although wind generators can be used as the sole source of electrical energy on sailboats, they are most often used in combination with solar panels and the engine's alternator.

Wind generators may vary in appearance but they all have similar basic components.

The rotor includes the rotating blades, which are mounted on an axle coupled to an electric generator.

In most cases, the electric generator is an alternator, which generates alternating current. The driveshaft of the alternator turns permanent magnets inside a housing of electric coils. The alternating current generated in the coils is then rectified into direct current. In better generators, these coils are completely encapsulated to reduce corrosion.

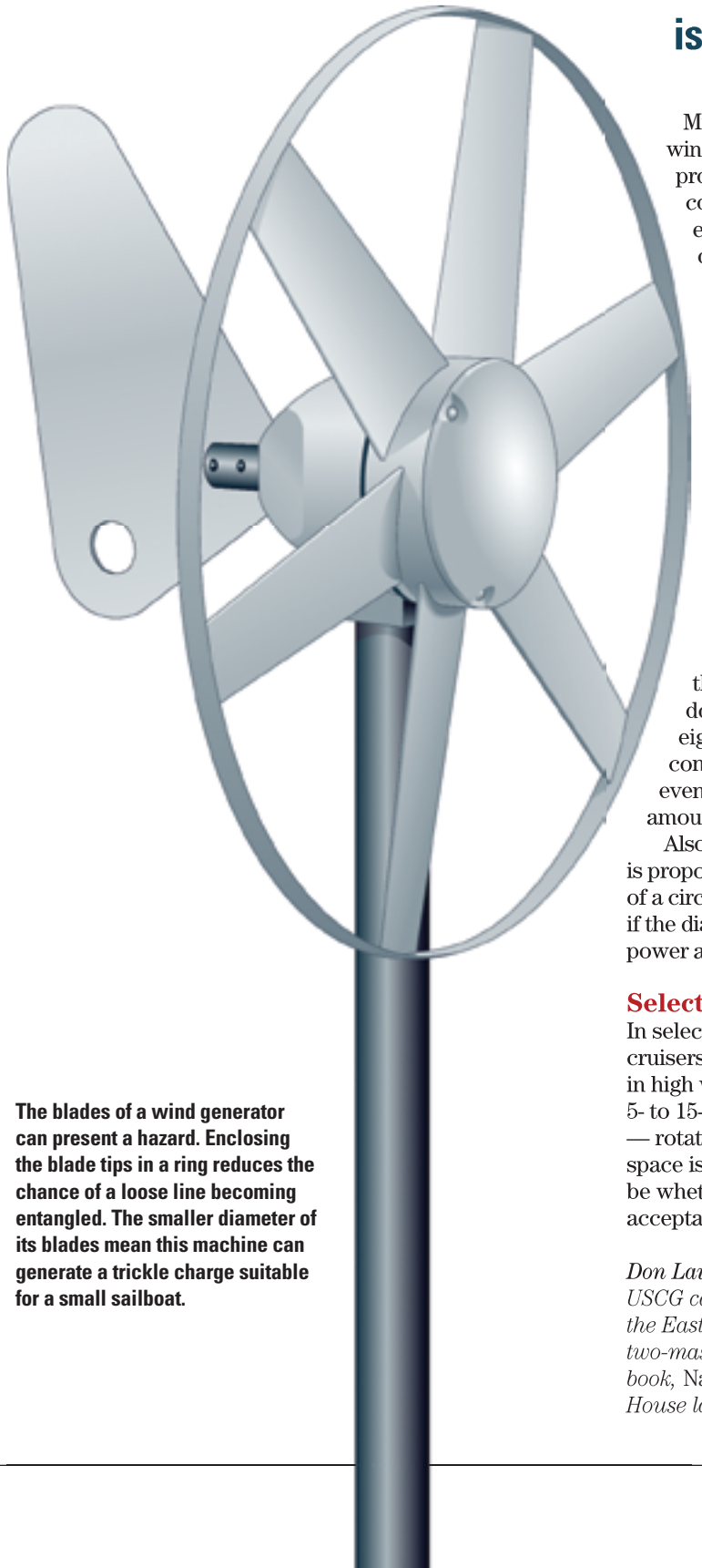
In many designs, the electrical current is transferred from the generator to the output cable via slip rings, a feature that allows the wind generator to rotate through a full 360 degrees to face the wind. Some wind generators don't use slip rings. As a result, on these models, the output cable can become wrapped around the support mast.

A few wind generators turn a motor-type generator that creates direct current. However, in such a generator, the commutator with its brushes and springs requires more maintenance, can be subject to corrosion, and is a potential source of electrical interference.

A wind generator needs a mounting tower and also must have a speed-control system. Some wind generators are also fitted with shutdown systems that, in the case of a component failure, will stop the blades from rotating and disconnect the output if it's too high or if the heat being generated is too great.

LAYOUT AND ILLUSTRATIONS BY TED TOLLEFSON

> **“If the wind speed doubles, the theoretical potential power available is eight times as great.”**



The blades of a wind generator can present a hazard. Enclosing the blade tips in a ring reduces the chance of a loose line becoming entangled. The smaller diameter of its blades mean this machine can generate a trickle charge suitable for a small sailboat.

Multi-purpose generators exist that can be driven by wind blades or, with the wind blades removed, by a water propeller towed from the stern of the boat. In the right conditions, a water propeller may provide enough electricity while under sail to power an electric autopilot or an electronic navigation system.

The necessity: wind

The major problem with wind power is the intermittent nature of the wind, which varies greatly with location and time of day. Since the wind may come from any direction, the horizontal-axis wind generator must be able to rotate so it faces into the wind. This usually requires that a wind generator be mounted on a tower, a very sturdy pole or, in the case of very small units, hoisted on a halyard. These precautions keep the blades out of the way of wayward lines, hands, and heads. Some wind generators have an outside ring around the tips of the blades to reduce the possibility of fouling or injury.

The power available from the wind varies as the cube of the wind speed. Thus, if the wind speed doubles, the theoretical potential power available is eight times as great. If this energy can be efficiently converted by the wind generator, strong wind conditions, even for a brief time, can therefore supply a considerable amount of electricity.

Also, for horizontal-axis wind blades, the power generated is proportional to the area swept by the blades. Since the area of a circle is directly proportional to the square of its diameter, if the diameter of the blades is doubled, the theoretical electric power available is four times as great.

Selecting a wind generator

In selecting a wind generator, the primary interest for most cruisers should not be the highest current output available in high wind conditions but the current output in the normal 5- to 15-knot wind range. The physical size of the generator — rotating blades and all — as well as the available mounting space is also of prime importance. Other deciding factors will be whether the vibration and noise at high wind speeds are acceptable and the reputation of a device’s manufacturer.

Don Launer, a Good Old Boat *contributing editor, has held a USCG captain’s license for more than 20 years and has sailed the East Coast from Canada to the Caribbean. He built his two-masted schooner,* Delphinus, *from a bare hull. His new book,* Navigation Through the Ages, *was published by Sheridan House last June.*

Aftermath of

A grim scene awaited Durkee Richards when he stepped aboard *Sirius* after he'd noticed ominous signs of soot around her companionway hatch.

In early December 2007, while she was alone in her slip, a fire started aboard our J/32 that nearly cost us the boat.

All was well during my routine check on Sunday afternoon. The next morning, my wife and I left to visit family. We returned home on Wednesday, and my first stop was to check on *Sirius*.

Before boarding, I noticed black, oily stains around the companionway slide and the hatch in the head compartment that had been left slightly ajar to help with ventilation. With a tight knot in my stomach, I removed the dropboards and discovered her black and cold interior. The smoke detector was still beeping forlornly, its battery nearly exhausted. A fire had started and died out without being noticed by anyone and without causing any damage to nearby vessels.

What followed was a long, arduous process to recover our beloved boat. It was a steep learning curve for us. Much of what we learned might be of use to other good old boaters confronted with the damage left by a fire or perhaps the sooty mess left by a leaking engine exhaust system.

Prelude to a fire

A fire aboard a boat is a fearsome thing. Ours started inside a power strip that was feeding a small oil-filled radiator-type space heater. Our using that power strip was the last link in a chain of events.

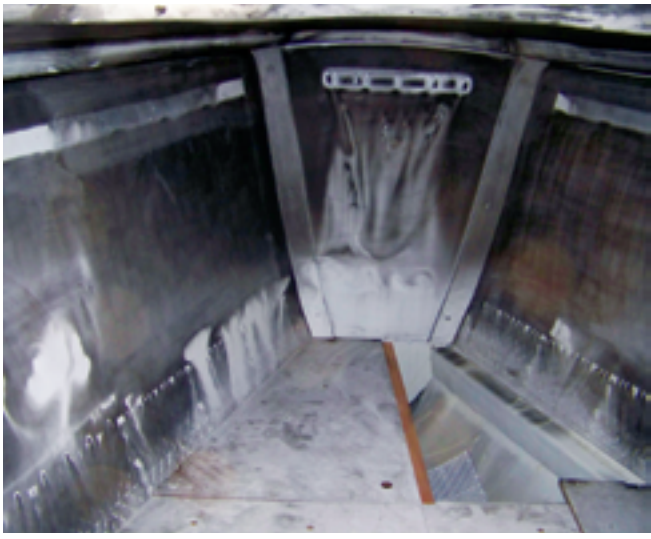
The winter climate where we live in the Pacific Northwest promotes the growth of mold and mildew. For aesthetic and health reasons, many owners run a small heater during winter months to keep out the damp.

My wife, Mary Jeanne, who has a keen sense of smell, wants her boat to smell fresh and be a healthy place to be, so during the shoulder seasons, I run a small (200-watt) dehumidifier for a couple of days a week. This does a great job of keeping the boat dry. In the coldest period of the winter, the dehumidifier becomes ineffective. During those months, my practice has been to run a thermostatically controlled heater at a 500-watt setting for a couple of days to warm up the interior, then run the dehumidifier for a couple of days. I would power down the boat for a few days before repeating the cycle.

Our J/32 left the factory with a well-engineered shorepower system. Initially, I plugged the dehumidifier or space heater into a convenient receptacle. Over time, though, I noticed that our zincs eroded with undue rapidity — especially the nose zinc for our rather expensive AutoProp. There was a derelict woody moored to starboard, and the fiberglass trawler to port had fallen into disuse, so I concluded that my rapid loss of zincs was due to contaminated shorepower.

My initial response was to install a galvanic isolator. This did modestly lengthen the life of the nose zinc. However, I was still concerned about the rather short life of the zincs and had a nagging concern about other underwater metals. I decided to bypass the onboard shorepower system so *Sirius* would not share the shorepower ground with adjacent boats.

I led the 30-amp shorepower cord through a portlight into the head compartment. Since plugging a 15-amp appliance directly into a 30-amp source is a very bad idea, I used the power strip to provide overcurrent and GFI protection upstream of the heater. (***Note:*** *There is a perception that, before something can get hot enough to cause a fire, a circuit breaker or fuse will blow. That's not true. A hot plate or a hair dryer can easily light a fire without blowing a fuse.* ***–Eds.***) Yes, the cord to the power strip was designed for 15 amps but was being fed by a 30-amp source. However, I expected that any trouble would be on the downstream side and the boat would be protected by the 15-amp current limit in the power strip.



The once-white vinyl hull liner in the V-berth cabin was beyond cleaning and had to be replaced.

a fire on board

Where there's smoke, there's a serious Sirius *cleanup*

by Durkee Richards

The fire aboard *Sirius* started in the head compartment, at left. The first step in the ensuing cleanup was to vacuum up all the loose soot, below.

The fire

Unfortunately, the over-current protection in the power strip did not stop the arcing. The 30-amp breaker in the shorepower box was the next line of defense. It did trip, but a 30-amp arc can support a substantial fire. The power strip was entirely consumed. The fire melted and burned through a plastic grate over the fiberglass shower sump molded into the sole of the head compartment. The burning mess settled into the shower sump.

During my initial inspection, I could not tell whether the fire had reached the inner surface of the hull, which is about one inch below the shower sump. Fortunately, it had not; but this was not determined until after the start of the reconstruction work.

The fire spread to the immediately adjacent bulkhead, burning through the laminate skin and charring the plywood core. It spread up this panel until it encountered a back-surfaced plastic mirror. Here it stopped. Evidently, the ignition temperature of this mirror was just high enough to stop the fire. Some traditionalists think that mirrors aboard boats are bad luck, but it seems that a mirror saved ours.

In addition to damage to the burned and heat-affected structures, the entire interior of the vessel was heavily contaminated with soot. As we were to learn, the effort and cost of dealing with the soot contamination would be greater than that associated with the direct fire damage.

Aftermath

The interior of *Sirius* was a dark, smelly, dismal cave. Going below required donning a Tyvek painter's suit (fondly called a bunny suit) and gloves. It was powerfully depressing. Furthermore, we could not begin any recovery work until the surveyor retained by our insurance underwriter had completed his survey.

As the surveyor explained, it is one thing to get the interior looking clean. It is quite another to be able to step below after the boat has been closed up and not detect a whiff of smoke. The hot and very reactive gases generated by a fire will diffuse into painted surfaces and vinyl, into varnished wood, and particularly into the back sides of wooden panels if they are not sealed. Hence the need for chemical cleaning followed by appropriate re-coating to seal in any residual odors.

While waiting for the surveyor's detailed report, we began clearing out the interior. We bagged up our personal possessions and hauled them home for triage: save and clean, possibly salvage, or toss. The settee and V-berth cushions came out next. Removing the soot and odor from the foam in cushions is so difficult that the surveyor recommended that they all be replaced.

Next, we vacuumed off the heavy coating of soot in the V-berth, saloon, and head compartment. We then set about removing all the brightwork that was not adhesively bonded in place, followed by the overhead panels, which are vinyl-covered plywood skins. We left the vinyl covering along the sides of the V-berth for later. All of this effort addressed just one of the surveyor's many recommendations.

Recovery begins

As part of our recovery plan, we budgeted extensive use of our own time. In effect, this project became my "day job" for about four months — one advantage of retirement. Working on-site with the team of professionals at the boatyard, Platypus Marine, kept the communications loop short and had another important, but subliminal, benefit. The yard crew seemed to appreciate having an owner there who was willing to put on a bunny suit and crawl into a locker with a paint roller, and they took a greater interest in our project.

Durkee and Mary Jeanne started cleaning soft goods with QuickNBrite, at left, with good results. Further research turned up Winsol Laboratories of Seattle, two of whose products they also used, at right.

We had about six weeks of working time before the scheduled haulout at the boatyard. Mary Jeanne and I used this time to develop techniques for cleaning soft goods such as clothes, bedding, lines, and sails. We set up an assembly line to clean, sand, and varnish our brightwork. Aboard *Sirius*, we began cleaning cockpit lockers, the lazarette, and head compartment. Our recovery plan included a contract with Servpro, a nationwide chain of fire-cleanup specialists, to do the initial cleaning in the main saloon and V-berth.

As a result of all our efforts, we learned a great deal about products and techniques used in cleaning up after a fire.

Cleaning soft goods

We learned, for example, that your first attempt will be your best chance to save a fabric item, so make it count.

Our first efforts to wash with a cleaning solution that was too weak seemed to set the soot contamination and made it impossible to remove later. Initially, we used a product called QuickNBrite purchased at our local Safeway store. It has similarities with the waterless hand cleaner I use to clean my hands after working on greasy engines. It comes as a gel that can be diluted. We used a dilution that was liquid while hot, but would gel up again when cold. We would heat some of the product in the microwave oven in a plastic tub and then slowly add water, stirring it and reheating as necessary to keep it liquid.

We placed the item to be cleaned in the bathtub and then worked the diluted QuickNBrite solution into it with a sponge or soft-bristle brush. Then we would leave it to soak, periodically agitating it gently by hand. Next, we placed the items in our washing machine. We added normal clothes-washing detergent as the machine was filling. After letting it soak for an hour or so, with occasional agitation by hand, we would run the wash and rinse cycle to completion. This process usually worked quite well.

We also experimented on two of the smaller foam cushions from the settees, even though all the cushions were going to be replaced. We did this to satisfy our curiosity in case we were ever confronted with the need in the future. For this test, we started with a QuickNBrite solution with the cushion in the bathtub. We gradually diluted the solution with more water and worked it through the foam with hand squeezing. We followed this with several rinses. We learned that it was possible to remove most of the odor, but drying the foam thoroughly proved to be harder than the washing. We finally stuffed the foam block into the washing machine and used the high-speed spin cycle to force out most of the water. A couple of days with

Lessons learned

We learned some key lessons from this fire and have a new preferred solution to avoiding problems with contaminated shorepower.

- Power strips are not really constructed to marine standards, and we no longer use them aboard *Sirius*.
- I understand that it is better to use the vessel's built-in shorepower system; but that it is important to incorporate best practices throughout.

As to my concerns about contaminated shorepower that led me to bypass *Sirius*' shorepower system and use that ill-fated power strip, we have implemented a better solution — an isolation transformer (sometimes referred to as a galvanic isolation transformer). This was an owner upgrade, something we did at our expense, rather than invoice as part of the insurance claim.

- With an isolation transformer, there is no connection between the boat's ground and the shorepower ground. The hot and neutral lines from the shorepower source connect to the input, or primary, winding of a transformer. The secondary winding supplies the hot and neutral lines to the boat's AC power system. The neutral line on the secondary side is tied to the boat's ground at the same point where the boat's AC ground would normally be tied to the DC power-system ground.
- The isolation transformer gives an additional benefit. Even if the neutral and hot lines at the shorepower outlet are reversed (mis-wired), the neutral and hot lines on the secondary side will still be correct. This avoids the potential risks associated with reverse polarity in the vessel's AC system.
- Most of the isolation transformers designed for marine use are rather heavy and bulky because it takes a lot of iron in the transformer to pass the required power at 60 Hz. I opted for a switch-mode unit from MasterVolt that weighs about 10 pounds. By electronically stepping the input current up to high frequency, the required transformer can be proportionally smaller and lighter. The output is then electronically switched back down to 60 Hz.



The boat and everything stowed aboard it had to be cleaned. The jib at least was an outdoor job, at left. Progress was slow but rewarding, as here where the head compartment begins to shine, center. A Servpro technician starts work on the saloon with a rubber sponge, at right.

the cushions baking in the sun finished the process. Overall, this process worked reasonably well but is unfortunately limited to foam pieces small enough to stuff into the washing machine.

Later, Mary Jeanne spent time searching the web for products specific to fire-damage cleanup. She found a company in Seattle, Winsol Laboratories, Inc., that specializes in this area. We purchased two of its products. One, called Versitol, was designed for cleaning the fire-turnout gear used by firefighters. We found this to be a good alternative to diluted QuickNBrite for cleaning soft goods. The other one, called CleansAll, proved to be very good for cleaning the hard surfaces aboard *Sirius*. It was formulated to clean surfaces in buildings prior to repainting. The product literature notes that CleansAll is alkaline and should therefore react chemically with the acidic fire-contamination deposits. It will also lightly etch painted surfaces to help provide good adhesion for new coatings.

Using either Versitol or QuickNBrite, we were able to successfully clean most of our personal clothing, bedding, lines (sheets, guys, and preventers that had been stored belowdecks), mesh stowage bags, and so on. We also cleaned contaminated spinnakers by soaking and gently agitating them in a Versitol solution, followed by extensive rinsing. We used a 40-gallon plastic garbage can for cleaning the spinnakers. We laid the jibs out on the lawn, scrubbed them with a Versitol solution and a long-handled brush, and followed up with a thorough rinsing.

Cleaning smooth gelcoat

We found that smooth gelcoat surfaces were the easiest surfaces in the boat to restore, but they nonetheless required a multi-step process. First, we vacuumed off loose soot. The more tenacious contamination was removed by spraying on a solution of CleansAll (about a 3:1 dilution) and scrubbing with a sponge, followed by multiple clean-water rinses. The third step was power buffing with an automotive buffer and a 3M cleaning wax. (I admit to a bias toward 3M products — a bias developed during my career in the 3M magnetic recording products labs.) I had three stages of aggression in my arsenal. For lightly oxidized surfaces, I used a mild cleaning wax; for more heavily oxidized surfaces, a more abrasive cleaning wax. The third degree employed a rubbing compound followed by the cleaning wax for lightly oxidized surfaces. This process always resulted in a well-restored surface with correct color and good gloss.

Cleaning textured gelcoat

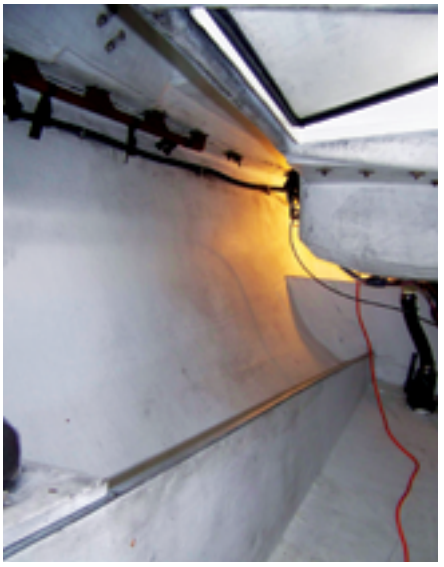
The textured surfaces were a tougher challenge. We started with either a 3:1 dilution of CleansAll or the Servpro solution (explained further below). I worked it into the surface texture with a soft bristle brush and rinsed it off with sponges and fresh water. It often required multiple applications. I usually finished off by power buffing with a cleaning wax and a lamb's-wool pad.

The overhead in the head compartment was the most heavily contaminated and also the most affected by heat. This made it the hardest surface to restore. Multiple cycles of spraying, scrubbing, and rinsing removed most of the contamination. The remaining trouble spots responded to vigorous rubbing with a cloth wetted with lacquer thinner. Once I had removed the soot, I power buffed with the more aggressive cleaning wax, using a lamb's-wool pad.

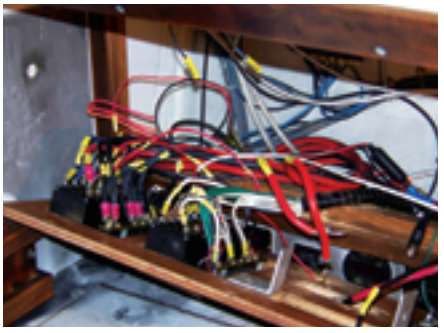
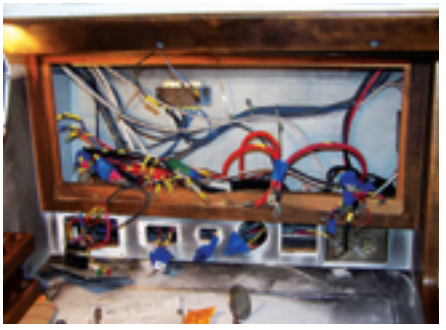
> **"The overhead in the head compartment was the most heavily contaminated and also the most affected by heat."**

Cleaning laminates

The Servpro team did the initial cleaning of laminated surfaces in the saloon and V-berth. Their general approach was to start soft and get more aggressive, as needed. This translated into an initial




Painted surfaces, many of them in hard-to-reach places like the starboard cockpit locker, at left, and the fuel tank compartment, at right, needed multiple cleanings.

Because acidic smoke residues could cause problems down the line, the electrical panel, at left, had to be removed, cleaned, and rewired, at right.

rubdown with large rubber sponges that resembled giant art-gum erasers. (Later on, while attempting to clean hard-to-replace documents, we thought back to this and found that an art-gum eraser worked surprisingly well on smoke-damaged papers.)

"definitely not a green product.") It was best to wear a good respirator when using it in a confined space.

This stage-three cleaning solution was required on all laminate surfaces. Despite all this, some stains invariably remained. I was able to remove them by

> **"Since some subtle stains remained, we concluded that we would have to replace all the vinyl coverings."**

The second stage for Servpro was a citrus-oil-based solution, which they sprayed on and vigorously rubbed off with terrycloth towels. Finally, if needed, they switched to a more aggressive cleaning solution. This was a proprietary product consisting of eucalyptus oil and a strong solvent. (As the local Servpro owner put it, this was

power buffing with rubbing compound followed by a cleaning wax. (My contract with Servpro was for a "best effort," since the local firm had little experience with yacht interiors.)

Cleaning painted surfaces

The first painted surfaces we attempted to clean were in the starboard cockpit locker. In our initial efforts, we used a citrus-based cleaner purchased from the local Safeway store. I sprayed this on and then scrubbed vigorously with a 3M Scotch-Brite-backed sponge. I found rinsing quite tedious when I was stretched out in a locker. We used the sort of synthetic sponges used to wash cars. Mary Jeanne handed in clean ones and took the used ones away to rinse out.

The citrus spray cleaner took these painted surfaces from black to gray — not good enough. This was, in part, what motivated Mary Jeanne to track down a specialty fire cleanup product. Once we had the CleansAll in hand, we went back into the locker, this time with much better results — the surfaces were now a light gray. However, the paint-shop crew at Platypus Marine took the cleaning one level higher. They set about the locker surfaces with a more aggressive grade of 3M Scotch-Brite and a strong solvent mix that they called Emerald Green. Their concern was that the residual contamination might bleed through the overcoat of oil-based paint and lead to a need for further recoating later.

I joked with the painter that they called it Emerald Green because using it in a locker without a really good respirator would take a guy off to the Emerald City of the *Wizard of Oz*. Emerald Green was the product of recycling all the solvents they used with oil-based paints, lacquer, two-part urethane paints, and fiberglass work. I found it to be more effective than lacquer thinner alone. The end result was nearly white painted surfaces that had a good tooth to which new paint would adhere. This rather arduous process was repeated for the port locker, the lazarette, the bilges, the fuel-tank compartment, under the galley and head sinks . . . and so on.

Cleaning vinyl surfaces

The headliners in *Sirius* are plywood skins covered with vinyl fabric. Vinyl fabric is also used to dress the sides of the V-berth. Our cockpit cushions too, with their vinyl fabric cases, had been stored in the starboard locker at the time of the fire and had obvious soot stains. Since they were going to be replaced, we decided to experiment on them to see if we could find a way to clean vinyl well enough to avoid having to replace other vinyl surfaces.

We started with QuickNBrite and a 3M Scotch-Brite-backed sponge. This removed the heavier deposits but left very visible stains. Vigorous rubbing with towels wetted with lacquer thinner removed most of the stains. The remaining stains could almost be removed by scrubbing with a Scotch-Brite pad wetted with lacquer thinner (using the least aggressive grade of Scotch-Brite). We had concerns about the lacquer thinner leaching plasticizers out of the vinyl and, since some subtle stains remained even after this final step, we concluded that we would have to replace all the vinyl coverings.

Electrics and electronics

We replaced almost all the electrical and electronic components in the main panel due to concern about corrosion from the hot reactive gases generated by the fire. This was a joint effort with the Platypus Marine electrical technician. The replacement list included the breaker panels, VHF radio, propane control and detector, bilge-pump switch, the 50-amp breakers for the electric winch and windlass, and the switch and high-current solenoid for the electric winch. The GPS chartplotter and radar display, which were stored below at the time of the fire, were also replaced.

We had to disassemble the inverter and its control head to reach the circuit boards and contacts. We cleaned them with alcohol so they could be reused. The Link 10 charge monitor received the same treatment. We wiped down the wiring behind the panel with alcohol and carefully examined the terminals. If there was any visible corrosion, we re-terminated those wires. We used the same process when replacing the AC outlets.

Fire is far-reaching

Fire aboard a vessel is an insidious thing. In most cases, it will require a great deal of effort, money, or both to bring your vessel back to life. Committed owners can often find a way to save their good old boats — especially when they get a few lucky breaks along the way. We are delighted to have *Sirius* back and in better shape and better equipped than before the fire.

Durkee Richards learned to sail in the Sea Scouts on the Columbia River. His first date with his sail-mate Mary Jeanne, was on a Snipe. They spent nearly 40 years in the Midwest, chartering boats on Lake Superior until they bought their J/32 in 1999. After Durkee retired, they moved to the Olympic Peninsula and the waters of Puget Sound and British Columbia.

Resources

Versitol and CleansAll
Winsol Laboratories, Inc.
1417 51st St., Seattle, WA 98107-5188
206-782-5500; 800-782-5501
www.winsol.com

QuickNBrite is stocked by retailers and supermarkets such as Safeway.

Servpro Cleaning Company
Specialist fire- and water-damage service with franchises nationwide.
www.servpro.com

To lose or not to lose your boat

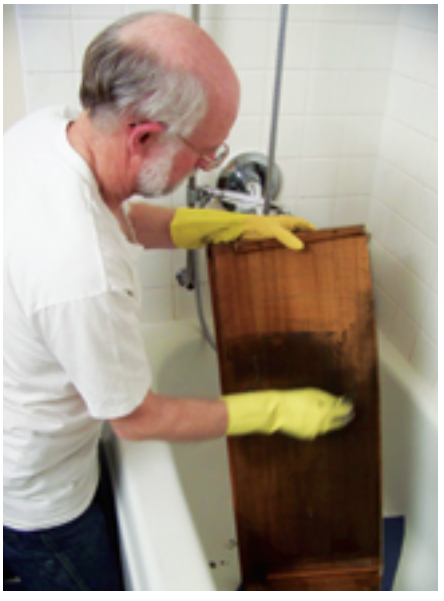
Factors and choices that may make the difference

by Durkee Richards

To find a beloved boat in such a state can be devastating, above. The labor that followed proved restorative for *Sirius* and her owners alike, below.

"You may not have enough insured value to save this boat." The surveyor's words left me stunned. He had finished his first task: to determine the cause of the fire (arcing within a power strip) and verify that this was an insurable event. Now he had switched modes and was documenting what would be required to make our boat whole again.

I struggled to understand his assessment. Our J/32, *Sirius*, is a 1997 model, still relatively new — at least to us. To my inexperienced eye, the cost to repair the direct fire damage to the sole of the head compartment and the immediately adjacent bulkheads, should be on the order of $10,000. The heavy soot contamination throughout the boat would require a lot of time to clean up. That might perhaps run to as much as another $10,000 but would surely be less than $20,000. This should still be a fraction of the value of the boat. So how was it that the underwriter might want to cash us out?



Many sailors before us have faced the choices we had to make. And many more will follow. The thought of a well-loved vessel — and all the wonderful memories associated with her — going to a salvage auction is painful indeed. But it does not have to end that way. Our instinctive response was that we would not consider letting go of *Sirius* while she was still so much with us. This might be a triumph of heart over head, but I suspect that this impulse is an integral part of being good old boaters.

Fortunately, we were able to save *Sirius*, in part through more than 400 hours of our own labor. Our well-loved boat is now whole again. We have recovered emotionally and financially from the long process. We can now look back on this experience with enough detachment to see some lessons that might be useful for others who face the possible loss of their boats.

Surveyors matter – We were very fortunate that our underwriter chose wisely. Our surveyor was experienced and knowledgeable and dealt fairly with all parties involved. He had considerable experience with boat fires and understood all that would be required for a satisfactory long-term result. He was also a good teacher and was willing to take time to make sure we understood the nature of the problems that lay ahead.

It is clear to me from this perspective that, had we been less fortunate in the underwriter's choice of surveyor, we should have immediately retained our own surveyor to represent and guide us. (We did make provisional arrangements with a surveyor just in case we needed to determine the salvage value of our boat.)

Your responsibility – For a claim involving a boat, the procedure for getting a comprehensive repair estimate is not the the same as it is with a car after an accident. Not only did we have to get our own repair estimate, but the surveyor pointed out that we could choose the boatyard we wanted to work with. He cautioned us that, if we turned our boat over to a boatyard to do the entire job, the cost might well exceed the amount for which the underwriter was responsible. That amount is the difference between the insured value stated in the policy and the probable salvage value of the boat as is. Plus, underwriters want some allowance for surprises before authorizing a major repair project.

Invest your own time – Your labor contribution can go a long way toward avoiding seeing your vessel go to a salvage auction. We were fortunate

that our underwriter was willing to pay owners for their labor while doing repair tasks for which they have the necessary skills. They paid us at an hourly rate about one third that which major boatyards in our area charge for their skilled trades. This made it more attractive to use our labor to try to keep the repair estimate below the threshold where the underwriter would opt to cash us out. However, we would have done this regardless to save our vessel.

Start early – Project *Sirius* was completed early and under budget. This is rare for major boat projects. One of the reasons for this was that we began sourcing replacement parts before *Sirius* was hauled out to start the major work. Therefore, all the required parts were on hand when needed. There were no project delays for lack of parts.

An important ally – The vessel's manufacturer, if still in existence, can be very helpful. We enjoyed excellent support from Pearson Composites, the contract manufacturer for J/Boats. The folks there put us in contact with the original sources for parts and materials, such as the vinyl fabric for the headliners, the cushions, the power panels, and much more. They even located the original tooling for the head compartment and were willing to prep it and pull a part to replace the fire-damaged shower pan. This was remarkably good support for a model that had been out of production for more than five years.

Choose your boatyard well – Your choice of boatyard will have a major impact on the success of the project. The yard we chose was quite willing to have owners, or their representatives, working on a major boat project. This was a big plus for us. The final repair estimate assumed that helping restore our boat would be my full-time occupation for the two months she was at the boatyard. This was a real benefit of being retired. The resulting estimate came in comfortably below the insured value so the underwriter had a vested interest in seeing our boat made whole again and would continue to insure her. Not all boatyards are as willing to have owners working alongside their employees. When talking to boatyards, be sure to ask about their policies regarding non-employee labor.

The boat's builder molded a new shower pan.

One last chance – Had the underwriter chosen to cash us out, we could have bought our boat back at the salvage auction. Or, we could have negotiated a salvage value with the underwriter so we retained ownership. Then, with title to the vessel and a check from the underwriter, we would have been left to our own devices. Fortunately, we did not have to go down that road.

Durkee Richards' bio is on page 33.

The insidious nature of soot

Any fire, even a relatively small and self-extinguishing one like that on *Sirius*, will fill the boat with soot and the acidic gases that carry it. For aesthetic reasons, the heavy coatings of soot must be removed from throughout the vessel. Otherwise, the vessel will never be habitable again. The scope of this work can be seen in just one of the recommendations from our underwriter's surveyor:

"Remove interferences. Chemically clean to bright surfaces and dispose of washings in an environmentally acceptable manner. Rub out and buff all molded fiberglass surfaces. Prepare, protect, and re-coat all painted surfaces. Re-finish all bright finished wood trim, and sole. Renew headliners."

Unfortunately, "removing interferences" entailed removing the water tank, fuel tank, and water heater to allow the compartments they occupied to be properly cleaned. But the problem goes far beyond that.

The hot gases generated by a fire, particularly those from burning plastics, are very acidic and corrosive to metals. Basically, this means that any electronic component with a switch or a circuit board that is not fully encapsulated will need to be replaced. Because corrosion will cause poor electrical contact, all AC outlets must also be replaced. Wiring to the power panels may need to be re-terminated for the same reason. These components may function immediately after the fire but, given time and humid air, field failure rates will be high. These tasks can greatly increase the cost of restoring a vessel after a fire.

Corrosion problems extend beyond electrical and electronic components. The plating on our faucets and light fixtures (in most cases chrome on brass) was pitted and bubbled. They were all replaced. Even solid stainless-steel surfaces were attacked. Some could be restored by buffing with abrasive compounds. For others, it was cheaper to replace them than to invest the time required to recondition them.

Preparing to cruise

A personal checklist from a 7-year liveaboard

by Dan Ahart

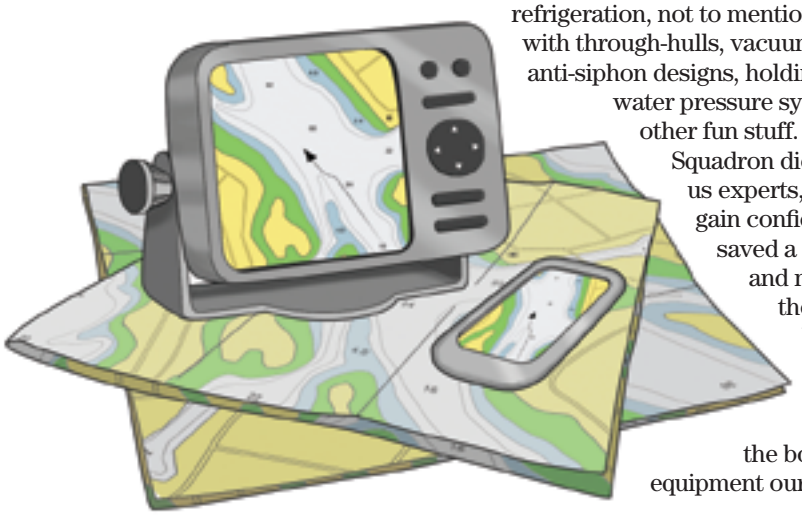
When my wife, Jan, and I decided we wanted to live aboard a sailboat and cruise the East Coast, the Bahamas, and the Caribbean for several years, we started reading all we could about the lifestyle, the kind of boat needed, the kind of equipment needed, and how we should prepare ourselves. We also talked to everyone we could find who had done it. We then bought a 1983 12-meter (41-foot) Catalac catamaran in December 1998 and moved aboard a year later.

We lived aboard *Sojourner* for more than seven years before reluctantly moving ashore not long ago. We cruised up and down the East Coast twice, spent many months in the Bahamas and Turks and Caicos, and enjoyed nearly five years in the Caribbean. Here are some ideas, based on our experience, that you might find useful if you're planning to live aboard and cruise on an older boat.

Preparing ourselves

Hundreds, if not thousands, of books and magazines contain articles about living aboard and the cruising lifestyle. We read a lot and kept talking to people who had done it. I had been trained on electronics in the Air Force and had fooled around with car engines since before I could drive. And, like most homeowners, I had repaired a lot of plumbing and done other household projects. Jan had experience working with wood, fiberglass, and paints. But we felt totally inadequate when it came to reading weather charts, navigating offshore, operating a diesel engine, handling large sails, and facing much of what is involved in caring for a boat complex enough to live aboard and cruise for several years.

A friend recommended that we join the local U.S. Power Squadron and take some courses. This was some of the best advice we were ever given. Even new boats have their share of equipment problems, but older boats are bound to have more. Besides, any bluewater cruising boat can be very complex, with AC and DC electrical systems, diesel engines, gasoline outboard engines, lots of batteries, refrigeration, not to mention plumbing with through-hulls, vacuum breakers, anti-siphon designs, holding tanks, water pressure systems, and other fun stuff. The Power Squadron didn't make us experts, but we did gain confidence and saved a lot of time and money over the years by either supervising repairs to the boat or fixing equipment ourselves. We also learned from other Power Squadron members the importance of inter-crew communication while anchoring, mooring, arriving at or departing from a pier, and handling sails.



Selecting the boat

We had owned a couple of lake- and coastal-sized monohulls before deciding to live aboard and cruise for several years. We naturally figured we'd get a larger mono to cruise in, but some of our Power Squadron friends pointed out that, if we were going to cruise the Intracoastal Waterway and the Bahamas, we should consider a shallow-draft boat. They pointed out that many areas of the ICW are very shallow. The Bahamas and the Turks and Caicos have thousands of square miles of water less than 20 feet deep and limitless coves and islets where the water is less than 10 feet deep. A deep-draft monohull would not be comfortable in those areas but a catamaran would be ideal.

We chartered a catamaran for a weekend and found it to be easy to handle, very stable, and very roomy. It also rolled little at anchor and, since we were guessing that we would spend a lot of time at anchor, this feature appealed to us. As it turned out, a lot of anchorages in the Caribbean can be rolly, but we never felt uncomfortable or spilled a drink due to *Sojourner* rolling at anchor.

We looked at dozens of catamarans, including many new ones. It was quickly apparent that an older boat offered several advantages, such as

ILLUSTRATIONS BY FRITZ SEEGERS

a lower purchase cost and lots of installed cruising equipment. In the case of the 12-meter Catalac, the bonuses included inside and outside helm stations, an enormous cockpit, and cavernous stowage.

The main disadvantage of an older boat is that much of its equipment will be worn and will eventually have to be replaced. During the first two years with *Sojourner*, we replaced both engines and transmissions, the mainsail, all the radios, the GPS, autopilot, standing and running rigging, and the dinghy and outboard. We also overhauled the watermaker, re-bedded all the windows, and did a lot of varnishing. The result was a boat we were comfortable on and equipment we had confidence in.

It was important too that the top of her mast was less than 50 feet off the water, so we'd be able to get under all the fixed bridges on the ICW. At her widest, she's 17.5 feet, so she can be hauled by an 18-foot travel lift. This proved to be an asset whenever we hauled out for bottom painting; wider lifts are not always available.

Equipment and safety

This is a subjective topic. What one person feels is absolutely essential, another may not care about. Here's what we found to be essential for us.

Tools and repair supplies – We carried all the tools we needed for routine maintenance and essential repairs. These included adjustable wrenches, open-ended and box wrenches, socket wrenches, Allen wrenches, screwdrivers, a battery-powered electric drill, drill bits, a hammer, hacksaw, wood saw, a few pieces of scrap wood to protect the boat finish from damage when working on some equipment, oil-filter wrench, a volt/ohm meter, and a small clamp-on vise. We also carried some extra wire of various sizes, spade terminals, a wire stripper, and a crimping tool for reconnecting electrical fittings. And, since *Sojourner* is fiberglass, we carried epoxy, hardener, and some fiberglass cloth. Although we never had occasion to use them, we also had aboard several sizes of wooden plugs in case a through-hull failed.

> **"We recommend having radar. We found it to be essential when sailing at night through busy shipping lanes."**

Getting her cruise-ready

Sails – We carried two mains, two jibs, and two spinnakers. We never had a blown-out sail, but we consider ourselves chicken sailors. We always studied the weather closely before making a crossing, so we never sailed in adverse weather. But the tropical sun is very hard on sails and stitching, so we carried spares.

Mast steps and bosun's chair – *Sojourner* came with folding mast steps and two bosun's chairs. These came in handy for changing light bulbs and checking rigging. When I climbed the mast, I also used a safety line tied to a halyard with a Prusik hitch that slides until pressure is put on it and then locks in place. This was easy to tie and to remove and added a great deal of security.

Spare parts – We carried a sail repair kit with appropriate patch material and thread, hose clamps of various sizes, extra hoses for all applications, bulbs for all lights, engine oil and filters, fuel filters, stainless-steel nuts, bolts, and screws, and shackles of various sizes. We had electrical tape, duct tape, caulking, sealant, and insulating material (such as Fluid Film) for electrical connections. We also carried spare bilge pumps, fuel pumps, and pressure-water pumps. These items can be found in the Caribbean but at much higher prices than in the States. When we were forced to order something from home, we usually had to pay an import tax and experience delays in receiving it. We also carried books on diesel and electrical repairs.

Radios and inverters – We never sailed offshore without a working single-sideband or ham radio. We felt we needed the long-distance transceiving capability for safety and weather information. In short order, we purchased a modem that allowed us to connect our laptop to the SSB so we could download weather charts and send and receive email at sea. We also installed a NOAA-registered EPIRB. The laptop needed 120-volt AC to charge its battery, so we installed a 1,500-watt inverter.

Radar – We recommend having radar. Many cruisers we met were not so equipped, but we found it to be essential, especially when sailing at night through busy shipping lanes. It was also extremely helpful while cruising eastward at night along the north coast of the Dominican Republic and the north coast of Venezuela.

“The Coast Guard Auxiliary and Power Squadron offer safety inspections. We took advantage of them more than once.”

Easting along these coasts is best done at night because of the beneficial effect of adiabatic winds off the mountains, which tend to neutralize the trade winds. Since there are numerous fishermen in small boats in the same areas, radar helps identify and avoid them and their nets. We did most of our passagemaking between islands in the Caribbean at night also, as we felt it desirable to arrive at our new destination in the morning, giving us the day ahead to find a good anchorage or marina. The distances between most islands allow for an easy overnight sail. We also installed a radar reflector to help others see us.

Navigation – We carried paper charts for backup but we primarily used GPS. We had a mounted Garmin color moving-map display and two hand-held backups.

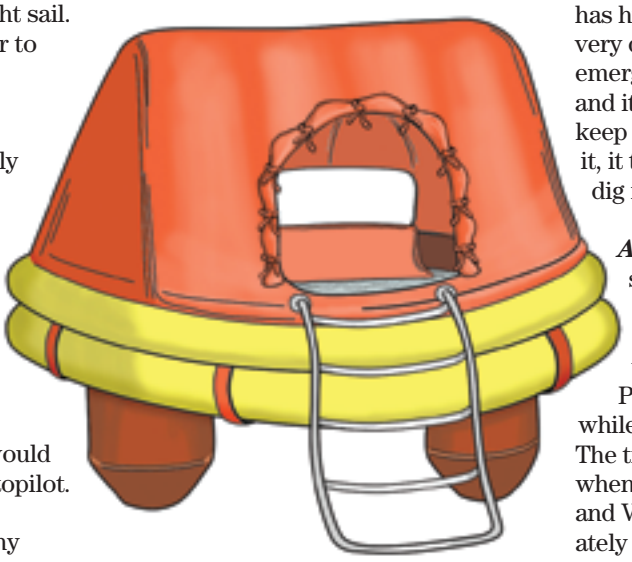
Autopilot – Sailing a boat is fun but can become tiresome. The longest nonstop voyage we took was from Puerto Rico to Marathon, Florida: 7 days. This would have been a chore without an autopilot.

Life raft – Although we met many cruisers who did not have one, we felt that a life raft was essential. We carried a six-person enclosed type. We were convinced, after attending a Seven Seas Cruising Association seminar on life rafts, that a six-person raft would be minimally comfortable for two.

Ditch bag – We never used it, but we kept a waterproof bag handy that could be thrown in the life raft if we had to abandon ship. The ditch bag contained a hand-held GPS, a hand-held VHF, a strobe and flashlight, extra batteries, copies of our passports and other documents, first-aid supplies, and extra water and food. All certified life rafts have some of these supplies aboard, but it never hurts to pack your own and carry extra water.

Life jackets – We carried six Coast Guard-approved offshore PFDs. We had two Sospender inflatables, which are not uncomfortable to wear, and four vest types. Many states require PFDs even for short trips in a dinghy.

Jacklines, lifelines, and toerails – Some newer boats do not have toerails or adequate lifelines or an easy way to connect a jackline. Toerails may not seem to be a major issue, but ours have saved many a tool from going overboard. Lifelines should be strong



enough to live up to their name. A jackline is a must if you do any serious sailing, especially at night. We have often discussed which would be the worse scenario: falling overboard and your partner doesn't know it or waking up to find you're alone on the boat.

Fire extinguishers – Small extinguishers are readily available at any marine-supply store. They're cheap and easy to install. We kept seven aboard.

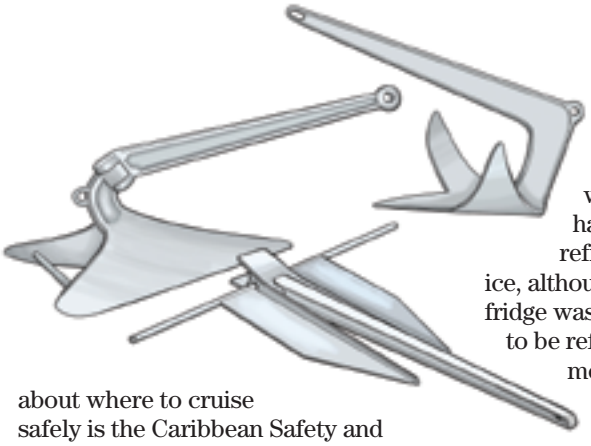
Bilge alarms – One of our bilge pumps came on one night and we didn't hear it. Although it probably pumped only a small amount of water overboard, its float switch stuck and the motor burned out. We did smell the motor. After that experience, we installed an 8-light alarm that would identify an activated pump with visual and aural alarms. We never had a sticking float switch after that, of course, but the monitor gave us peace of mind. This is a good place to mention hand pumps. We kept a manual bilge pump aboard with a long hose on it just in case.

Safety inspections – The Coast Guard Auxiliary and Power Squadron offer safety inspections. We took advantage of them more than once. We didn't want to take a chance on overlooking something that was unsafe or something required by a local law enforcement agency or the Coast Guard.

Emergency steering – *Sojourner* has hydraulic steering, which is very dependable, but we also had an emergency tiller. We practiced using it and it worked well, but that taught us to keep it handy, as the first time we tried it, it took us 10 minutes to locate it and dig it out of a locker.

About pirates – No discussion of safety would be complete without a mention of pirates. We never had a problem with pirates, but we met a few cruisers who did. Problems ranged from boardings while offshore to break-ins at anchor. The trouble spots in the Caribbean when we were there were St. Vincent and Venezuela. There are many desperately poor people in those countries and the governments are so inept or uninterested that very little is done to protect cruisers.

We stopped only once in St. Vincent, even though we sailed past the island several times. When in Venezuela, we kept to safe areas — those where lots of cruisers could be found — as much as possible. If we had to traverse a troubled area, we sailed with at least one other boat. We did not carry firearms, as most Caribbean countries have strict laws prohibiting them. We also learned never to leave a dinghy in the water overnight, especially one with an outboard on it, and we carried a chain and padlock to lock our dinghy to a pier when going ashore. We also had a padlock on the outboard. The best source of information



about where to cruise safely is the Caribbean Safety and Security Net, discussed below.

Watermaker – Many cruisers did not have watermakers; we provided a great deal of fresh water to several of them. If you plan never to be more than a day or so away from a marina, you may not need a watermaker, but if you plan to anchor off an idyllic island for a few days, you'll wish you had one. We once spent six weeks anchored off Isla La Blanquilla, about 100 miles off the north coast of Venezuela. We loved every minute of it and could not have done it without a watermaker. Be sure to carry spare filters for the watermaker.

Anchors – We learned how to properly set an anchor through the Power Squadron. We also learned to carry at least three types: Danforth, Bruce, and Brittany (similar to the Danforth, but stockless). Different anchors are necessary for different bottoms. Plus, there were times when we deployed two or more anchors. In narrow anchorages with minimal swinging room, or those where the tide reversed the direction of the current, we used fore-and-aft anchors in a Bahamian-style deployment. If the winds were particularly strong, we used two anchors for safety.

Electric windlass – *Sojourner*'s anchors are heavy. Pulling in a 65-pound anchor plus another 200 pounds of chain by hand is no fun. We carried 230 feet of chain rode and needed it all on occasion. There are some lovely, but deep, anchorages in the Caribbean.

Refrigeration – Refrigerators, freezers, and icemakers come in all sizes and types from engine-driven to electric to propane. We have met many cruisers who would not fool with any kind of refrigeration. We also met cruisers who would not leave a marina without a functioning icemaker. We landed somewhere in the middle. *Sojourner* has a top-loading 12-volt refrigerator capable of making ice, although we rarely needed ice. The fridge was adequate for items that had to be refrigerated: cheese and fresh meat or fish. We never refrigerated eggs, vegetables, or fruit.

Generators – The more electric stuff on board — such as refrigerators, freezers, and watermakers — the more need for a way to charge batteries or generate 120-volt AC. We met cruisers who installed a 120-volt AC generator on the engine, but we had a separate diesel-powered 4-kilowatt Onan that could run our air conditioner and watermaker while charging our batteries at the same time. We never used solar panels or wind generators.

"We had the opportunity to get certified for scuba. What a wonderful experience."

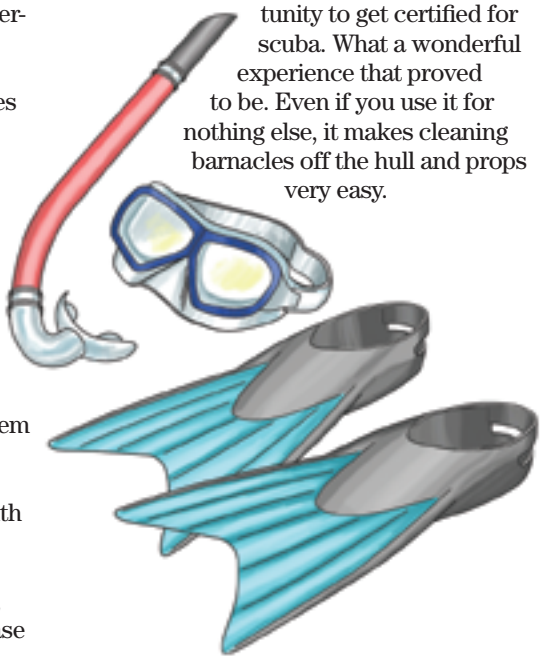
Air conditioning – At anchor, we rarely ran our air conditioner because we had nice trade-wind breezes, but in marinas, we really enjoyed it. The heat can get stifling if a marina is tucked behind hills or buildings that block the breeze. Ours was a 16,000-Btu water-cooled Mermaid.

Propane – Almost everyone carries propane to fuel a water heater or stove and range. We carried three 20-pound tanks because we liked to stay at anchor for extended periods. Only one tank could be connected at a time, and we installed a safety shut-off switch for the propane supply. We sure didn't want a leak to go undetected. A propane detector is a good idea. We never had any problem getting tanks refilled.

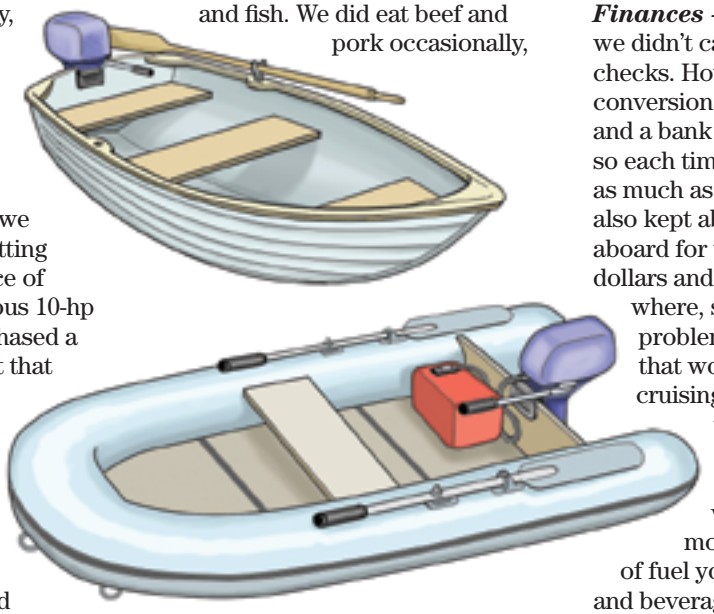
Clothing – We started cruising with all kinds of extra clothing until we realized that all we needed was a couple of pairs of pants and shirts, skirts and blouses, and shoes in case we had to fly back to the States. Other than that, it was bathing suits, cargo shorts, T-shirts, and sandals. Because the tropical sun is hard on clothes and our clothes were frequently ruined by oil, caulk, or grease, we were always on the lookout for cheap replacements. Finding replacement T-shirts, shorts, and sandals was not a problem.

Sunshades – A sunshade covering for the entire boat is important in the Caribbean. The tropical sun can be brutal, but a shade can make an otherwise sweaty day very enjoyable. We carried a sewing machine, and Jan made our sunshade and roll-up side panels out of a material called Griffolyn. It's tough as nails, half the weight of Sunbrella, and waterproof. We chose white after trying blue and green. The darker colors looked nice but got very hot and cut down on the light inside the boat. The sunshades enabled the air conditioner to do a more effective job. Reef Industries makes Griffolyn (see Resources, page 41).

Snorkel and scuba – We got along fine with snorkels for the first three years in the Caribbean. Then we had the opportunity to get certified for scuba. What a wonderful experience that proved to be. Even if you use it for nothing else, it makes cleaning barnacles off the hull and props very easy.



Dinghy and outboard – Our first dinghy was a 10-foot Avon inflatable. The advantage of an inflatable is that it can be deflated for storage. We never deflated ours intentionally, although it deflated itself at some inopportune times. We eventually purchased a 10-foot Livingston fiberglass dinghy. It had the same overall dimensions as the Avon and weighed the same. It never deflated and we didn't have to worry about it getting torn by a barnacle or sharp piece of coral. We also had a cantankerous 10-hp Evinrude outboard, so we purchased a new Yamaha 15-hp replacement that ran like a dream. A dependable dinghy and outboard are absolutely essential for getting to shore or the marina when you're anchored out.



Food – When we started cruising, we carried lots of dried and canned food. This was unnecessary. Food can be purchased everywhere. We started eating like the natives do with lots of local fruit, vegetables, chicken, and fish. We did eat beef and pork occasionally, but outside the United States no one seems to age beef, so it doesn't taste the way we expect it to.

Finances – ATMs are everywhere, so we didn't carry lots of cash or traveler's checks. However, we had to pay a conversion fee for the local currency and a bank fee each time we used one, so each time we used an ATM, we drew as much as we felt safe carrying. We also kept about $1,000 in cash hidden aboard for use in an emergency. U.S. dollars and euros are accepted everywhere, so spending money is not a problem. We developed a budget that worked for us. When we were cruising (from 1999 through 2007), we met cruisers who were spending as little as $1,000 a month and others who were spending $5,000 a month. Obviously, the amount of fuel you require, the type of food and beverages and entertainment you

prefer, and the maintenance costs for your boat will have a great influence on your budget. We found that talking with other cruisers was the best way to find out about current prices in various locations.

The Caribbean Safety and Security Net – We always monitored this wonderful net on our SSB radio in order to learn what was going on in the Caribbean. It was also a great source of information on where to get services.

Herb Hilgenberg and South Bound II – We had not heard of Herb Hilgenberg and his call sign, South Bound II, before we started cruising. Herb has been broadcasting Atlantic weather and helping cruisers for more than 20 years. He specializes in advising transatlantic cruisers about weather in the Atlantic, but he will also help Bahamas-bound cruisers. He draws the line at the Caribbean because of the many other nets and aids in that area. Herb is one of the cruising community's greatest assets.

Our experience

We felt the cruising lifestyle was very healthful, and provided us with plenty of exercise and fresh air. We found the cruising community to be made up of lovely people who were always willing to assist whether we needed advice or a helping hand with a project, and we still correspond with dozens of them.

We had a wonderful time and will always treasure the memories of our cruising days.

"We found the cruising community to be made up of lovely people and we still correspond with dozens of them."

Cruising was nothing like living ashore. Even with a watermaker, we took Navy showers or we bathed in the ocean and rinsed with fresh water. We also learned to conserve battery power. We snorkeled and went scuba diving. We read and swapped dozens of books, DVDs, and computer games with other cruisers. We played hours and hours of dominoes and worked hundreds of crossword puzzles.

We learned about the history and culture of the countries we visited and took many tours inland. We made an effort to learn a little Spanish and French. And even though our accents and grammar were terrible, we had fun at least trying to communicate with the locals. We know our efforts were appreciated. We found an excellent book, titled *Spanish for Cruisers*, by Kathy Parsons, that covers all the Spanish words and phrases we needed in order to obtain parts or repairs for our boat. (***Note:*** *Kathy has published a French version also.* ***–Eds.***) We learned that a smile is understood in any language and paid big dividends when dealing with officials in the various countries we visited.

We tried to use common sense, be safe and, more than anything else, we really enjoyed being on Island Time.

Dan Ahart, and his wife, Jan, found they had a common interest in boating when they were dating, about 42 years ago. They later owned a 17-foot O'Day and a MacGregor 26. When retirement loomed, they became interested in ocean sailing and bought Sojourner.

Resources

Reef Industries
Manufacturer of Griffolyn
www.reefindustries.com

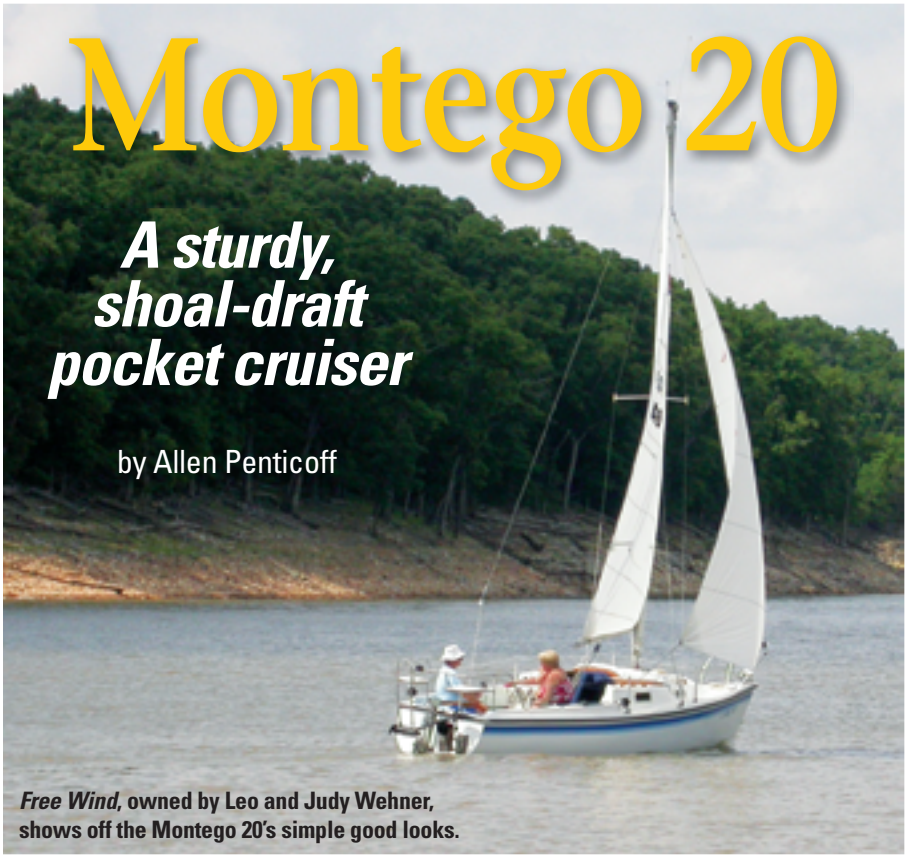
The Caribbean Safety and Security Net
www.safetyandsecuritynet.com

Herb Hilgenburg
www3.sympatico.ca/hehilgen/vax498.htm

Montego 20

A sturdy, shoal-draft pocket cruiser

by Allen Penticoff



Free Wind, owned by Leo and Judy Wehner, shows off the Montego 20's simple good looks.

Trailersailing became popular during the 1970s, as it offered an economical way to get out on the water without having to pay slip fees in boats for which the cost of fuel was practically nothing. The most popular length was 22 feet; if you have an old sailboat directory, count 'em. There were dozens. The Montego 20, our review boat, is on the small side of average.

History

The Montego 20 was designed and built by Johannes "Jopie" Helsen, who was something of a child prodigy in the boating industry. His father, Louis, began building racing sailboats in his home country, the Netherlands, in the 1930s. He moved the family to the U.S. in 1957 after liking what he saw of the country when he visited the New York Boat Show. He was the first to import the Flying Dutchman one-design into the U.S.

Jopie was 10 that year. By the time he turned 13, he already knew he wanted to follow in his father's footsteps. By age 15, Jopie was working in Charlie Morgan's Florida boatshop, doing the grunt work one expects of a teenager, and it wasn't long before he began crewing on some famous offshore racing yachts. He studied yacht design through the Westlawn Institute's correspondence program and set out to design his own boats.

His first boat, which he designed at the age of 19, was the swing-keel Helsen 22, considered a midget ocean racer at the time. It was built in his father's shop, Dutch Craft, in St. Petersburg, Florida. Louis wanted to stick to the old ways, but Jopie wanted to build in new ways, so he fledged his own company, Universal Marine Corporation, where he built 20 boats a month instead of the two per month his father produced at Dutch Craft.

In the early 1970s, Jopie and his wife, Sandy, began to acquire property along Salt Creek on Barboro Harbor in St. Petersburg. The company grew, adding a full-service marina, Sailor's Wharf, just south of the Albert Whitted Airport.

Universal Marine Corporation built four sailboats under the Montego line, the 19, 20, and 25, and the short-lived Montego 5.87. The Montego 20 and its fraternal twin, the Montego 19, share the same 19-foot, 6-inch hull but have different keel configurations; the 19 has a 450-pound swing keel and the 20 a fixed keel. The 20 was the more popular model by far, outselling the 19 by a ratio of five to one.

The 14-year-old company was sold in 1987. Production of the line ended then as the buyer could not make a go of it. A total of 2,300 boats designed and built by Helsen were sold. No figures are available for the production run of the Montego 20 model, designed in 1976.

As a side note, the Watkins 23 XL is an adaptation of the Helsen 22. Jopie Helsen also did some design work for other companies. The Sovereign 20, designed in 1982, is an example. He also designed the Hunter-Helsen Signature 470 for Hunter Marine, keeping the first boat for himself. In all, Jopie Helsen designed 31 boats, ending with a VIP 57 passenger boat built in Amsterdam. He is surprised that his first design, the Helsen 22, can still be found sailing and that, while they sold for $2,995 new in 1966, used models sell today for $4,000.

Our review boat is a 1984 Montego 20 owned by Leo and Judy Wehner of Byron, Illinois. Leo is essentially a self-taught sailor, and he found the stable Montego 20 to be an excellent platform on which to learn. As a beginner, he lucked out: the Montego 19/20 owners' manual, a typed and photocopied affair, has the clearest and most detailed instructions for learning to set up and sail a boat I've ever seen in a manual. Since the Wehners acquired her in the summer of 1999, they've towed *Free Wind* from their landlocked home to many of the great Midwest sailing destinations including Lake Michigan, Kentucky Lake, Table Rock Lake and Mark Twain Lake in Missouri, White Bear Lake and Lake Vermillion in Minnesota, Lake Mendota in Wisconsin,

> "Leo is essentially a self-taught sailor, and he found the stable Montego 20 to be an excellent platform on which to learn."

and Lac Seul in Ontario. Northeastern Missouri's very sailable Mark Twain Lake was the site of the photo shoot.

Design

The Montego 20 has a raked bow, a slightly reversed transom, and a pleasant sweep to its sheer. The stubby 8-foot-long keel leaves the small cabin free of a centerboard trunk and provides plenty of righting moment with 600 pounds of ballast encapsulated in the short 15 inches it extends below the hull. Despite the fixed keel, the draft is only 2 feet, making for easy launching at most boat ramps. The boat's 1,700-pound dry weight allows for towing with lighter vehicles, and its designed displacement, fully loaded, is 2,300 pounds.

The boat's beam is 7 feet 2 inches and the cockpit takes full advantage of it, which makes it very comfortable. The hull is nearly flat at the keel, rising and rounding firmly at the turn of the bilge to give good initial stability. All Montego 20s were tiller-steered with a kick-up transom-mounted rudder. A transom bracket is provided for an auxiliary outboard. The trailer was an option that sold with approximately 90 percent of the boats.

Earlier boats had fixed "Euro-style" tinted windows; later boats had Beckson opening portlights with screens. The fixed-window version has a somewhat sleeker appearance.

Weighing 1,700 pounds dry, the Montego 20 can be towed by most average-size cars. The shoal keel and kick-up rudder allow beaching the boat in calm conditions.

Construction

The Montego 20's hull is solid hand-laid fiberglass. It has an outward-turning hull-to-deck flange that's bonded with polyester putty, mechanically fastened with stainless-steel rivets, glassed over with mat and roving, and capped off with a substantial rubber rubrail mounted to an aluminum lock strip secured by the rivets. A sturdy aluminum cap at the bow further protects the hull.

A toerail is molded integrally with the deck and filled with resin-impregnated microspheres, while the deck itself is a sandwich, its core made up of 3- x 4-inch plywood blocks ⅜-inch thick. Gaps between the blocks were filled with a mixture of microballoons and resin. The Montego 20 has sufficient encapsulated foam flotation to be "unsinkable."

In the attachment to the owners' manual describing the construction, Jopie wrote: "Every boat we build is a restatement of the Helsen family tradition of over 50 years of boatbuilding. We are in no hurry. Our boats have been around for a long time. We want them to last."

In the interior, a fiberglass pan forms the berth flats and two small counters. This liner does not extend above the berths; the inside of the hull and the overhead were sprayed with a pebble-texture gelcoat. A mast support transfers the rigging loads to the keel. The substantial rudder is solid fiberglass and pivots in an intricately cast aluminum bracket. The tiller is a sturdy wood lamination.

The cockpit is long enough to nap in and the footwell is narrow enough for Judy Wehner to brace her feet on the opposite seat .

On deck

One of the first things you notice as you approach the Montego 20 is the single lifelines supported by aluminum bow and stern pulpits. Leo has had a new stainless-steel stern pulpit fabricated that includes integral seats in each corner . . . "Like the big boats," he says. A previous owner also added a long swim ladder.

The cockpit seats are 6 feet 6 inches long and 19 inches wide and easily accommodate four people under sail. The coaming is angled and high enough to form a comfortable backrest. At 24 inches, the space between the seats is a comfortable distance for bracing while heeled; the 11-inch-deep footwell drains through two screened scuppers aft. A 14- x 22-inch lazarette bridges the seats aft and offers access to the entire aft end of the hull's interior, a space which could accommodate considerable gear. The bridge deck is flush with the seats. In the case of *Free Wind*, a traveler is mounted on it for the mainsheet tackle, although this was not original equipment.

Forward of the cockpit, two screened opening portlights on each side of the cabin trunk plus a 10- x 17-inch fiberglass opening hatch provide excellent

The V-berth occupies most of the area forward of the mast, which is supported by the compression post, at left. The center section of the V-berth can be removed to provide access to the portable toilet beneath. Two small countertops make up the "galley." At mealtimes, a removable tabletop fits between them to provide a larger work surface. A 50-quart cooler does double duty as a companionway step, at right.

ventilation in the cabin. No provision is made at the bow for an anchor, however all deck cleats are substantial. Leo stores the anchor aft in the lazarette.Two Maxwell winches are mounted on the cockpit coamings with fixed fairleads.

The sidedecks on the Montego 20 are narrow, so the favored path to take when moving fore and aft is "over the top" of the cabin. The non-skid is reported by some to get slippery when wet. *Free Wind*'s deck was heavily oxidized; Leo used NewGlass2 to restore the gelcoat surface.

Among the cabin and deck fittings are a number of teak components, from sturdy handrails to cabin trim. Leo found all the exterior teak pieces on this 1984 model to be in decline and replaced them with parts he fabricated from maintenance-free PlasTEAK. Leo has replaced the original teak-faced plywood companionway boards with ones he made from King StarBoard polymer-sheet material. The companionway is 32 inches wide at the top, making for easy access to the cabin.

Accommodations

As one would expect in a pocket cruiser, space inside is limited. There are four berths: two in the 78-inch long x 65-inch-wide V-berth and two 76-inch x 25-inch quarter berths. All cushions are covered with plaid upholstery. The V-berth has a removable section to provide access to the portable toilet beneath. Stowage is also provided under the V-berth. There is no stowage under the quarter berths but they are open to the lazarette and the area under the cockpit sole, where Leo has his battery.

Just below the companionway is a small, clearly labeled fuse-protected electrical panel for the boat's modest needs. Sitting headroom is adequate for anyone under 6 feet tall and is comfortable for two people.

Montego 20

Designer: Jopie Helsen
LOA: 19 feet 6 inches
LWL: 17 feet 9 inches
Beam: 7 feet 2 inches
Draft: 2 feet 0 inches
Displacement: 1,700 pounds
Ballast: 600 pounds
Sail area: 189 square feet
Disp./LWL ratio: 136
SA/disp. ratio: 21.2
PHRF: 282

An 8- x 11-inch sink is built into a countertop on the starboard side, its water supply pumped from a removable jug. To port, another small counter accommodates a stove. A small removable table bridges the space between these counters; below them are small storage areas with teak doors. A 50-quart cooler with a teak dressing serves as a somewhat wobbly companionway step.

Headroom under the closed sliding companionway hatch is 51 inches. The opening ports provide light in the cabin and more enters through the forehatch even when it's closed, because part of its surface has no gelcoat and is therefore translucent.

Overall, the cabin is light, airy, and comfortable. It would do in a pinch for a weekend or short vacation for crews who can stay on good terms in close quarters. A family of two adults and two kids could make the boat work with careful packing and limited provisioning. Good sailing naps may be had in the quarter berths or on the long cockpit seats. Except for some solo forays where Leo has stayed aboard alone, the Wehners typically plan to spend nights in a motel or a relative's home — a good choice.

The rig

The ⅞ sloop rig has upper shrouds, single lower shrouds, a single set of spreaders, and inboard chainplates. The backstay is split above the tiller. The mast can be raised by one person without the use of a gin-pole or winch as long as someone is handy to pull on and hold the jib halyard while the forestay is

connected. Leo has managed to put it all up by himself at times, however.

The mainsheet was originally rigged to the end of the boom with a bridle to the coamings port and starboard. This is a cumbersome arrangement that some report is unsuitable in high winds, as it cannot be released quickly to depower the mainsail. The owners of *Free Wind* have installed mid-boom sheeting on a traveler mounted on the bridge deck. Happily, the boom is mounted high enough so no ducking is needed when tacking. While there's provision for a boom vang, Leo doesn't have one.

The 89-square-foot mainsail comes with one fairly deep reef and a Cunningham. A reef hook is provided on the mast as jiffy reefing was standard. Leo has installed removable lazy-jacks to help with sail handling when short-handed. On *Free Wind*, the halyards lead aft to line clutches. The standard jib is a hanked-on, 100-square-foot, 125 percent genoa. Total sail area is 189 square feet, giving the Montego 20 a generous sail area/displacement ratio of 21.2. Mast height above the designed waterline is 27 feet 3 inches.

Performance

We sailed *Free Wind* on a windy day on Pierce Lake, a small lake near Rockford, Illinois, well known for swirling winds. This day was no exception.

When you step aboard, the Montego 20 doesn't seem particularly tender and has the feel of a larger boat. Leo's 50-pound-thrust trolling motor easily propelled *Free Wind* away from the dock and into the wind. The outboard bracket is rated to 7.5 horsepower, but such a large engine would be overkill.

The Montego 20 did well through the many tacks and course changes necessary when sailing this lake on a windy day. Such a long keel implies steady tracking but, by the same token, it does slow the turning process some, although not unreasonably so. Back-winding the jib a bit helps bring the bow around. Obviously, she's no racing dinghy. In lighter air, the relatively heavy displacement gently carried us through tacks. Gusts heeled her over to the rubrail but we did not often feel overpowered despite carrying full canvas. We employed the Cunningham to help flatten the sail, but we really should have taken in a reef for we had some weather helm to contend with. The reef, however, appears to be deeper than what was needed on that day. I recommended that Leo consider adding another reef that would reduce the sail area by less and setting it up with jiffy reefing so he could tame the weather helm and reduce the rudder drag. Despite the boat being somewhat overcanvassed, the rudder showed no tendency to stall and allow a round-up. Although the pressure on the rudder was not uncomfortable to deal with, it would have been nice to have been properly trimmed for the conditions.

Leo reports the Montego 20 does not sail well under genoa alone. While some criticize the fixed fairleads for the genoa sheet, this arrangement does keep things simple and the fairleads are well placed for most conditions. The small winches worked well enough with the small headsail, but I found tying the sheet off to a conventional horn cleat to be cumbersome, particularly when my weight was really needed on the windward side. Leo ties the sheet on the windward cleat when crew is not in the way. We did not try out the symmetrical spinnaker that on downwind runs Leo sometimes sets from the bow in the same way you would an asymmetrical.

The Montego 20 accelerates reasonably well and feels fast, though we had no knotmeter to provide accurate numbers. Some reports indicate the short keel will "lose its grip" when heeled over and recommend that the Montego 20 be "sailed flat." It pointed well enough on this day, considering its shallow keel, which doesn't generate as much lift as a deeper fin keel.

The one Montego 20 with a PHRF rating is listed at 282 seconds per mile, which compares favorably with the more contemporary Starwind 19 at 288 and a Hunter 20 at 285.

Conclusion

The Montego 20 looks good on the trailer and in the water. An old aviation adage goes, "If it looks right, it'll fly right." In this case, the Montego 20 looks right and sails right.

While it's not a "go anywhere" boat, coastal and inland lake cruising are reasonable expectations for Montego 20 owners. The shallow draft allows gunkholing at its finest and beaching within knee-deep wading distance of the shore.

Other than your typical gelcoat stress cracks and fading, there seem to be no inherent structural problems with the Montego 20. Following an altercation with a rock, Leo repainted *Free Wind*'s bottom and topsides with automotive paint and she now looks much newer than her 25 years. The original trailer was a bit undersized for her weight. This led to a bearing failure while on the highway. Leo has replaced the trailer with a first-class custom single-axle trailer by Loadmaster.

"Some reports recommend that the Montego 20 be 'sailed flat.' It pointed well enough considering its shallow keel."

A recent Internet search found no Montego 20s listed for sale. The Wehners paid $3,500 for *Free Wind* 10 years ago. One Montego 19 sold in 2005 for $2,900. Pocket cruisers generally trade hands for anywhere from $500 for a desperately-in-need-of-work boat to $3,000 to $4,000 for a prime example. Finding a Montego 20 will probably require being lucky, as the Wehners were.

Allen Penticoff is a freelance writer, sailor, and longtime aviator. He has trailersailed on every Great Lake and on many inland waters and has had keelboat adventures on fresh and salt water. He presently owns three sailboats: an American 14.5, a MacGregor 26D, and a 1955 Beister 42-foot steel cutter that he's restoring.

Resources

"HelsenSailors"

A Yahoo group for Montego/Helsen owners, moderated by Carl Chitwood, currently has 42 members.
groups.yahoo.com/group/HelsenSailors/

Bring on the heat

A bound-up bilge pump yields to friendly persuasion

by Richard Smith

The thing about a 30-year-old boat is that some of its gear is apt to be 30 years old and, unlike that good old hull, not all of it works quite as it used to. I'd been preoccupied with getting a succession of electric bilge pumps and their floating switches to work. In the process, I cleaned out the deep bilge sump — no easy job but finally immensely satisfying — and discovered three decades' worth of stray bolts and nuts, washers, and electrical wiring snippets. There was an old cigarette lighter down there, a few peach pits, and a lot of watermelon seeds, along with several clots of an unidentifiable substance. Everything lay just beyond arm's reach in a bed of oil and mud — all part of *Kuma*'s mysterious former life.

I put in a new pump, but that didn't work. My friend Jerry brought in his test meter and found that the problem was in a faulty three-way panel switch as well as in the pump. When I got it all back together, it worked . . . and then it didn't. Jerry's nose for trouble led to some frayed wiring. It's working now, happily chucking out water from stuffing box and icebox with impressive regularity, but my confidence in submersible electric bilge pumps and their sometimes fickle nature has been shaken.

The manual alternative

Kuma came to me equipped, like many good old boats, with a Whale Gusher 10 manual pump. It looked good but didn't lift a drop of water. It's been on the spring-outfitting job list for years. This year I finally got to it.

Once I got the neoprene diaphragm off, all came clear: the Gusher's inlet and outlet valves were stiff and mired in corrosion; they'd have to be replaced. The solution seemed pretty simple: I'd get a service kit from West Marine. But, as I was unable to get at the machine screws holding the valves in place, I first had to very carefully extract the pump and all its bits and pieces from the boat.

The body of the Whale Gusher bilge pump had years of life left in it but the valves had seized. Here, after reluctantly giving up its old valves, the pump's cast aluminum body has been given a coat of protective paint and the new valves are in place.

I took it all home and shot WD-40 around the bases of the machine screw heads, gave it a few taps with a hammer, and let it soak overnight.

On the way over to Jerry's shop, I thought about a new $300 Gusher. I also thought about a $40 plastic job, which is not as fitting for a small yacht but was a compromise that wouldn't deplete my two-speed-winch-and-new-headsail kitty by much.

> "I expected a slurry of melted metal on the bench at any moment."

In the morning, I tried loosening the screws, but nothing doing. I emailed Jerry, who suggested heat. I went back into the shop and fired up the propane torch. Still nothing doing. Another email. Jerry said it needed more heat, real heat, and a lot of it.

"Bring it over," he said. "It could be brutal; are you prepared for failure?"

We placed the pump's aluminum body in a bench vice and, as I held the tip of a blue acetylene flame at the base of a screw head, Jerry addressed it with a properly sized screwdriver, a hammer tapping, and two strong hands. We poured on more heat and Jerry squirted in a little penetrating oil. The valves bubbled when the oil caught fire, and

I expected a slurry of melted metal on the bench at any moment.

Torquing and twisting

But Jerry knew better. He leaned into that screw head with his whole weight, grunting like a Wimbledon champion and muttering something I couldn't quite make out over the roar of the torch. He torqued some more with a steadily increasing back and forth twisting motion, all the while adding penetrating oil to avoid snapping off the screw head. Just when I knew the head must come off, there was a very slight movement, and then a little more.

Jerry made a quick clockwise jerk, one final mighty twist to the right, and it was over. The old pump gave up its treasure. The rest of the fasteners almost seemed to unscrew themselves. It had been brutal but it was done. Later, flushed with success, with everything along with a can of magnesium-chromate paint in a cardboard box in the back of the pickup, we celebrated with coffee and some good talk about bilge pumps and boats.

Sometimes it takes a lot of work to set things right. And sometimes a little more than that. It takes a clear sense of one's own limitations, knowing what we can do and what we probably can't. Despite all our efforts, we sail imperfect boats or we don't sail. Looking back on it, I doubt I would have been able to repair that pump without Jerry's help. Left to my own devices, I would probably have put it off for another year or I'd have struggled until I left a headless screw in the casting and bought a new pump (and put off my new genoa for another year). What made it all come together right was a little help from my friend.

Richard Smith is a contributing editor with Good Old Boat. *He has built, restored, and maintained a wide variety of boats and sailed them on Michigan lakes and Oregon reservoirs and from harbors and mud berths in the Irish sea. He sails* Kuma, *an Ericson Cruising 31, with his wife, Beth.*

After being a notation on the "to do" list for several seasons, the bilge pump, finally refurbished, became a functioning part of *Kuma*'s essential equipment.

Adapting to flanged seacocks

Captive bolts mean freedom from worry

by Stephen Thompson

Like many boats from the early 1970s, my Hallberg-Rassy Mistral 33 was originally fitted with bronze gate valves. They were mounted directly on the ends of the through-hull extensions, and even though a small piece of ⅜-inch marine plywood was placed between the hull and each through-hull nut, I was concerned that the plumbing attached to the gate valve still relied on the through-hull's sealant for its structural support.

In a couple of locations, a previous owner had reinstalled some ball valves but had left out the plywood, so the through-hull nut was in direct contact with the hull. When making my pre-restoration inspection, I found that all of the remaining gate valves were permanently stuck in the open position and none of the existing connections felt firm or secure.

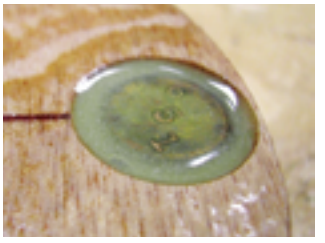
Since I was stripping the entire inner surface of the hull, I thought I would bring the through-hulls and their connections up to modern seacock standards. However, every article I read regarding the installation of the Perko flanged seacocks I had purchased called for the flange mounting bolts to pass through the hull and be sealed with polysulfide sealant. This was going to mean a lot more holes in the hull, all of which would be potential points for leaks to occur. As the whole point of changing these through-hull connections was to give me more peace of mind, this seemed counterproductive.

The articles I read also called for a contoured wooden spacer between the hull and the seacock to ensure a square and flat surface for the flange to mount against, and that gave me an idea. I've become somewhat proficient with epoxy … so, what if I countersunk the bolts into the underside of a plywood mounting plate and buried the heads in epoxy to keep the bolts from turning? I could install the plate against the hull with thickened epoxy to fill in the hull contour, fillet the edges, and fiberglass it permanently in place. It would then provide a solid and secure location for the seacock flange to mount against with the bolts sticking straight out of the hull.

With this solution in mind, I dove right into the project.

First, I laid out each through-hull mounting plate by tracing the seacock mounting flange's features onto the plywood. Then, to ensure I would drill them accurately, I center-punched the centers of the holes for the mounting bolt and for the through-hull itself.

I used a ¾-inch Forstner bit for the countersink and cut into the plywood a little deeper than the thickness of the bolt head. Then I drilled through the rest of the plywood at those locations with a drill sized a little larger than the thread diameter of the mounting bolt. I cut the hole in the center about ⅛ inch larger in diameter than the threads on the through-hull to provide a little leeway during installation on the hull. I dry fitted the seacock with the mounting bolts to make sure everything was going to work and traced around the flange so I could cut the plywood a little oversize. Once I'd cut the plywood, I applied a sealing coat of epoxy. If you attempt this project, be sure to use only high-grade marine plywood and seal it very thoroughly.



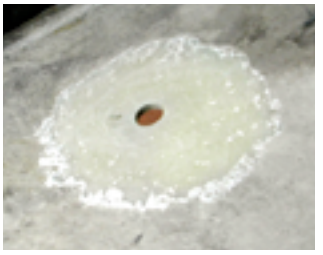
Using the mounting bolts, I mounted the seacock to the plywood mounting plate, placing a plastic grocery bag between them to ensure that I didn't bond the seacock to the plywood should any thickened epoxy seep though the oversize bolt holes. With

> "I dry fitted the seacock with the mounting bolts to make sure everything was going to work."

the mounting bolts tightened (and therefore aligned and in the correct position) I turned the seacock upside down and filled the countersunk bolt-head areas with thickened epoxy.

Once the epoxy had hardened, I disassembled the pieces. When I was done, each new Perko seacock or Groco flange mount now had its own customized plywood mounting plate.

Before installing the mounting plate, I prepared the inside of the hull by sanding it down to the bare fiberglass, wiped the area with acetone, and wetted it out with unthickened epoxy. I plastered the underside of the mounting plate heavily with epoxy thickened to peanut-butter consistency to fill in the contour arc of the hull. Then, with the through-hull holes lined up, I pressed the mounting plate onto the hull while the excess epoxy paste extruded out around the outside of the plate or into the through-hull hole.



I filleted the thickened epoxy that squeezed outward to the edge of the mounting plate and removed what entered into the center hole with a rag over my finger. I was initially concerned about holding the mounting plate in a fixed location over the hole while the epoxy hardened, but it turned out that this was not necessary.

"What once were rather doubtful installations are now solid . . . The result? Peace of mind . . ."

After the fillet had hardened, I fiberglassed the hull and fillet surface around the outside of the mounting plate. I still have plenty of work to do on the interior of the boat, but when I do get around to painting the inside of the hull, I believe these mounts will look very professional.

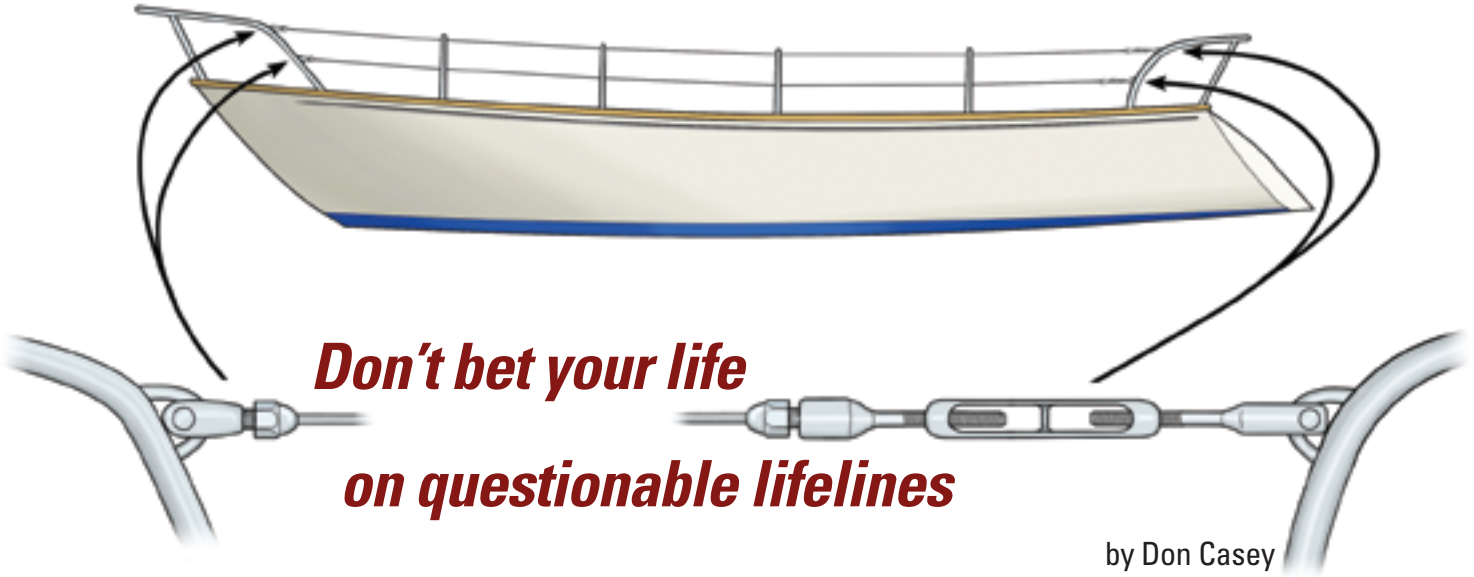
The Perko seacocks, or triangular Groco mounting flanges, can now be installed with sealant under their flanges to permanently mounting plates, while the through-hulls can be installed from the outside according to usual practice.

What once were rather doubtful installations are now solid, and I'm confident the structural loads are no longer being carried by the through-hull sealant.

The result? Peace of mind and a story to tell.

Stephen Thompson is a professional mechanical engineer. Having sailed on inland lakes as a boy, he caught the bug once again at 50 years of age and built a small sailing vessel from scratch. He is now engaged in the complete restoration of a 1970 Hallberg-Rassy Mistral 33 in Houston, Texas.

Maintain your perimeter



Don't bet your life on questionable lifelines

by Don Casey

The following is an excerpt from the second edition of Don Casey's This Old Boat, *published in April of this year by International Marine.*

FRITZ SEEGERS

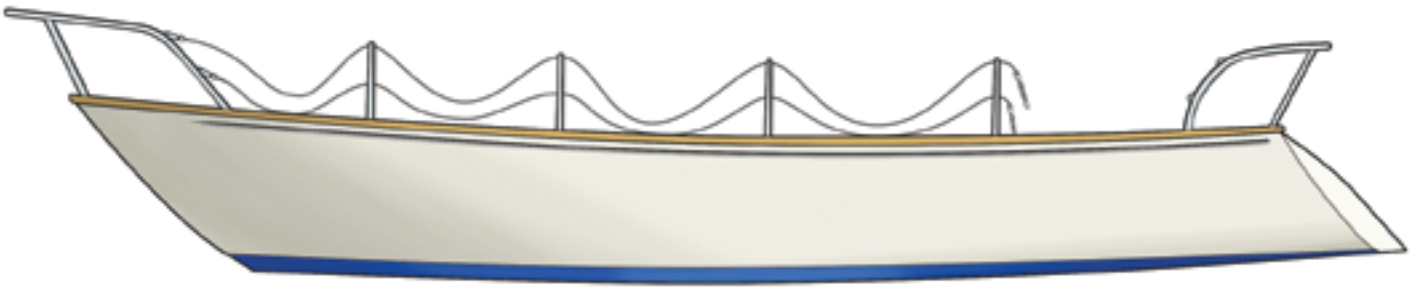
Most old boats have been delivered with lifelines rigged with coated wire. Coated wire is an astonishingly bad idea. Not only does the coating promote corrosion by depriving the stainless steel of essential oxygen, but by design the inevitable corrosion of the wire is hidden from view. The true strength of aging coated lifeline wire is a bad-odds gamble, with the ante being someone's life. That is why they are called lifelines. Just for the record, the Offshore Racing Congress (ORC) bans coated lifelines.

Examine coated lifelines closely. As they age, the vinyl coating hardens and cracks, and soon enough rust appears at the cracks in the vinyl. This instantly condemns the wire — no ifs, ands, or buts. Likewise any kind of bump or lump in the vinyl covering means a tumor of corrosion inside. If you see rust stains anywhere on coated lifelines, even at the ends of the coating, put lifeline replacement at the top of your priority list. Falling overboard is far and away the most serious risk boaters face, and weak lifelines greatly increase your exposure. You are safer without lifelines.

I urge you not to replace old coated lifelines with new coated lifelines. The best wire for lifelines is Type 316 1 x 19 rigging wire. The same outside diameter will deliver more than three times the strength of coated wire, the 316 alloy will resist corrosion for a long time and, if any does occur, it will be immediately visible for evaluation. Given that safety at sea is surely more important than convenience at the dock, I also advocate abandoning gates in favor of a continuous lifeline from bow to stern. In my experience, gates are rarely in the right place anyway. They are like an open manhole in the dark if accidentally left open. They at least double the number of end fittings, thus doubling too the possibility of fitting failure, not to mention doubling the fitting cost. (If safety is your concern, you are paying more to get less.) And as an added benefit, a pair of boat-length runs of rigging wire can be a priceless onboard resource in the event of a rigging failure. On our boat, a ketch, the upper lifelines are the same wire as our main shrouds, and the lower lines are the same as the mizzen shrouds.

> "A pair of boat-length runs of rigging wire can be a priceless onboard resource in the event of a rigging failure."

You have three options for end fittings. There are do-it-yourself hand-crimp terminals available that claim to deliver about 70 percent of the wire strength, but that is on 7 x 7 wire. I fear that the grip of these crimp fittings will have significantly less strength on the smoother surface of 1 x 19 wire. I have only anecdotal data to support this concern, but if you decide on the greater safety of uncoated wire, you should pair this with the greater strength of either machine-swaged or swageless terminals. You will need a rigging shop to install swaged terminals. Several manufacturers offer complete lines of swaged lifeline fittings, including integral pelican hooks, gate eyes, turnbuckles, and threaded



Don recommends stainless-steel lifelines be continuous between bow and stern, at left. Turnbuckles fitted at the after ends can be slackened and unpinned to create a convenient loading gate when needed, above.

adjusters. These make for very attractive lifeline installations and, because the swages live their lives horizontal, internal corrosion is less prevalent.

A do-it-yourself alternative is to terminate the lifelines with swageless terminals, typically fork or toggle jaws at the bow and studs or eyes at the stern joined to turnbuckles. You can lower the cost without much compromise of strength by eliminating the turnbuckles and substituting a multi-purchase lashing of high-modulus, small-diameter line to tension the lifeline and attach it to the stern rail. However, I prefer a turnbuckle because it allows tension to be eased and the clevis pin removed to drop the entire lifeline to deck level between any pair of stanchions, effectively giving you a wide and ideally located boarding or loading gate.

High-modulus (or hi-mod) lashings inevitably lead to the question, why not just replace the wire altogether with high-modulus rope? A ¼-inch double-braid line with a polyester cover for abrasion and UV protection and a high-modulus (Dyneema) core can have a breaking strength exceeding 4,000 pounds, about twice as strong as coated lifeline wire of the same outside diameter. The rope is more expensive than the wire, but only modestly so, and it has the advantage of being much lighter and more comfortable. A thimbled eye splice at each end would be all the "terminals" required, with one end tensioned with a multipurchase lashing. Hi-mod rope lifelines would require you to learn to do a core-to-core splice. Beyond this intellectual demand, the other drawback is that there is no way to tell when or if the strength of the line has been degraded by exposure. I would caution against trusting rope lifelines more than five years old, based on the life of polyester halyards that have the longevity advantage of being vertical rather than horizontally exposed to the sun's rays. By contrast, Type 316 lifelines should last two decades or more.

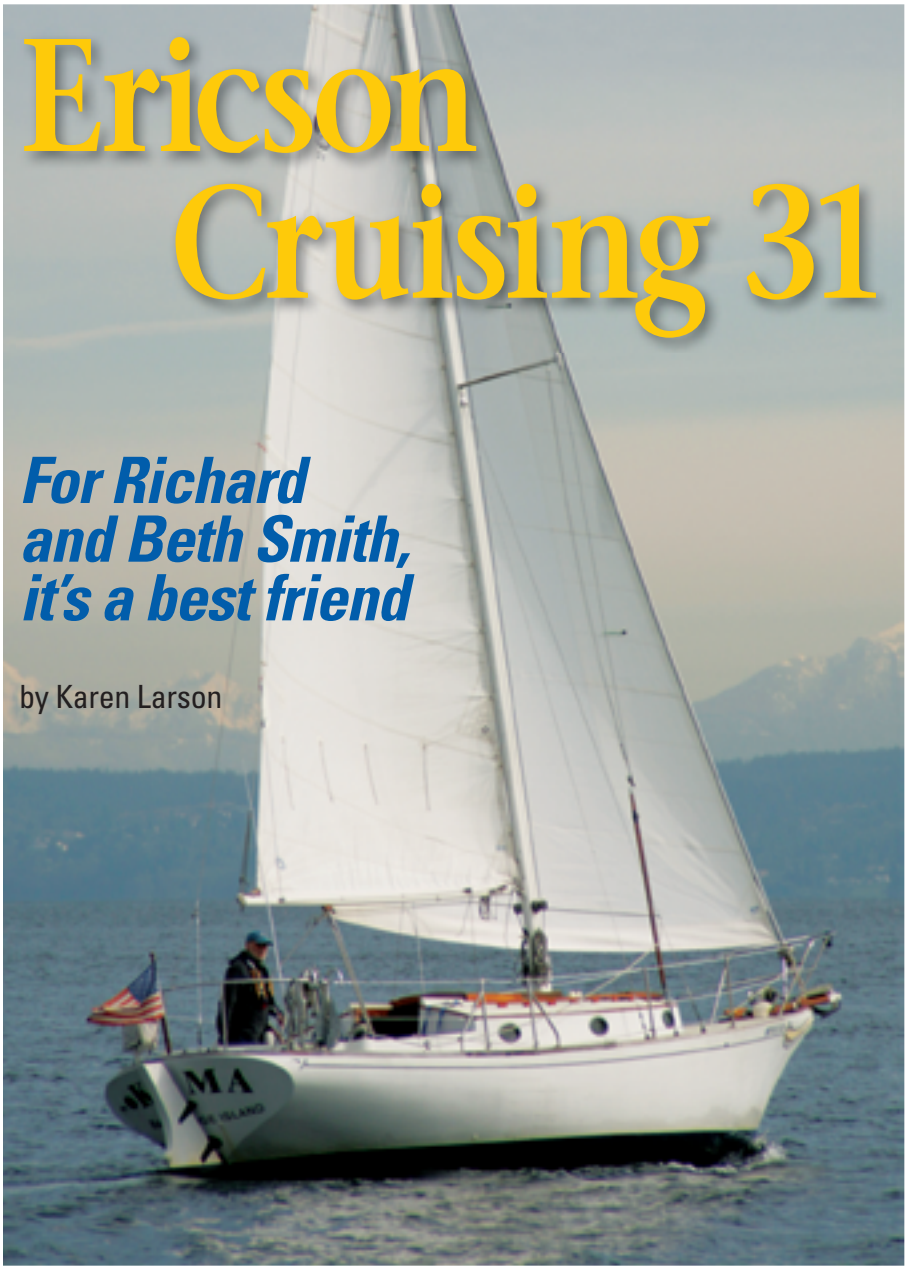
"I would caution against trusting rope lifelines more than five years old. Type 316 lifelines should last two decades or more."

Don Casey became the authority on boat fix-it projects with This Old Boat. *He is the author of a series of books in the International Marine Sailboat Library and of* Dragged Aboard: A Cruising Guide for the Reluctant Mate. *He and his wife, Olga, have been cruising aboard their 1969 Allied Seawind,* Richard Corey, *since 2002.*

Ericson Cruising 31

For Richard and Beth Smith, it's a best friend

by Karen Larson



***Kuma*, a compact Ericson Cruising 31, has taught her owners, Richard and Beth Smith, valuable lessons in leading a compact life.**

The sailboats Richard and Beth Smith have owned have taught them well. *Kuma*, their Ericson Cruising 31, is currently in charge of their education. As an occasional liveaboard over the years, Richard learned what he really needs in life and where and how to stow it. He and Beth applied these lessons to the home they designed and built and to the lifestyle they have chosen. For the past several years, Richard has been a contributing editor with *Good Old Boat*, offering articles penned from his unique perspective.

Architecture and sailboats

In his professional life, Richard studied architecture, practiced architecture, and taught architecture. On the personal side, he was either planning to build a sailboat, building a sailboat, or living aboard a sailboat. These two themes have been the constants throughout Richard's adult life. They merged in the home on Washington's Olympic Peninsula, across Puget Sound from Seattle, where the Smiths have lived for the past 15 years.

Their 900-square-foot home is cozy and complete. It is architecturally beautiful while embodying much of the thinking that goes into the design of a sailboat's cabin.

What Richard and Beth learned from *Kuma* and her sisters is the fine art of minimizing. By overlaying house plans and boat accommodation drawings, Richard is able to show that their home is not much larger than a sailboat although it, fortunately, has square corners and rectangular spaces. It is raised above the hillside so visitors first cross to the front door over a walkway much like a marina pier.

Inside, Richard and Beth have created storage spaces under seats and below hatches in the floor and stairs. They have open ventilation throughout. Cabinets do not have doors. Living spaces are open and loftlike. The dining nook reminds any sailor of a saloon table. The narrow kitchen is very much like a galley. Their bed is built in a nook much like a V-berth, except that it is not shaped in a V and their feet do not share a tight space.

Naturally, they have had to shed possessions so they can fit into a smaller home. The boats and the home have taught them the fine art of economizing: identifying what's important and what is unnecessary baggage. Books are important; guest bedrooms, lots of furniture, stacks of dishes, and entertainment centers are not. A workshop and an artist's studio are important; a garage is not. Being surrounded by nature and beautiful things is important; possessing those beautiful things is not. Being close to your sailboat at the nearby marina is important. Of course.

Small-boat beginnings

Richard's passion for boats began in Michigan with a $50 Snipe he shared with a boyhood friend. They named her *Pride and Joy* and taught themselves to sail. College and a stint in the Navy intervened before Richard bought his next boat, a Moth. "It only holds one," he notes, adding with a knowing smile, "It's like sailing a potato chip."

Life interposed a growing family, the acquisition of a master's degree at the University of Minnesota, and the opportunity to teach architecture in Oregon. Although Oregon sounded like the other end of the world, the move

was a good one. "It was a wonderful place to work. Those were the halcyon days," Richard says. Finally established, he had time to nurture his interest in sailing. "I bought a Tombo, a Japanese sailboat rather like a Snipe. I fixed it up, but the family didn't go for it."

Soon thereafter, Richard discovered a book, Volume VIII of *The Motorboating Series* (now out of print), a compendium primarily of William Atkin's boat plans (including sailboat plans) published by *Motorboating* magazine. "Atkin wrote about each boat in a lyrical way with two to three pages of drawings complete enough to build the boat. The writing could inspire you. This is how I got hooked," Richard says.

Richard fell in love with Atkin's 18-foot Red Onion. "I built everything according to the plans," he says. He trailered this boat to the waters of Puget Sound. "It takes a lot of skill to sail a centerboard boat in these waters," he notes. "It was good training." Starting with her construction, this was perhaps the first of his boats that taught Richard Smith a few things about sailboats and life in general.

The family still didn't take to the sailing. Richard, who had now crossed the line over to "passionate sailor," was soon single.

A first keelboat

A Thunderbird came next and, as Richard recalls, it was "almost a 'proper yacht' with a keel. It was fast. For the first time, I could overtake other boats." A new Ericson 27 followed. "But I couldn't afford it," Richard says.

When given a chance to teach in England, he began a long-distance commute in which he lived on a boat during the summers in the Pacific Northwest and sometimes in homes and sometimes on boats in Liverpool.

Next came a Folkboat in need of love. In retrospect, Richard says, "I kept buying star-crossed boats." He bought this one in Scotland and shipped it home to the Pacific Northwest, but not before doing an extensive refit and learning a few more lessons from a good old boat. The two-cylinder Volvo gas engine was "a bomb waiting to go off," he recalls.

A student in Liverpool connected Richard with the Fairey Atalanta, designed by Uffa Fox in collaboration with Fairey Aviation. Richard wrote about that boat in our May 2006 issue. The student's father had been swept to his death from the deck of this boat by a tidal bore. The family had stored it in a garage for several years until Richard rescued and restored it. He sailed it in the area and eventually shipped it home to the Pacific Northwest. The Atalanta was a very unusual boat, designed as a lifeboat that could be dropped from an airplane to stranded air crew. The compromises its design necessitated soon began to bother Richard. "It was slow. Boats were passing me again. I still wanted a 'proper yacht,'" he says.

A venture into steel

Richard was ready for a new lesson from a boat. "I got it into my mind to build a steel boat. I had worked in wood and fiberglass," he says. In England once more, he built an Alan Pape 30-foot cutter design that he would name *Coot*. He was preparing for the great grand adventure: he hoped to sail this boat home to the Pacific Northwest, rather than sending it aboard a ship. He was the first to build this untested Pape design.

"I figured 30 feet was the smallest boat you could take anywhere and it could take anything. I learned to weld. Building a steel boat takes a lot of skills that I didn't have. I approached it like building a wooden boat out of steel."

"Richard did not go home during the summers. He did not attend friends' weddings. He worked on that boat."

It took three years to build *Coot*. Richard says he was a man possessed. He did not go home to the Pacific Northwest during the summers. He did not attend friends' weddings. He worked on that boat. When she was completed, Richard sailed her in the Irish Sea and learned some truths about her handling. "She had a horrible lee helm," he says.

The anchor sprit Richard had installed complements the clipper bow and molded trailboards that give the Ericson Cruising 31 its characteristic appearance.

Ericson Yachts gave the interior of the Cruising 31 a cozy and classic feeling. It has abundant teak paneling and trim and a white overhead with wooden beams and grabrails. The solid-fuel heating stove is a season stretcher in *Kuma*'s home waters.

"It couldn't be corrected." *Coot* did not travel to the U.S. on her own bottom or on the deck of a ship. He sold her in England where she was born. He learned many lessons with that one.

In 1988, he was living aboard *Coot* when he met Beth, a Brit and a non-sailor. This woman, however, embraced the sailing lifestyle. He describes her first night "at his place" in the marina: "I wanted to show her the positive side of life aboard. But it was blowing 40 knots. Halyards were clanging everywhere. It was absolutely wild in the marina."

Life in small spaces

Beth didn't know any better and still loves the melody made by loose halyards. She adapted to life in small spaces and embraced the outdoor lifestyle. She was willing to follow her man to the ends of the earth, it seemed. That was important because Richard was soon teaching in Malaysia. They owned an Ericson 26, followed by an Ericson 29. They built their current home, the one heavily influenced by sailboat interiors, while living aboard the 29.

While they were completing the house, Richard received an offer to teach in Hong Kong. They hurriedly finished the house so they could rent it out during their two-year absence. There was just one more piece of unfinished business: buying a proper yacht that would be waiting for them while they were gone. "We had to get to Hong Kong. We were running out of time. But I had to have a good boat to come back to," Richard says. A sympathetic broker understood the dilemma.

Time was so short that the broker delivered the boat to her slip for them. They had already left. Her name would be *Kuma*, the word for bear in Japanese. She was an Ericson Cruising 31, designed by Bruce King.

In her charming British lilt, Beth says of this choice in boats, "Richard, being an architect, wanted something a little bit different. It had to be visual. It is, perhaps, a bit eclectic."

"And," Richard adds, "It had to be available within a certain price range. We could have sailed her right then, if we'd been in the area, but there were systems that needed to be upgraded and some equipment that needed to be removed."

A refit via fax

The Smiths liked her looks. The sale was made. They were on their way. Then, while they were gone, some of the modifications were made on their behalf with communications moving halfway around the world by fax.

"We had an anchor sprit added and the boat was rewired." Richard says. "We also revised the propane-tank storage so we could turn off bottle valves from the galley. We added a bridge deck of sorts with bucket storage below. I had a new main built.

"The basic idea in sailing this boat is simplicity. The more systems and equipment I can understand myself, the better." Richard later removed the rusty water heater and replaced the pressure water function with a foot pump. He replaced the Webasto diesel heater with a wood stove. He removed the boom vang. He and Beth sail with the simplest of navigation instruments, preferring to keep their lookout and do all their chart plotting on paper in the cockpit using basic techniques.

"I don't fear instruments," Richard says. "But I have strong feelings about what's appropriate aboard. It is true that, since I haven't mastered the electronics manuals, I don't want to have my face in the instrument — pushing buttons and twisting knobs — when I should be looking around sailing."

The number of instruments aboard is not the only aspect that Richard and Beth have simplified. They removed the quarter-berth cushion and turned that space into a stowage area. "Berths were expendable," Richard says. "We had six berths for two people." One year, they removed the dodger and realized they liked sailing better without one.

Making the right choices

"What's really important," he adds, "is getting your boat right for how you sail, who you're going to be sailing with, and where you will be sailing most of the time." Perhaps that was the chief lesson learned. After several false starts, Richard has at last acquired his "proper yacht" and the first mate with whom to sail it.

"It's good for crossing the straits (Juan de Fuca and Georgia, near Seattle). And the underbody is slippery," he says. "The keel design is more modern than you'd expect with her traditional lines. She's a fast and reasonably close-winded boat."

Beth adds simply, "While you're rowing around her, you're apt to say, 'That's a lovely boat.'"

Their proper yacht came with one more advantage they hadn't expected: an active owners' group led by Glyn Judson. Glyn has found all but two of the 69 Ericson 31s. Just to confuse things, they are numbered through 70 because there was no hull number 13.

On his website, Glyn quotes Bruce King's son, Marty, who says the 31 design was inspired by the Ericson Cruising 36: "Ericson wanted a smaller version of the Cruising 36." Glyn notes that this Bruce King design was built primarily by Ericson Yachts. Squadron Yachts bought the molds from Ericson and laid up four more hulls.

The first two hulls were completed, and are known as Liberty 31s. The last two were never completed, and languished for years until they were purchased by George Kramer of Waukegan, Illinois. George died in 2002, before completing work on the first of these. The second had an inspired end just prior to being cut up and sent to a landfill. Glyn flew to Illinois and, with permission, sawed off six feet of the bow and the chunk of the transom containing the final hull number. He took these pieces home to California.

Evolving to the Independence

The boats built by Ericson underwent an evolution from a Mark I to a Mark II version, during which its name changed from the Cruising 31 to the Independence 31.

Before creating the Mark II version, the company surveyed the owners of Cruising 31s, asking them what they would like to see in a new boat, and incorporated a number of their suggestions in the Independence 31. Most of the first 25 boats (the Cruising 31) were sloops. A cutter rig was introduced toward the end of that batch and became standard with the Independence, although, just to keep it complicated for those of us looking for simple identifying features, eight of these were built as sloops at the request of their original owners.

Other changes at the Mark II stage involved cabin layout and amenities, cockpit lockers, and portlights. The complete evolution of the Ericson 31 (so far as it is known) is available at Glyn's Ericson 31 website: <http://e31.no-ip.com/history.asp>.

"Glyn is the first person to talk to if you want to buy or sell one of these boats," Richard says. "He is the guru for these boatowners. He has visited 45 of the hulls he's located, even one that's in Ireland."

Richard continues: "Glyn's database of owners works as a forum for anyone wanting to modify one of these boats. He publishes "Tiny Tips," which are very helpful in all manner of ways for the Ericson Cruising and Independence fleets. These cover such items as installing spice racks, lee cloths, better milk storage, and freeing up stubborn holding-tank deck fills. I've consulted Glyn about bilge pumps, best rpm settings, propeller sizing, and other project work."

"When sailing, Beth keeps a sketchbook nearby. 'I sketch all the time,' she says. 'It's sort of a log of our sailing.'"

Cruising on *Kuma*

These days, Richard and Beth spend approximately three or four weeks cruising each year. Richard goes out alone for shorter sails when Beth is working. She's an artist with a greeting card business, art shows, classes to teach, and an active website <http://www.elizabethsmithprints.com>.

When sailing, Beth keeps a sketchbook nearby. "I sketch all the time," she says. "It's sort of a log of our sailing."

Kuma has become the place they go to for relaxation. If the wind is howling, they stay put whenever possible, preferring to enjoy the world around them in a quiet anchorage than to head home with a reef or two tucked in and clothed head to foot in foul weather gear.

"Throughout my life," Richard says, "boats have been very important. Like a dog, a boat can be your best friend." He pauses and then takes this one step further. "You may lose your friends. No matter where you live, what your work, or who your crew may be, a sailboat will provide the steady keel beneath you."

Karen Larson and her husband, Jerry Powlas, the founders of Good Old Boat, *have been sailing their C&C 30 on Lake Superior for nearly 20 years. They also have a C&C Mega 30 project boat in the backyard. With it they are learning some important DIY truths and don't welcome questions about how soon it will be ready.*

As on many boats this size, *Kuma*'s quarter berth has become a storage area, left, while the forepeak offers a restful haven.

Three true bluewater voyagers

Comparing the Ericson Cruising 31 with two close rivals

Ericson Cruising 31 | Columbia 9.6 | Seafarer 31 Mk II

by Ted Brewer

First, I have to admit that I intensely dislike the appearance of trailboards on a sailing yacht with a bald (no bowsprit) clipper bow. I see no practical or aesthetic reason for them on such a boat. To me, they seem like an excess of jewelry around the lovely neck of a beautiful woman.

That said, the Ericson Cruising 31 appears to be a solid design with a great deal going for it as a coastal family cruiser and true bluewater voyager. I always try to avoid comparing apples to oranges and, this time, I was particularly lucky to find two very similar yachts to put up against the Ericson: the Columbia 9.6 and the Seafarer 31 Mk II. All three are husky fin-keel boats with many similarities. It is obvious that their designers intended them to be suitable for family cruising as well as for serious coastal and offshore sailing.

The Seafarer is a slightly older design and, perhaps for that reason, has a few inches less beam than the other two. She makes up for it, though, with a foot longer waterline, giving her the lowest displacement/LWL and beam/LWL ratios and, perhaps, gaining a more slippery hull as a result. With her greater sail area and higher ballast ratio, she is probably the fastest of the three around the buoys, but that is not what these boats are all about, at least in today's sailing world.

Look carefully at the displacement ratio, ballast ratio, capsize number, and comfort ratio for each of the three craft and you will see that, while they are only moderate-sized yachts, they are also very capable bluewater cruisers. Out of curiosity, I averaged the figures for seven other 30 and 31 footers that I have reviewed for these pages and the results were rather enlightening, as well as a bit surprising. These seven boats were the Tanzer 31, Cal 31, Hunter 31, Islander 30, Newport 30, C&C 30, and Tartan 3000.

Their average displacement was 8,530 pounds with a displacement/LWL ratio of 238. The average ballast was 3,483 pounds (41 percent). The capsize number averaged 2.01. The comfort ratio was only 21.9. Obviously these seven boats would be much bouncier in a seaway, have less stability, and be much slower to right if capsized. I thought they might have considerably greater beam than our heavyweights to make up for their light displacement and ballast with form stability. To my surprise, I found that their average beam was only 10 feet 3¾ inches. They are not in the same league as our three huskies when it comes to stability, offshore capability, comfort, and general seaworthiness. Those seven were designed for a very different purpose.

Offshore arrangements

Having commended our three boats for their offshore capability, I looked at their accommodation plans for offshore suitability. The Columbia is the only one of the three with a keel-stepped mast and, for that reason alone, would get my nod. On the other hand, her head is tight and I cannot visualize leaning my portly body across the WC to get at the washbasin nor leaning across a hot stove to get at the cold drinks. The Ericson layout is generally workable with a good head and galley but no sign of a chart table. The Seafarer appears to have a good chart table and galley but an athwartship head that cuts off access to, or from, the forward cabin when in use.

Bear in mind that I am looking at very small-scale sketches and, of course, individual needs differ. If you are in the market for a small ocean-cruising yacht, you must judge the layout for yourself. But I will say that, given proper gear and good condition, any one of the three will take experienced skippers wherever they want to sail — in safety and comfort — and bring them home again.

	Ericson Cruising 31	Columbia 9.6	Seafarer 31 Mk II
LOA	30' 11"	31' 6"	31' 0"
LWL	23' 11"	23' 9"	25' 1"
Beam	10' 5"	10' 2"	9' 9"
Draft	4' 11"	5' 6"	5' 3"
Disp.	11,400 lb	10,500 lb	10,300 lb
Ballast	4,500 lb	4,580 lb	4,850 lb
LOA/LWL	1.30	1.33	1.24
Beam/LWL	0.44	0.43	0.39
Disp./LWL	372	350	291
Bal./Disp.	0.40	0.44	0.47
Sail area	459 sq ft	457 sq ft	483 sq ft
SA/Disp.	14.5	15.2	16.3
Capsize no.	1.84	1.86	1.80
Comfort ratio	29.64	28.15	28.4
Year introduced	1976	1978	1974
Designer	Bruce King	Alan Pane	McCurdy & Rhodes

Ted Brewer is a contributing editor with Good Old Boat. *He is one of North America's best-known yacht designers and has designed scores of good old boats.*

A triangular romance

Two classic beauties capture a sailor's heart

by Andy Schell

When I open a sailing magazine, I always start flipping through from the back, where all the brokerage listings are. So, on one particular morning, my pattern was no different.

My girlfriend, Mia, and I had sailed to Fell's Point from Annapolis on my Dad's 1986 Wauquiez Hood 38, a fine boat that I'd gotten to know well while living aboard for more than two years. I was perched at the nav table with my coffee. The radio was playing music in the background and I was enjoying the morning. I turned to a classified ad: "1966 Allied Seabreeze yawl, fully restored. Lying Oxford." I was not in the market for a sailboat. I was living comfortably on Dad's boat. I could sail her when I pleased. I was quite content. But I kept returning to re-read this ad.

Mia is Swedish. Mia is tall. And Mia is beautiful. We met during the winter of 2006, backpacking in New Zealand. An unlikely three-week romance turned into a real relationship when she flew halfway around the world from New Zealand to Annapolis via Sweden. Since falling in love with Mia, I've spent a dark winter in Scandinavia and a sweltering summer in the Caribbean, but I've always returned to Annapolis.

I'd grown fond of two-masted boats. Most of my Dad's previous boats had been ketches, and I'd been crewing on the schooner *Woodwind* for the past two years. When I saw the ad for the Seabreeze, I was excited not only at the idea of a yawl, but also because it was an Allied. When I was 9 years old, my parents plucked my sister and me from the structure of elementary school and moved us onto our Allied Princess, a 36-foot ketch, bound for the Bahamas and an education in adventure. I learned to love sailing and was instilled with a wanderlust that has grown nearly out of control since I graduated from college a few years ago.

Rendezvous with a new love

Mia and I sailed Dad's boat back to Annapolis, spinnaker flying. A few days later, Dad drove down the Eastern Shore from Pennsylvania and Mia and I drove across the Bay Bridge to meet him in Oxford. It was a gorgeous spring day with a slight chill in the air. As we drove down the eastern side of the bridge, I told Mia I had a strange, good feeling about this boat . . . despite my insistence that this trip was just for fun.

The boat was at Bachelor's Point Marina, in the yard. It was immediately apparent that this place does not allow ugly boats. Hinckleys, Masons, and Bristols abounded. Every boat was impeccable. As we rounded the bend, I caught a glimpse of the shiny white hull with the dark maroon bootstripe. Her bow curved gracefully upward. I was overwhelmed with excitement; my heart was pounding just at the sight of her, and she didn't even have her masts stepped. I told Mia this was going to be our boat.

The owner, a Mr. Weems (yes, *that Weems*, of Weems & Plath) soon arrived and I tried to play it cool. He introduced himself simply as Ben. I complimented him on his boat. She was immaculate, absolutely gorgeous in every respect. Her graceful sheer and elegant overhangs cast a spell on me. Her hull simply looked like a real boat is supposed to. Ben was immensely proud of her, going so far as to show me how he had countersunk all the nail holes in the teak cockpit grate. On deck, the bronze stemhead fitting and shiny stainless-steel cowl vents had me completely head over heels. I knew I was going to own that boat.

We parted ways with Ben that afternoon, my head still spinning. A strange series of coincidences and

Serendipity had a hand in bringing together the trio of Andy Schell, his fiancee, Mia, and the Allied Seabreeze yawl, *Arcturus*, on facing page. Mia takes the helm as they sail *Arcturus* on her delivery voyage to Annapolis, at right. On a romping broad reach, *Arcturus* touched 8.5 knots surging down waves on, says Andy, "the best sail of my career." As one of the last steps in a multi-year restoration project, *Arcturus*' former owner, Ben Weems, helps Andy bend on the mainsail in preparation for the delivery sail to Annapolis from Oxford, Maryland, below left. *Arcturus* crosses the starting line of the 2008 Good Old Boat Regatta under full sail.

GAIL SCHELL

ANDY SCHELL

serendipitous similarities was ever so quickly leading me down the slippery slope toward boat ownership. I was 24 years old, the same age Dad had been when he bought his first boat. His story is eerily similar. He'd been boat shopping with Mom when they saw an ad for a classic Rhodes-designed Chesapeake 32 in Georgetown, on the Northern Chesapeake. They too fell for the boat the second they saw it, when they caught their first glimpse of it from atop the Georgetown bridge. In that instant, they knew they'd own the boat, no matter what.

I had told myself that unless the perfect boat came along, in the perfect situation, and at an irresistible price, I was not going to even think about buying a boat, yet suddenly I'd stumbled upon the most beautiful boat I'd ever seen, a boat on my eclectic short-list of boats I'd consider. This list included the rugged but tiny Contessa 32, a fast IOR-era Peterson 34, the European-styled Contest 34, and my Dad's Wauquiez Hood 38.

So here was a breathtaking Seabreeze that had been lovingly restored by a rather famous owner . . . one who insisted on keeping a broker out of the deal, one who would become a close friend throughout the process, and one with whom I remain in touch today. And, of course, it was an Allied, manufactured by the builder of our beloved *Sojourner*, the boat I grew up on, earned my sea legs on, and which had left behind the fondest of memories.

That evening I called Ben. We chatted about sailing and about boats. He mentioned to me the intangible notion about how you simply have to love your boat . . . have to have that urge to turn around and admire her as you walk away. That, we decided, was the most important characteristic of any boat. Without it, you may as well forget it.

The next few weeks were strange. I was eager to get a deposit to Ben. I knew he had other people coming to see the boat, and anyone with half a brain could see what a remarkable boat she was. I didn't want to lose her. Our deal was refreshingly simple; we trusted each other and relied on a "gentlemen's agreement." In my hurry, I called Ben from aboard *Woodwind* and hastily arranged to meet him after work that night. Ironically, we were sailing in Weems Creek on the Severn and ran hard aground at the mouth.

I couldn't believe it. All I wanted to do was get back to the dock and scurry over to Oxford to secure my boat but here we were with *Woodwind* hard aground in Ben Weems' namesake creek. After 10 excruciating minutes, we pivoted off. Our passengers all cheered because they'd learned of my scheme and were rooting for me to get going. They could see the excitement in my eyes. As soon as the last dockline was secured, I sped off to Oxford.

En route, Mia wrote out a simple sales agreement. I had a personal check for the deposit. We met Ben in the parking lot of a grocery store at nearly 10 p.m., exchanged pleasantries, and were off again in no time. I had my boat . . . at least on paper.

Anxious anticipation

Three weeks after I'd first seen her, the Seabreeze was still in the yard at Bachelor's Point and still without her masts. Ben wanted to complete work that he had begun, launch her, and at least get one look at his beautiful boat before some kid sailed away with her. I was headed for the Caribbean in two weeks to skipper a catamaran for the summer and wanted to get the boat back to Annapolis and sail her for a

MIA KARLSSON

BOB DE YOUNG

GAIL SCHELL

"The lady fully dressed in her best attire," as her former owner, Ben Weems, would say, *Arcturus* sails downwind on the Chesapeake, making nearly 6 knots in as much breeze.

weekend before I had to leave. I was in a hurry, as usual, but Ben wanted to finish his boat.

We didn't sign the closing papers until the boat was launched. I met Ben again, this time at his bank, with the remaining balance. I hadn't yet seen her in the water; I hadn't even seen her with her masts stepped. We drove down to the marina. I was nearly bursting with excitement. I had just bought a boat I hadn't yet seen rigged and was about to sail her back to Annapolis. My Dad and Mia were there for the return trip. Ben showed us to the slip. When I saw her, floating elegantly with her full rig, I knew I'd made the right decision. She was more beautiful than I had imagined.

Ben helped us bend on the mainsail and we rigged the dodger. His project was finally complete. We posed for photos on the dock before casting off. I can only imagine the pride Ben felt that day to see his boat completed. It must have been difficult to see us sail away, but I think he felt he'd found the right owner. I'm a USCG-licensed Master, I'd be living on the boat and sailing her regularly, and I had big plans for future cruising. That, to him, was what this boat needed; he had certainly fitted her out properly.

I steered her carefully out of the marina, a ridiculous grin plastered on my face as we motored away from Oxford. I was giddy, the captain of my own boat at the helm for the first time. Dad must have known the feeling.

A name with significance

In Auckland, New Zealand, I'd been invited to sail on a 1930 John Alden schooner named *Arcturus*. The captain, a died-in-the-wool Kiwi, had the boat in absolutely stunning condition inside and out. I was extremely pleased with myself that I could answer, "Yes," when he asked if I could rig the fisherman sail. My love of classic boats and my schooner experience was paying off on the other side of the world. There were several varieties of New Zealand beer on board that day and we enjoyed a magical sail under full canvas (we even set the gennaker) in one of the world's most beautiful and historic cruising grounds. When I took *Arcturus*' wheel, a broad smile spread across my face.

Two days later, I met Mia. I knew then, if we ever bought a boat together, we would name her *Arcturus*.

A rollicking first sail

Neptune was on our side that day. As we trimmed the mizzen, a fine southerly breeze kicked up and we were soon sailing fast, close-hauled, and headed out of the Choptank River. Once clear of the lighthouse, we eased the sheets and steered north. The breeze freshened on cue and, with all sails flying in an unusually large following sea, we ran north on the finest broad reach I've ever experienced. The Seabreeze has very low freeboard aft. Each wave that rolled up astern tried to jump aboard before whisking us down its face at speeds up to 8 knots. *Arcturus* was as surefooted as a mountain goat. When Mia took the helm, I scurried forward, perched myself on the bow pulpit and simply gazed aft at my boat flying with the breeze. She whispered to me with every surge of speed, "Yes, I am a fine boat, a real boat. You made the right decision."

We sailed as far as we could into Annapolis harbor, skirted some moored boats, and dropped the sails just shy of the Eastport drawbridge. We coaxed the engine back to life long enough to ease into our slip at Sarles Boatyard, right next to Dad's boat. As I walked down the dock that afternoon, I stopped and turned to admire my new boat. I was smitten. Ben was right.

"She whispered to me with every surge of speed, 'Yes, I am a fine boat, a real boat. You made the right decision.'"

Andy Schell is a professional captain and freelance writer. He lives aboard Arcturus *in Annapolis, Maryland, where he runs sail-training and navigation workshops with his father, also a captain. Next spring, he and his fiancée, Mia, plan to sail* Arcturus *to Sweden, Mia's home country. Contact Andy at <http://www.fathersonsailing.com>.*

GAIL SCHELL

Andy and Mia motor *Arcturus* out of Mill Creek on Chesapeake Bay on their way to sail her in the 2008 Good Old Boat Regatta.

Sailing through school

Building a boat was an education that paid for itself

by Graham Watt

We hear a lot these days about student loans and young people working for years in humdrum jobs to clear the heavy personal debt needed to pay for a university education. I've heard of former students who've almost had to forgo buying iPod Nanos, plasma TVs, and magnesium rims for their Civics just to make ends meet. Some are even forced to continue eating Kraft dinners.

This is unacceptable and, for those young people leaving high school and thinking about attending a university, I offer an alternative option I myself took several years ago. Your parents will hit the roof when they hear it, but they've done that before, as when you came home with the Celtic tattoo and a lip ring.

So here goes: for the same amount of time and money you'll spend on a college education, you can build yourself an incredibly beautiful and useful sailboat. I guarantee you'll learn more about life, yourself, and the nature of stuff. The bigger the boat, the easier it is to build. Little boats need precision. Big boats just need energy.

Building a large sailboat by yourself has several advantages over going to university. It'll take you some serious construction time . . . about as much as you'd spend deconstructing things and being terminally bored in an undergraduate program. And there's a very positive side to the boatbuilding option: you're putting together something beautiful, rather than taking apart something ugly.

Besides, after you finish, you can live on the boat and sail away in it. Then, after several adventures involving beautiful women, you can sell it for much more than you put into it. Try doing that with a diploma, unless of course it's in psychiatry or advanced plumbing.

Tools for life

So forget about the skill set. What you really need is a Skilsaw. As far as learning about life and becoming a serious thinker goes, the boatbuilding experience is better here too. Everything you do physically when building a boat you must also do mentally. You'll quickly learn to plan, reflect, and especially not to drill a 5-inch hole in the hull unless you're damn sure it's in the right place.

Let's look at some comparisons. For one, the examinations are much tougher for the sailboat than for any academic work. The sea is a hard marker. A 30-foot wave tearing off your deckhouse is more devastating than a note from your prof saying you should rework the essay on "Heretical Tendencies of Disparate Families Living Near Organized Places of Worship."

There's an artistic side to boatbuilding too. Some yacht designers are pure artists with an ability to match functionality with grace under pressure. Remember, a Stradivarius violin, looking so fragile and vulnerable, can be put through the rigors of Beethoven's Force 12 storms with little damage. (Remember, too, that boats are like songs, so build one you can stand to have in your head a long, long time.)

Learn without effort

When you opt for the boatbuilding education, you'll receive several free bonus courses. You won't find free courses at the university, I assure you. With the boatbuilding bonus courses you'll hardly feel you're learning. Even before the sailboat is completed, you'll get relatively painless lessons in geography and some nifty new vocabulary words like metacenter and phrases like ballast/displacement ratio.

You'll also receive, absolutely free, a slightly more painful course in how to use a screwdriver while inverted in a space resembling a horizontal Johnny-on-the-Spot. You'll learn about exotherms and how the potential explosive effect of too much catalyzed resin in the acetone bucket can quickly get you off the All-Bran and possibly off the boat. When you build a big boat, you actually

ILLUSTRATIONS BY TOM PAYNE

get into it; you're not just faking that you're into it, as you might when writing an essay on Cardinal Newman's *Apologia*.

And, of course, after you've finished the boat, the learning will go on. You'll enjoy a free course in natural conflict resolution by virtue of the sailboat's habitat at the interface between atmosphere and hydrosphere, boisterous personalities frequently at odds with one another and quite willing to tear you apart to prove a point.

So why go into debt for $50,000 learning things at university you'll never use, like finding out why Hegel was such a dork or that Fidel Castro isn't a hedge fund, when you can go into debt borrowing $50,000 to buy stuff in order to build a boat? It's a no-brainer. You'll sail the boat for years, hopefully with a wonderful partner you'll meet who thinks you're absolutely terrific, partially for having such a fine boat and maybe because you have calluses and perhaps a missing finger or two. Then you'll sell the boat for at least $150,000. Trust me, I did this myself, except for the missing fingers.

Forty years ago, I opted to build a sailboat rather than go to college I still think it was a good move. A 36-year-old university degree has very little power to impress. But the boat — that today is sitting pretty in tiny Luperon Harbour in the Dominican Republic under Dutch registry — still turns heads. And, while I don't own it anymore, I'm still learning from it. I've found that something you build yourself remains yours no matter where it goes.

Graham Watt is retired from the advertising industry. He took 10 years to build Canada Goose*, an L. Francis Herreshoff Marco Polo schooner, in fiberglass from a male mold he built in 1969.* Canada Goose *set sail from Montreal for Murder Point, Nova Scotia, in 1978.*

Table on demand

A handy extra work surface stows in a jiffy

by Connie McBride

Our 34-foot Creekmore, *Eurisko*, has a fixed dinette that's always in use. When we're not eating at it, our sons do their schoolwork there, and it serves as additional counter space throughout the day. The newest hobby of my husband, Dave, is jewelry-making. For this, he needs a stable flat surface, but he knew the dinette table was rarely available. What he needed was his own work area. Not wanting to alter *Eurisko*'s interior permanently, he built a sturdy yet easily removable table. His design can be altered to accommodate most boats.

Dave's temporary table hangs from the bookcase fiddle that runs along the top of the saloon settee back. The first step in designing it was to get an idea of the size for the supports. He didn't have to replicate the shape of the fiddle exactly, so he simply formed a C with his index finger behind the fiddle and his thumb on the settee back. He transferred this outline to ¼-inch plywood, then cut out two identical supports. These pieces are 12 inches long and 4 inches wide at the bottom and, so they would rest flush against the settee back, Dave cut notches in them to allow for the trim around the locker doors.

Next, Dave cut a 28 x 14-inch tabletop from a 1-inch thick mahogany board. To attach the supports, he drilled a hole on either side of this board 2½ inches from the end. In the supports themselves, he drilled holes in three locations, since he was not yet sure of the most comfortable height for the table.

Because Dave wanted to be able to fold the table upward and out of the way when it's not in use, he made sure the holes in the support were placed so the edge of the table would clear the settee back as it pivoted. He attached the

When four people live on a 34-foot sailboat, table and counter surfaces are at a premium. The McBrides created an extra table surface in a way that could be copied on many boats.

supports to the table with screws, placing large washers under their heads.

Supported from above

The inboard end of the table is suspended from the overhead. Dave drilled two vertical holes in the inboard corners of the tabletop, passed a line through each of them, and knotted the lines underneath. He tied the lines around the grabrail in the overhead, using rolling hitches so he could adjust them. Once he'd determined the optimal height, he secured the lines with a clip to make connecting them easier. With the table supported at both ends, Dave noticed a wiggle, which he eliminated by screwing a dowel between the two outboard supports.

If you use this idea in your own boat, you'll have to make a decision about fiddles: if you want them at all, on how many sides, and of what material. If you plan to eat at the table, you may want fiddles on all sides; for playing cards, none at all; for our purposes (jewelry-making and writing), we have fiddles on all but one side, so Dave can rest his arms on it.

Screwing 2-inch webbing to the edges as fiddles is another option. If you choose that route, you'll want to leave the edges of your table square. For ours, Dave rounded the corners and edges and built teak fiddles.

When our new table is not being used, we can pivot it to rest flat against the bookshelf without having to disconnect the inboard end. To secure it in this position, Dave places a dowel into a hole drilled through the support and into the raised table. To completely remove the table, we unclip it from the grabrail and lift it off the bookcase fiddle. The supports fold down to rest on the table.

Dave can sit at his table with his back against the bulkhead. He left off the fiddle on the side of the table he faces so he can rest his arms on it as he works. When he's done, the table folds away against the settee back.

Dave completed this project from materials at hand, so our choices were limited. He would have liked to have made the supports out of hardwood, but they would have to be laminated to achieve the strength necessary in two directions. High-density polyethylene, acrylic, and polycarbonate might have been other possibilities. Likewise, the table could have been made of any material, though we prefer the look and feel of wood.

This temporary table is the perfect solution to our lack of adequate workspace. It is multi-functional, folds up out of the way, and can be quickly removed entirely. I have come to like it so much, Dave may have to build one for himself.

Connie McBride, her husband, Dave, and their sons have been living and exploring aboard their 34-foot Creekmore, Eurisko, *for 8 years. After several years in the Eastern Caribbean, they are currently in Panama wondering what is next.*

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Sail or Not T-shirt by Tom Payne
100% cotton, high-quality fabric in a color we call Prairie Dust.
Sizes: S, M, L, XL, XXL
$20.00

Wind T-shirt by Tom Payne
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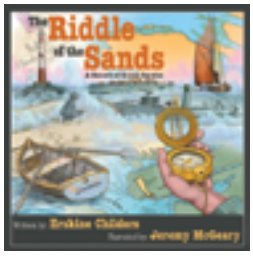

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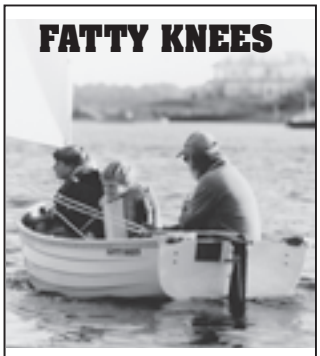

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Recently, we discovered the Dragon V2 from CallPod. This is a Bluetooth headset that allows hands-free remote use of your cell phone. The neat thing about this product is that a pair of these headsets can function as walkie-talkies with full duplex — no intermediary cell-phone tower needed. (Full duplex allows both users to talk and listen simultaneously.) The Dragon V2 has a range of 328 feet (100 meters) — so it will work on any good old boat — and is relatively inexpensive. The sound quality is OK to good, depending on how much background noise the device has to compete with.

The suggested retail price is $99.95 for a kit that includes AC/DC and USB chargers. You will save about 40 percent if you purchase them (you need a pair) at Amazon.com. Look for complete specifications for the Dragon V2 at <http://www.CallPod.com>.

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These tiny rechargeable lights cost $19.95 and can be found at <http://www.superbrightleds.com/specs/spotlight.html>.

To be featured on this page, items must be new products. If you would like to have your product featured here, please send an email to Michael Facius, michael@goodoldboat.com, or call him at 612-605-8319. By the way, readers, if you contact a marine supplier mentioned here or elsewhere in our magazine, please remember to tell the folks there that *Good Old Boat* sent you.

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A man, a boat, a squall

That first storm builds a bond, even on the hard

by Todd Townsend

Ominous clouds spread across the horizon. I hoped they might miss me. But the flags crackling stiffly straight off the pole told a different story: the clouds were headed right over me. I took some consolation in the thought that it had been a beautiful day and I had done lots of work.

I sat under the cockpit awning eating a supper of baked beans with ham together with the last of a nice loaf of bread I'd bought in town. There were some pretzels in a box and a San Pellegrino water left from the last delivery I made.

My boat is a Cape Dory 28. Her buying price was in my range because she had sat in the back of the boatyard for at least two seasons without much protection. I have almost felt her tremble with anticipation as I've worked on her during the last couple of years. She doesn't know it yet, but we have big plans.

The dark clouds danced in a slow menacing line as they rolled toward me, lightning illuminating the nooks and crevices in the roiling mass. Across the way, past the far group of boats, the trees began to rustle. The maples flashed silver, then green, then silver again as their leaves turned up in the wind. I could hear the rain. It wouldn't be long in coming now.

> "The storm shut out the sunset and hastened dusk through to dark."

A quick burst of wind knocked my mostly empty bowl down by the scuppers. The pretzel box spun around and the workday dust blew across my face and swirled around the cockpit. I took refuge below, grabbing the supper stuff as I went.

Strumming in lantern light

The rain hit like a load of gravel. The awning kept it out of the companionway but it splattered the portlights. I dogged down the windward ports. The storm shut out the sunset and hastened dusk through to dark. Poking around with a flashlight, I checked for new leaks. A few old leaks reminded me I hadn't got to them yet, but she was mostly dry.

With a lantern lit, I got out my guitar. It had been a while, but old favorites come back easily. I scratched at the strings and half sang, half shouted, over the roar of the rain. As my work-worn fingers began to ache, the rain softened to a random pitter patter. I knew I should take the awning down, but the fresh air, hard work, and sun had dulled my brain. I convinced myself the storm had passed. The wind was gone anyway. I crawled into a berth and read for a minute. My eyes drifted shut, the book fell on the mattress, and I dozed.

During the night, the rain started anew and the wind kicked up. The boat lurched as the awning filled and dragged at the lines. In my coma-like slumber, I considered running up on deck to douse the awning, but I never made it out of the cobwebs. I rolled over and slept on.

In the morning, all was well. The awning survived. The hard rain had sluiced the decks and my dusty cockpit clean. The sun was up. It was another beautiful day. I planned to strip some more bottom paint, clean up my storage unit, and head home. I supposed that the previous night I might have worried more, but my boat, *In A Mist*, was still in the yard. I was still spending my weekends on her restoration out in Used Boat Purgatory at the back fence of the boatyard, where she has the company of other boats of her generation.

In fact, the last delivery I made was in a semi truck. That's how I'm supporting my boat habit. I've been making good progress this summer. She probably won't be in the water until next year, but we have ridden out our first storm together.

Todd Townsend, a sailor and writer, is refitting a Cape Dory 28. All summer and deep into the fall, his weekends are dedicated to preparing for a launch next year. His previous credits include Living Aboard *magazine.*

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