

# GOOD OLD BOAT®



THE SAILING MAGAZINE FOR THE *REST* OF US!

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Issue 63 November/December 2008



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# Back Issues from the year 2001 on CD from Good Old Boat magazine

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## January 2001

Allied Seawind II review  
Catalina Yachts vendor profile  
What happens when you activate an EPIRB  
Cape Dory 27 refit, Part 1  
Making an Ontario 32 bluewater-ready  
A deck made of Trex  
Chesapeake skipjacks  
Don Launer on schooners  
Diesel installation  
Carrying the dinghy  
Renewing oars  
An improved seat in the head

## March 2001

Four sailing tenders reviewed  
Ted Brewer on the fore-and-aft rig  
South Shore Yachts vendor profile  
The Tiny Tot stove  
Jib numbering system  
Cape Dory 27 refit, Part 2  
Cherubini Hunters  
Bristol 27 review  
Boat buying: 9 steps  
Catalina 22  
Dockside AC  
Portlight latch  
Anchoring tip

## May 2001

Cape Dory 25D review  
James Baldwin on Pearson Triton circumnavigations  
Chris-Craft Capri refit  
Building an aluminum toerail  
No fear mast stepping  
Rebuilding a rudder  
Rudder tubes  
Extended season cruising  
Cheoy Lee Offshore 40  
Adding a fiddle rope  
Quick fix for a deckhead drip  
Building a brass searail  
Beating the low-voltage blues

## July 2001

Mustang: Sheathing Rod Stephens' New York 32  
Ted Brewer on shoal draft  
Adding bronze ports  
Marine corrosion, Part 1

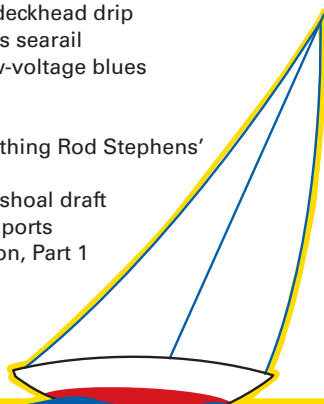
Building a big bed on a small boat  
Lord Nelson 35  
Small-budget cruising  
Catalina 27 review  
Make your own lazy-jacks  
Add more ventilation  
Lubricate the seacocks  
Build a cockpit table  
Bosun's chair as a boarding ladder

## September 2001

Baba 40  
Marine corrosion, Part 2  
Winter bubblers  
Ted Brewer on resistance in yachts  
Stanchion repair  
Electric auxiliary power  
The Viking yacht  
Marshall Cat Sanderling refit  
Tartan 33  
Cruising on a shoestring  
Bauer Boats vendor profile  
One-pot galley wonders  
Monterey boats  
Bristol Corinthian refit  
Hatchboard modifications  
Jury-rigged cutter

## November 2001

Dana 24 review  
Long-shaft conversion  
Olin Stephens profile  
Ted Brewer on hull form  
Building a leakproof classic hatch  
Celestaire vendor profile  
Making a breakproof tiller  
Sailing schools  
MacGregor Venture Newport refit  
Bowsprits, bumpkins, and belaying pins  
Wedging the mast  
Finding and preparing shellfish  
Improvements for oarlocks  
Nautical "hood" gasket  
No more head knockers



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THE SAILING MAGAZINE FOR THE *REST* OF US!

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# Back Issues from the year 2000 on CD from Good Old Boat magazine

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## January 2000

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Riding sails  
Folkboat review  
Women sailors  
Whisker poles  
Heating and cooling your boat  
Alberg 30 refit



## March 2000

Pacific Seacraft 25 review  
Marine sealants  
Ted Brewer on stability formulas  
New swageless fitting  
Dave Gerr on fiberglass  
Stitch-and-glue dinghy  
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Tanzer 22  
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Stovetop baking  
The Tahiti Ketch/Tahitiana design



## May 2000

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Ted Brewer on the influence of rating rules  
Varnishing tips  
Pearson 26 refit  
Soft versus hard dinghies  
Reese Palley's favorite classic designs  
Bristol Bronze vendor profile  
Pearson Triton review  
The reluctant woman sailor  
Should you sail with the transmission in or out of gear?



## July 2000

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Ted Brewer on keel design  
Buying sails  
Anchor windlass  
Dan Spurr on the birth of fiberglass boatbuilding  
The Cheoy Lee legend  
San Juan 24 refit  
West Wight Potter 19  
Build a windscoop  
Rinsing your diesel  
Storing the whisker pole

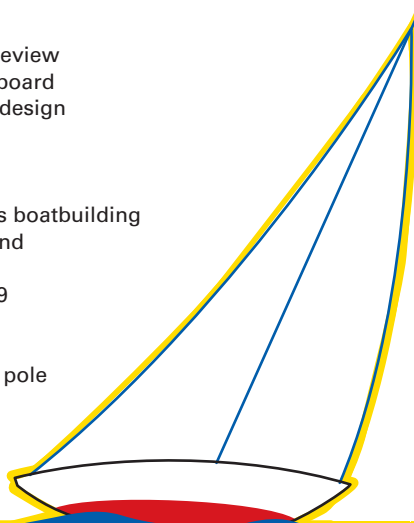


## September 2000

Westsail 32 review  
Charles Kanter on cruising multihulls  
Yacht deliveries (by captain, by truck, or DIY by modifying a trailer)  
Allied Seabreeze 35  
Marine photography  
Wooden boat construction  
Through-hulls  
Com-Pac 23  
Cockpit shade  
Salvaging a rusty anchor  
Make a folding dinette table

## November 2000

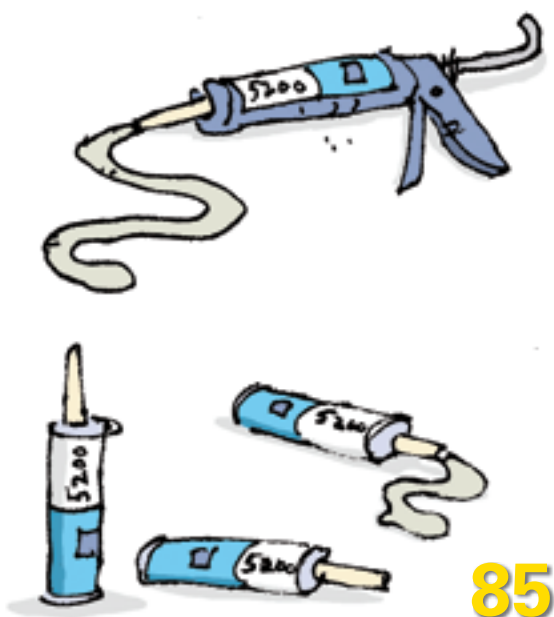
Alberg 30 review  
Don Launer on the club-footed jib  
Lin Pardey on the staysail  
Cape Dory Typhoon refit  
Ted Brewer on classic design  
John Vigor on capsizing  
Hard dinghy to "RIB" conversion  
More on marine photography  
Advantages of trailer sailing  
Ericson 36  
Musical instruments afloat  
Companionway hatch improvements



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# Back Issues from the years 1998-99 on CD from Good Old Boat magazine

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## Premier issue – June 1998

Nigel Calder discusses through-hulls  
Marine metals  
Cape Dory 30  
Atomic 4

## September 1998

Lin Pardey on shipboard communication  
Wet exhausts/waterlift mufflers  
Ericson 35  
Nautical photography  
Buying a used boat  
Sailrite vendor profile  
Buying used sails  
Birth of the Valiant

## November 1998

Profile of Ted Brewer  
Buying an older boat (buying, insuring, financing)  
Fond memories of *Small Boat Journal*  
Niagara 35  
Cruising Rule Number 12:  
Reef early and often  
Delamination is not spelled d-o-o-m  
Setting up a vang/preventer  
Roller furling or bags on deck?

## January 1999

Reese Palley on surviving  
Hurricane Georges  
Tanks (building them, restoring them, and more)  
Flag etiquette  
Boat tenders  
Blackwatch 19  
Winter aboard? In Canada?  
Moyer Marine vendor profile  
Allied Boat Company history  
Life without a cooler

## March 1999

Blister repair to a Valiant 32  
Fuel and water filters  
Albin Vega review  
All about oars  
Cruising Rule Number 15: Be careful  
who you get into a boat with  
Baba 30  
Anchoring (Bahamian mooring)  
Don Casey on safe shorepower  
Make your own anodized parts

## May 1999

Standing rigging  
Lin Pardey on the advantages of tillers  
Pearson Commander  
Affordable boats (partnerships, keeping it simple, purchase criteria)  
Bristol Channel Cutter review  
Bristol 27 refit  
Chip logs and lead lines  
Pardeys' flopper stopper  
Mildew wars

## 1st Anniversary issue – July 1999

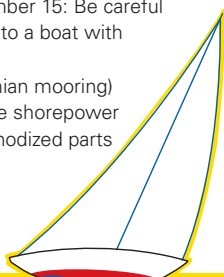
Cal 20 review  
Ted Brewer on steel  
and aluminum yachts  
New sails for old boats  
John Vigor's boat naming ceremony  
Walker Bay boats  
Block Island 40  
The sailor's medical bag  
Building a wooden mast  
How GPS works  
Poor man's windlass  
Ted Brewer's formulas, Part 1

## September 1999

Climbing the mast  
Contessa 26 review  
Rig it yourself  
Replacing your ports  
Chafing gear  
Nicholson 35  
Boat blisters  
Lin Pardey on attitude  
Make a valve-spring compressor

## November 1999

Flicka review  
Don Casey on repowering, Part 1  
History of the Pearson Company  
Stuck fasteners  
Building a stern rail seat  
Pressure cooking aboard  
Bayfield boats and Ted Gozzard profile  
Building marine sanitation devices  
Ted Brewer's formulas, Part 2



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## Double the size of your boat

*It's simple, really,  
and we never knew*

by Karen Larson

One day last August our 30-foot boat doubled in size. Because we've never before experienced this phenomenon, we were completely taken by surprise. But it's easy. Really. You can probably do it with your boat. Here's how.

We had company coming to spend a week cruising in our favorite wilderness, the north shore of Lake Superior. Preparations included taking as much off the boat as we could reasonably and safely live without. Since it was July, we reasoned that we could manage without the winter parkas that come in so handy in May and October.

In addition, the two big bulky immersion suits had to go. We'd try not to sink with company aboard. Since there would be four of us aboard anyway, how would we decide who would get a suit and who would go down with the ship? I'm particularly partial to the captain. Surely he wouldn't have to forfeit, would he?

A huge camera bag with two camera bodies and an assortment of lenses stayed behind. I lived without the 200- to 400-mm zoom lens just fine for a week, but it was a trial.

In addition to taking things off, however, we brought more aboard: larger pots and pans for the larger meals necessary to accommodate our larger crew, cooking utensils to go with the Teflon coating on the additional skillet, more food, more dishes, more towels. And then there was our guests' gear:

a couple of duffel bags, a couple more sleeping bags, two more pillows, a couple of life jackets, another guitar, more wine . . . all the essentials.

While we could double the size of our provisions, we essentially halved the size of our tanks: suddenly we needed water for four instead of two. Ditto for the size of the holding tank; it could cruise for only half as many days as we were used to.

We had a great time though. Every night the V-berth was unloaded of the duffel bags and gear it held, and we turned it into a bunk once again. Every morning the cabin was cleared of the extra gear that was once more stuffed into the V-berth. Off we went in search of moose and other wildlife. Some of the best "wild life," however, was found in the cockpit during evenings with the guitars.

Then the week was over. Our friends packed up and headed south. We removed the extra skillets and utensils, hauled off a few trash bags, and looked around. Our boat had *never* looked so large to us. In fact, it had practically doubled in size!

Keep this trick quiet, please. If anyone catches on, we may have to pay for a larger slip. 



**“Our boat had *never* looked so large to us.”**

# Of refrigerators, paints,



## Installing refrigeration shelves

OK, so I got Karen Larson's message in the July 2008 issue ("Meet the Magicians") that no readers in their right mind would be interested in "doing a bow-thruster installation any time soon." Although I disagree with the comment, I do respect the fact that readers' interest in such an addition to their full-keeled good old boats may, in fact, be limited to the eccentric sailors in our society who believe in the phrase, "More toys are better." Of that part of society, I admit, I am a full-fledged dues-paying member.

That being said, here is a picture of a recent addition I made to my refrigerator/freezer compartment on *Panache* (see photo above). I added shelves to help organize the area and to almost double the flat space available for separating various refrigerated items. This was actually a relatively inexpensive addition at \$127.27, including \$43.93 for shipping. (I bought the shelves online at <[https://www.rparts.com/Catalog/Box\\_Building/shelving/shelving.asp](https://www.rparts.com/Catalog/Box_Building/shelving/shelving.asp)>.) The installation is easy enough; I even did it myself, which is a marvel in its own right.

The photo shows the shelves with nothing on them, with a glimpse of the items, such as ice, that can handle the lower cooling temperatures below. My wife insists that items such as beer, chardonnay, and vodka be placed at the bottom of the refrigeration area to limit my access to them.

**Richard F. Charette**  
Wadsworth, Ill.

## Water-based paints on boats? Really?

I would like to find out the specific type of paint and the paint manufacturer that were referenced in the article by Richard Smith in the July 2008 issue ("Making It Your Boat"). He said he used a water-based semigloss, which totally surprised me. Is this a paint used for backyard decks?

**Howard Brode**  
Thousand Oaks, Calif.

## Yes, they *can* work in some situations

I've been using various water-based paints for several years in a wide variety of situations both around the house and on boats. My main reason for doing so is to keep things as simple as possible. I like the ease of application and cleanup, the absence of volatile thinners, and the general lack of fumes, especially inside a small boat. There is also a virtually limitless variety of colors to be had, and latex paints are readily available at the local hardware store.

With all those advantages, the durability of water-based paints is remarkably good when compared with oil-based paints. They dry rapidly and cover well. I can get a couple of coats on in a day, and windblown or shop dust is less threatening. The problem I have is in using up the oil-based paints that partially fill the many cans in my paint cabinet. I've been using oil-based primer under latex paints primarily because it's available.

I built my strip-planked Black Fly dinghy and painted the insides with two coats of Valspar acrylic exterior house and trim paint laid over an oil-based primer painted on epoxied cedar. After almost five years of hard usage on sand and mud beaches, the insides show no flaking, chipping, scuffing, or other signs of wear. I also used two coats of water-based AquaGuard ablative antifouling paint on the bottom and am pleased with that finish as well. I keep it scrubbed during the cruising season to keep the slime down. There are no barnacles, and it shows little sign of abrasion even as we drag the skeg over the rail in rough water. I put on a new coat every year.

I recently built another tender, a Phil Bolger Auray Punt. Lovely boat. The plywood is covered with fiberglass cloth and resin and finished entirely with water-based paints. Topsides and insides are protected by two coats of Dutch Boy premium latex. It looks fine after almost three seasons.

I should add that my dinghies are only in the water during the summer months, living in the shed over the winter. Perhaps a better test is with the mother ship, where I had occasion to remove a defunct device from the main bulkhead several years ago. I graved in a piece of plywood to fill the hole, covered it with fiberglass and epoxy, and faired it all in nicely. I primed the epoxy and gave it two coats of latex. As I mentioned in the article, the Dutch Boy semigloss matched the dulled white gelcoat perfectly. It's been exposed to sun, rain, and wind for about 10 years now and still looks good. I also like the Dutch Boy plastic container and its screw top. I carry a jar on the boat.

Most recently, I've had problems dealing with the weathering teak plywood on the companionway slide. Epoxy didn't stick so I've primed the teak (oil based) and put two coats of Dutch Boy on it. It looks just fine. The horizontal surface gets a lot of exposure to the weather, plus abrasion from the crew moving around on top of it while reefing and furling the main. So far, it seems to be holding up well. But we shall see.



# and easy fixes . . .

I'm not a professional in these matters, but I'm learning to respect advances in latex paint technology. The idea of using anything cheap on our boats is anathema to many sailors and understandably so. But in the case of paints, there may be advantages to the use of water-based varieties that are difficult or impossible to achieve with oil-based paints. Beyond our own individual experiences, though, what we really need is a good, thorough, and objective review of what's available and how water-based products compare with more traditional varieties.

**Richard Smith**  
Indianola, Wash.

## Any latex suitable for fiberglass?

I face the task of repainting a fiberglass deck on an old Columbia. Paint such as Interlux, although suggested by those who have been there, is miserably expensive, along with the prescribed cleaners, thinners, etc. I will contact various paint companies to see if they have a suitable latex for fiberglass. I will let you know if I discover a solution.

**Bill Blackmore**  
North Hero, Vt.

## A wonderful bolt extractor

The other day I was introduced to a wonderful tool, the existence of which I had been unaware. It's called an Irwin Bolt Extractor, and it's made by the same folks who make the Irwin Vise-Grip.

One of my boat's lag bolts, the one holding the motor mount, had deteriorated from a ½-inch head to no head at all. I needed to get the lag out. A friend suggested I soak the bolt in PB Blaster penetrant and then use the bolt extractor on it. The extractor works by gripping the bolt head or what is left of it — in my case, only a ⅞-inch diameter stud with no head. The tighter you turn the bolt extractor, the more it bites into the bolt. Hardened teeth inside what looks like an ordinary socket wrench will not let go. I was successful in extracting the 4-inch lag bolt from a difficult-to-reach position behind the front mount of my engine.

A five-piece set of extractors is available from Home Depot and lots of other stores for less than \$25. A valuable asset to any toolbox.

**Bill Sandifer**  
Mandeville, La.

## What's that elegant pram?

I have a 25-foot MacGregor project boat that I am restoring. It is my first boat and the salve for my midlife crisis. I don't know how to sail, but as a kid I went sailing with my neighbor several times and the impression that made has never left me. I am 48 years old and decided that I have always wanted to learn how to sail. And now is the time. I have been doing something to the boat every year and now the trailer is being reworked. I think this will be the year I finally get the

boat in the water. For the last four years I have been going out to the driveway where it is parked and sitting in it, eating my lunch, and making wind sounds.

My question is this: on page 46 of the July 2008 issue, I was wondering what kind of pram that is? It doesn't look like a Nutshell Pram. It looks more elegant to me. Hope you can find out.

**Greg Ellis**  
Plano, Texas

## She's a Nutshell Pram

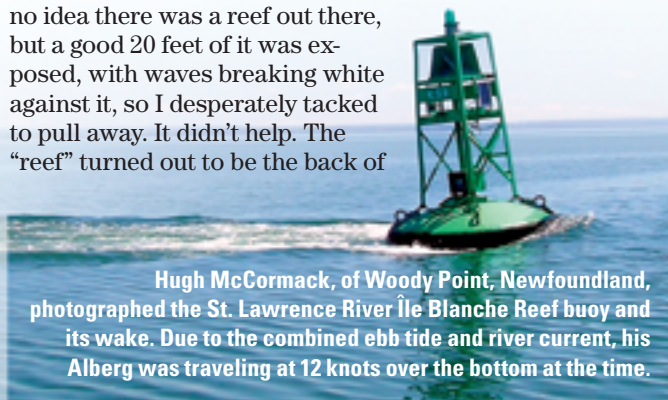
*Ti Bato* is indeed a Nutshell Pram designed by the famous Joel White of *WoodenBoat* magazine fame. She is 7 foot 7 inches and I built her from plans. Kits are also available. To my mind she's one of the sweetest dinghy designs around. Looks good. Rows well. Tows beautifully. And there's a sailing version too. As for elegance, maybe it's the all-round canvas rubrail that does it.

**Andy Vine**  
Vancouver, British Columbia

## Count on sailing to never change

In May, after not having a boat for three years, I bought myself a Walker Bay 310 rigid inflatable dinghy (a 10-footer) with the optional sailing rig. I took it out for an afternoon sail for the first time with my 85-year-old father, whose greatest love was sailing his 12-foot aluminum Petrel dinghy. (He sailed her until his early 70s.) I planned to sail out to Gerald Island, directly in front of our house about a mile away, and back in plenty of time before our dinner guests arrived at 6 p.m. The winds were very light and fluky, and I was a bit puzzled at why, once out of our little bay, we seemed unable to make any progress toward the island, even though we probably had the boat coasting along at 2 or 3 knots.

I finally realized we were in the grip of a tidal current that was pushing us backward faster than we were moving forward. By 5:30 we were out of sight of the house and going farther away all the time. Something caught my eye behind us, and I was shocked to see that we were approaching a reef backward at astonishing speed. I had no idea there was a reef out there, but a good 20 feet of it was exposed, with waves breaking white against it, so I desperately tacked to pull away. It didn't help. The "reef" turned out to be the back of



**Hugh McCormack, of Woody Point, Newfoundland, photographed the St. Lawrence River Île Blanche Reef buoy and its wake. Due to the combined ebb tide and river current, his Alberg was traveling at 12 knots over the bottom at the time.**

a gray whale that steamed by us about 15 feet away. A full-grown one can be 50 feet long and weigh 70,000 pounds, and this one looked to be pretty full grown, especially from a 10-foot dinghy.

At this point I realized we had no hope of getting home, so I turned and sailed with the current and the wind, making good speed. At 7 p.m. we rounded the point at Beachcomber, behind which I knew there was a marina, and I asked a boater hauling up his crab traps to call my wife, Lorraine, on his cell phone and ask her to send someone to pick us up. We were sailing a perfect line to the marina in calm water when, about half a mile away, the wind died completely. I had to row the rest of the way.

Obviously, nothing has changed about sailing during my three-year absence. You just never know what is going to happen and there is never a dull moment. My poor father, who is in rather poor health, did say he got all his remaining urges to sail out of his system and that he can now die without any yearnings to get out on the water again.

**Peter Kiidumae**  
NanOOSE Bay, British Columbia



### An inexpensive boom vang

I needed a cheap boom vang for my American 14.5. I wanted something that would be easy to attach and easy to release — and above all, cheap. See my solution in the photo above.

The “gripper” style tiedown strap comes in a four-pack at Menards for around \$8, so one strap is worth about \$2. The Farm & Fleet carabiner clips are \$1.50 or less each. So the whole vang costs about \$5. And it works fine.

I could/should cut the tail on the strap. I cut off the hooks that came with the strap using a 4½-inch grinder with cut-off disc, but the job could be done with a hacksaw. The carabiner clips slip right on.

I'd like to see if this arrangement works on something bigger, like a MacGregor 26. I use a multipart tackle on my Mac, and it seems a bit of overkill.

**Allen Penticoff**  
Rockford, Ill.

### Rescued by Rescue Tape

I noticed a new product offering in *Good Old Boat* for Rescue Tape (Product Launchings, July 2006). It looked like economically priced insurance for a variety of mishaps that can occur at sea, so I ordered three rolls of it.

We returned to Gaspé, Québec, this spring to begin *Mandalay's* trip back to Lake Superior after having spent several previous seasons in the Canadian Maritimes. I discovered a slit in the raw-water intake hose leading into the heat exchanger of our three-cylinder Perkins diesel. As this hose is a custom-made part, it was nowhere to be found in Gaspé. On the Internet, I learned from the Canadian Perkins distributor that I had to order it through a Perkins dealer, that there was not one in stock in Canada, and that it would take five to seven business days to get one from the manufacturer in the United Kingdom.

We turned to Rescue Tape, and it definitely rescued the situation. We taped the leak in the hose, ordered the new part through the Perkins dealer in Québec City (where we anticipated being about 10 days later), and set off on a wing and a prayer up the St. Lawrence River against the wind and against the current (read: mostly motoring).

When we arrived without incident in Québec City, the part was waiting for us at ADF Diesel. With the Rescue Tape holding so well, we put off installing the new hose part until we eventually reached Rochester, New York, where we hauled out for the winter. The Rescue Tape looked like it could have held for several more seasons, so we are keeping the old taped intake hose as a spare. Since I don't have the manufacturer's address any more, I would appreciate it if you would forward this letter with my kudos on the quality of the product.

**Bill Kronschnabel**  
St. Paul, Minn.

*We were happy to send this message on to Ron Cordas at Rescue Tape. The company website is <<http://www.rescue-tape.com>> or call 877-847-2628.*

### Still in the eye of the beholder

“Most anyone . . .” I could tell something inelegant was coming from the first two words of Dave Martin's guest editorial, “Ugly Can Be Beautiful” (May 2008). I was not to be disappointed. As the proud owner of a truly beautiful, classic 1974 Seafarer 38C ketch, I am here to defend the position that beauty not only counts; it is, as Don Casey has told us, the *sine qua non* of boat ownership, the appearance that makes our pulse quicken when we stand on shore and view the object of our dreams with genuine passion.

When I bought *Roundelay*, she was seaworthy and sound — her former owners had seen to that — but she was not much to look at. Over the ensuing months, I have, with love in my heart, been replacing threadbare toerails; filling and fairing battered decks, topsides, and cabin and cockpit soles; polishing brass; replacing shabby countertops and plumbing fixtures; installing cabinetry; replacing *Blew-By-You* in rather mundane lettering on the transom with *Roundelay* in gilt-edged Dauphin font; and generally trying to bring this proud old beauty back to her former resplendence. Unlike Mr. Martin, who is evidently content to live with his gouges and scrapes, if I should happen to bash the concrete



seawall while docking singlehanded on a windy day (as I, in fact, did on my last outing), I get out the Marine-Tex and fill, fair, and paint until no trace of the offending wound remains. And unlike Mr. Martin, I really do thrill to the many compliments I regularly receive on my lovely vessel. But of far, far greater value than those is the immense pride I feel in making my good old boat shine as best she can. In the final analysis, this one's for her and for me.

**David Laing**  
Stockton Springs, Maine

### Love the girl you're with?

I kind of like both opinions, yours and Dave Martin's. In boating there are a lot of takes on a lot of things. Dave tends to cut to the chase. On the other hand, with that attitude he and his family have sailed around the world (twice, I think) and gone to a lot of places and done a lot of interesting things.

A third take (mine) is this: the boat of the moment seems to take on a beauty of her own that is based more on what she has done and can do than on how pristine she actually is. (Love the girl you're with?) Anyway, if a boat gets into my head and heart, she takes on a beauty that dock rash cannot harm.

**Jerry Powlas, technical editor**

### Calling all Sundance 20 Weekender owners

I am the owner of a Sundance 20 Weekender sailboat, hull #38. Through your reader services, I have been able to make contact with two other Sundance owners, one the owner of a 23-footer and the other hull #2 of the Weekender 20s. In comparing pictures with the latter, we have noted changes in the cabin and cockpit style from hull #2 in 1972 to hull #38 in 1974. Other Internet searches have led us to believe that the manufacturer, El Mar Boat Co. of Roseville, Michigan, was out of business by May 1976.

We are trying to fill in some of the history of this mystery boat. By simple extrapolation, there should be about 100 of these boats manufactured. It would be nice to connect with current or former owners and get a sense of the history of this boat during the four years that it was built. If any of your readers have any info on the boat, the company, or the designer, A.E. Brown, I would be pleased to hear from them at roger02@mts.net.

Thanks again for the continued singularity that your magazine represents in the sailing genre. I have renewed my subscription yet again just today.

**Roger Conrad**  
Brandon, Manitoba

### Black Velvet II found!

I am a long-time reader. In the July 2008 issue ("Fifty Years On"), Ted Brewer talked about his personal favorite design, *Black Velvet II*. I took a couple shots of this old girl, who happens to be my mooring neighbor. I will try to take a good shot under sail if I cross her on the water (see photo at right). I really appreciate Mr. Brewer's designs and his writing.

**José Girardin**  
Montréal, Québec

### Ted Brewer replies

Thanks for putting José Girardin in touch with me. These are the first decent pictures I've had of the *Black Velvet II*, and she is about 36 years old now. Indeed, I was just beginning to wonder if she was still afloat!

**Ted Brewer**  
Agassiz, British Columbia

### Have your readers heard of a boat growing?

Last fall my 26-foot Chrysler sailboat was taken from the water for winter storage. Again this year, my 25th with the same boat, I have noticed the strangest occurrence. With the hull dried out, she has *grown* to a length of 34 feet and *broadened* to a beam of 12 feet. The phenomenon has been getting more pronounced each year, most noticeably as I sand, scrape, polish, wash, rub, paint, and otherwise get ready for spring launching. Frankly, I'm tired. Especially since, within a week of re-launch, I discover that the boat has shrunk back down to a length of 26 feet, with a meager beam of 8 feet.

Have any of your many, many readers ever written about this strange annual happening? I'm really curious.

**Barry Marcus**  
Milford, Mass.

### Another prop puller alternative

The September 2008 article about making your own prop puller ("Getting That Prop Off") prompted me to write with an alternative. I needed to pull the prop on my Watkins while it was in the water. Instead of making one like Rudy and Jill Sechez did or buying one of the expensive pullers available, I went to Harbor Freight Tools and got an 8-inch, three-jaw gear puller for \$10 <<http://www.harborfreight.com>>. The "fingers" fit between the blades to the back of the prop hub, with the threaded rod on the end of the shaft. It worked perfectly and didn't even rust!

By the way, I used an "extended" snorkel, which made the job much easier too. You can't breathe underwater through more than 3 feet of tube, but since my snorkel (and most others) is only about a foot long, I added a 2-foot section of PVC. (Of course, I used duct tape.) I drilled a



small hole close to the top and inserted a piece of small line that was tied to the rail adjacent to the prop, which kept the tip from going under. With the extended reach, I was able to work under the boat without coming up for air throughout the duration of the prop removal and again during re-installation.

Your magazine is the best. It's almost like a chat group or blog for sharing tips and secrets.

**Gordon Pickett**  
Raleigh, N.C.



## A man's best sailing friend

As the sun was setting on another beautiful day, it was time for Matte's evening trip ashore (see photo above). So man's best friend stood by the starboard gate to remind her master it's time to be lowered into the dinghy. Matte is getting a bit long in the tooth and her eyesight isn't what it used to be, but she loves the boat and loves traveling. And who knows? Perhaps tomorrow she'll do it all over again with her best friend.

**Colleen and Lorne Shantz**  
Saltspring Island, British Columbia

## Inspired by twin backstays

I have to say I was blown away by the September 2008 article by Bob Steadman on the use of twin backstays. It's the kind of stuff that brings out my design cap. Why didn't I think of it? How simple!

I have done nothing for the past two days but try to

figure out how to put the Bimini that's on the Moorings 39.3 (shown in the article's opening photo) on my Pearson 33-2. I've been sketching boat drawings and bending tubing in my computer-aided design (CAD) program. This weekend at the boat will find me firming up all the dimensions. You can bet by next season I'll have a Bimini very near to that one. I would like to see some more detailed photos of that Moorings Bimini, just for the sake of design comparison. Would Bob have taken any more for his article that did not get published?

This month's magazine is jam-packed with ideas. You folks are a joy to all of us loyal subscribers.

**Dave Dickmeyer**  
Fort Wayne, Ind.

## Disappointed with the tenth anniversary issue

I have always enjoyed your magazine because it has focused almost entirely on boats and technical issues and repairs related to them. I just picked up your July 2008 issue and was extremely disappointed. It seems to be full of fluff, with few of the topics I have become accustomed to. In other words, "Where's the beef?"

**Ron Boylan**  
Waldport, Ore.

*We worried about that before we did it. What you have in the July issue is a once-in-a-lifetime celebration of our 10 years in publishing. None of the other issues, some 60 in total, are like that one. We did mention our fifth anniversary in an editorial, but we went nuts for 10 years. That is, in part, because so few magazines make it to 10 years. Having said that, the best way to not make it that far is to disappoint our readers.*

*So we apologize for the fluff and lack of beef. We hope you will find that we are back on track and steering the base course again.*



## More feedback on the anniversary issue

When I first got the special edition (July 2008) and flipped through it, I was disappointed. However, once I got into it, read it, and took it apart, I changed my mind. I agree with you that it is OK to take chances. I thought the article regarding how Karen and Jerry met was touching ("Let's Launch a Magazine!"). I did not realize Jerry was such an animal when he was younger, a pretty accomplished guy. Karen just plain rocks and she is a sailing goddess.

**John Gabilondo**  
Lilburn, Ga.

## And now another perspective

I wanted to send my congratulations on your 10-year anniversary. The format for the July issue was a stroke of bril-



liance. It is both unique and appropriate, as you and Jerry have created a sense of family with *Good Old Boat* since the beginning. The July issue not only reinforces that sense for your staff and contributors, but it also brings your readers into that family.

**Kim Efishoff**  
Napa, Calif.

### We appreciate all the comments on issue #61

Thanks to everyone who wrote to tell us their views on the July 2008 issue. We enjoyed reading the range of comments. And as you can see from the letters above, we received quite a range! We're looking forward to continuing all kinds of conversations in the years ahead.

**Editors**

### Socks for your favorite sailor

We've learned of an online shopping site that offers nautical socks for men, women, and children (among socks featuring other interests, occupations, and holidays). For under \$20 you can select a sock and send it with a personalized greeting anywhere within the U.S. Sock Grams also offers a customizable reminder service that will notify gift givers of important dates, holidays, and occasions.

The sailing socks come in a variety of styles and patterns, from ankle socks to traditional calf-length socks. As the company's owner will tell you, Sock Grams strives to deliver



warm hearts and happy feet. For more information, visit <http://www.sockgrams.com>.

**Editors**

Send questions and comments to *Good Old Boat*, 7340 Niagara Lane North, Maple Grove, MN 55311-2655, or by email to [jerry@goodoldboat.com](mailto:jerry@goodoldboat.com).

## New Found Metals.com

Owners of all these boats have chosen  
**New Found Metals ports!**



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Bayfield	Dolphin	Kiwake	Skookum
Beneteau	Downeaster	Lancer	Sovereign
Bombay Clipper	Duffy	Lazy Jack	Spray
Bristol	Easterly	Little Harbor	Southern Cross
Brewer	Egg Harbor	MacGregor	Spender
Cabo Rico	Endeavour	Mariner	Swan
C&C	Ericson	Mason	Swift
Cal	Excalibur	Mayflower	Sunberg
Caliber	Fantasia	Morgan	Tartan
Camper Nicholson	Freedom	Monteire Clipper	Tahiti Ketch
Cape Dory	Flicka	Nancy's Cima	Tayana
Cape George	Formosa	Nelson	Tenor
Cartwright	Freeport	Newport	Union
Cascade	Freya	Niagara	Vagabond
Catalina	Fuji	Nova	Valliant
C-Dory	Galaxy	O'Day	Vancouver
Celestial	Grampian	Owen	Vector
Challenger	Gulfstar	Pacific Seacraft	Voyager
Cheoy Lee	Hans Christian	Pan Oceanic	Wells Ketch
Chris-Craft	Heritage	Passport	Westerly
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# Hughes-Columbia 31

## *A roomy coastal cruiser that's fun to sail*

by Gregg Nestor

In 1963, brothers Howard and Peter Hughes of Willowdale, Ontario, formed a partnership to build dinghies. Their venture was quite successful, and by 1968 their product line included auxiliary sailboats ranging from 22 to 48 feet.

Wanting to diversify, U.S. Steel bought Hughes Boat Works Limited in 1969 and changed the company name to Northstar Yachts Limited. Concentrating on performance boats, the new company introduced eight racers. However, despite the boats' racing prowess, Northstar disappeared from the marketplace in 1975. Howard Hughes purchased the defunct Northstar Yachts in 1977 and renamed it Hughes Boatworks, Inc. With the focus redirected toward family cruisers, business improved dramatically.

When Columbia Yacht Corporation of Costa Mesa, California, went bankrupt in 1979, Howard bought it and renamed his new company Hughes-Columbia. Using the designs of Alan Payne and William Tripp Sr., seven new models plus five reworked Sparkman & Stephens designs were introduced under the Hughes-Columbia name. Due to the debt incurred by the acquisition of Columbia Yachts, which was compounded by a deep recession and high interest rates, Hughes-Columbia went into receivership. In 1982 the factory was closed and the business sold to Aura Yachts, which unfortunately was unsuccessful in making a go of it.

Around 1986, after the failure of Aura, Howard again entered the picture and bought the assets. He concentrated on building a custom 41-footer, as well as branching out into one-piece fiberglass swimming pools. In 1991, the combination of a catastrophic fire and a fraudulent insurance company closed the plant for good. Howard leaves a legacy of 3,500 boats and, for several



years, his company was the largest Canadian sailboat manufacturer.

### Design

While under the ownership of U.S. Steel, Northstar Yachts hired Sparkman & Stephens to design six boats ranging from 25 feet to 36 feet. One of them was design #2098-6c, marketed as the Northstar 1000 (NS1000). Subsequent to the formation of Hughes-Columbia, the NS1000 was modified to become the Hughes-Columbia 31

**Designed by Sparkman & Stephens and built mostly during the 1970s in Canada, the Hughes-Columbia 31 was influenced by the International Offshore Rule (IOR). Pictured above is *Whisper*, owned by Walt Pilny of Mentor, Ohio.**

(HC31), and it remained in production until 1982. The changes included rolling out the sides to create tumblehome and stretching the transom.

Even after the modifications, the design of the HC31 was still highly



The raked bow has a slight concave curvature hinting at clipper heritage, at right. Most IOR designs have pinched ends, as illustrated by the HC31's small transom, below.

influenced by the International Offshore Rule (IOR). The boat features a bald clipper bow and a modern reverse counter that is very narrow and pinched. The long bow and moderate stern overhangs are connected by just a hint of curvature in the sheer. Those sections of the topsides forward of amidships are flared, and the tumble-home of the Northstar 1000 is no longer in evidence. The boot stripe and wide cove stripe cleverly camouflage the boat's moderate freeboard, while a generous coachroof crown minimizes the cabin's height. The boat's appendages are typical of '70s styling, including a slightly swept-back fin keel and a rudder attached to a skeg.

### Construction

Both the hull and deck of the HC31 are solid hand-laid fiberglass. Prior to mating these two parts, a molded fiberglass pan was glassed into the empty hull. This pan incorporates the engine bed, berths, and most of the other "furniture." In addition to the pan, there's a fiberglass headliner. These two interior components not only stiffen the boat structurally, but also greatly speed up construction. The hull-to-deck joint appears to be an inward-turning, overlapping flange that's been chemically bonded and mechanically fastened with closely spaced bolts through a slotted aluminum toerail.

The wooden bulkheads and cabinetry are marine-grade plywood that have been veneered with mahogany. All trim, plus the overhead handrails, are solid wood. The galley counter and chart table are finished in an off-white plastic laminate, and the sole is teak and holly. Exterior brightwork is minimal and limited to the companionway trim, hatchboards, and sometimes the cabintop handrails.

Underwater, there's a 5-foot 2-inch fin keel comprising a solid lead casting and a solid fiberglass spade rudder mounted to a moderately sized skeg. All chainplates are electrically bonded to the keel. Deck hardware is of good quality and is properly through-bolted with backing plates.



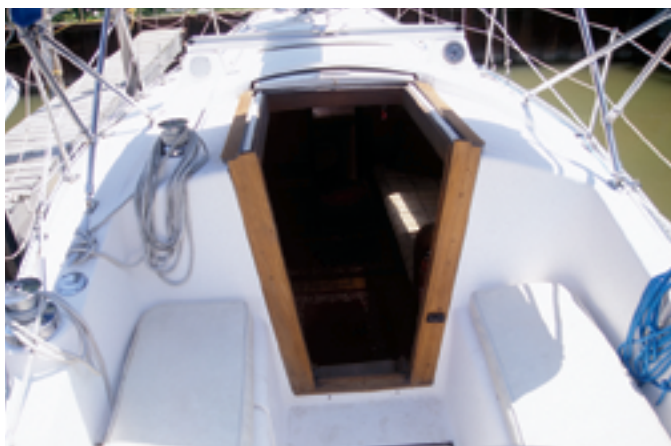
At one time, the HC31 was widely marketed as a "kit boat" for amateur completion; however, most were factory finished.

### Deck features

An anchor roller is incorporated into the boat's stemhead fitting, while a pair of mooring chocks are situated outboard at the forward terminus of the slotted toerails. Owing to the sharpness of the bow, the foredeck is a bit on the narrow side. Even with this being the case, the area is fairly clutter-free, except for a 10-inch cleat mounted directly in the foredeck's center. The sidedecks are a generous 18 inches wide and allow easy movement. Outboard, they are flanked by dual lifelines that terminate at stainless-steel bow and stern pulpits.

Forward, on each side of the cabin trunk, is an opening portlight followed aft by two larger fixed portlights. Situated on the cabintop are a forward opening hatch, a pair of cowl vents, port and starboard grabrails (either stainless steel or wood), and a sea hood. The cockpit is T-shaped and, owing to the boat's IOR-influenced design, small. The cockpit seats are 5 feet long; beneath the port one is a sail locker that also houses the fuel tank. There's no bridge deck to help prevent water in a pooped





Without a bridge deck, the bottom companionway boards should be secured in place when sailing in blustery conditions.



Owner Walt Pilny installed a padded seat athwartships on *Whisper* so he can sit down on the job.

cockpit from cascading below. There is, however, a pair of 1½-inch cockpit scuppers. Unfortunately, their openings are raised about ⅜-inch above the cockpit sole, which precludes the cockpit from draining completely.

## Belowdecks

The interior was undoubtedly a strong selling point of the boat, and for the most part the belowdecks finish is well done.

The layout is conventional, with a V-berth forward, followed by a head to port and a hanging locker-and-bureau combination to starboard. The V-berth is 6 feet 4 inches long and, with its insert, 5 feet 3 inches at its widest. Above is a pair of shelves and beneath are the holding and potable water tanks. The head features a marine toilet, a single stainless-steel sink, hot and cold pressurized water, and a shower with teak-grated sump that drains to the bilge. A double-duty wooden door offers privacy to either the V-berth or the head, depending upon which way it is swung.

The saloon consists of opposing settees and a bulkhead-mounted table. While the port settee converts into a double berth, the starboard settee is a fixed single berth. The space beneath the port settee houses the hot water heater, the inverter, and the 110-volt breakers.

The L-shaped galley, with its single sink, icebox, pressurized alcohol cooktop, and flip-up counter extension, is to port. Across from it is the forward-facing navigation station with a lift-up chart table. A spacious quarter berth

follows directly aft. The 12-volt electrical panel is situated above and at the head of the quarter berth; the batteries are housed beneath. At the foot of the quarter berth is a removable panel that accesses the cockpit locker.

There is plenty of stowage above, behind, and below the settees and quarter

berth, as well as in the galley. The settees and quarter berth are 6 feet long, and headroom measures 6 feet 1 inch.

## The rig

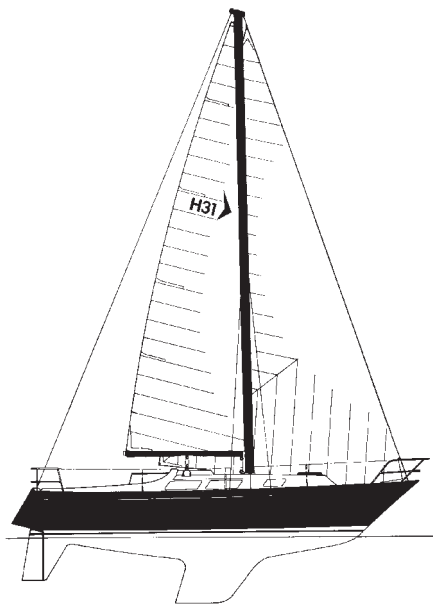
The HC31 is rigged as a masthead sloop. Its mast is deck-stepped and supported by a pair of cap shrouds, a single pair of spreaders, fore and aft lower shrouds, a headstay, and a single backstay. Comprising a main and a 100% foretriangle, this high-aspect-ratio sloop has a sail area of 400 square feet.

A pair of Lewmar #7 halyard winches is mounted on the mast. The headsail's sheets are led aft through snatch blocks that can be infinitely positioned on the slotted toerails and terminate at two-speed Lewmar #30 primaries. The main is sheeted mid-boom to a cabin-top traveler and is controlled by a third Lewmar #7 that's mounted to port on the cabintop. Other sail controls include jiffy reefing, a vang, an outhaul, and a topping lift. The halyards, outhaul, and topping lift are led internally.

## Under way

The HC31's fin keel and lean hull form make for good upwind sailing performance. Its speed, seaworthiness, stability, and balance are average, if not slightly above. Its PHRF rating is 186. In comparison, a Ranger 30, another late-'70s design, rates between 168 and 174, and that old stalwart, the Catalina 30, usually rates 180 or 192 in fleets around the country.

The boat's best point of sail is upwind. The boat, like many other IOR boats, isn't known for great handling under a spinnaker.



## Hughes-Columbia 31

**Designer:** Sparkman & Stephens

**LOA:** 31 feet 6 inches

**LWL:** 24 feet 0 inches

**Beam:** 9 feet 8 inches

**Draft:** 5 feet 2 inches

**Ballast:** 3,350 pounds

**Displacement:** 9,100 pounds

**Sail area:** 400 square feet

**Displ./LWL ratio:** 294

**SA/Displ. ratio:** 14.7





The saloon is straightforward with opposing settees and a bulkhead-mounted table.



Opposite the galley is a dedicated chart table, somewhat unusual on a 31-footer.

*Whisper*, the review boat, is equipped with a 15-hp, raw-water-cooled 2GM Yanmar diesel and a 15-gallon fuel tank. Access to the engine is excellent and easily achieved by removing the companionway stairs and the cabinetry housing the engine.

### Things to check out

Most complaints seem to be age-related rather than chronic production-related faults. These include leaking portlights, tired rigging, and the effects of poor maintenance.


In general, the overall integrity of the hull and deck structures seems to be above average. Unfortunately, the

HC31 was widely marketed as a “kit boat” for amateur completion. As such, there’s a chance that the interior of some boats may suffer from less than professional workmanship.

Also, some boats were fitted with inexpensive 15-hp OMC Saildrives. This gasoline engine is essentially a de-tuned 30-hp outboard motor and is the least desirable auxiliary. Fortunately, many boats have been re-powered with diesel engines.

### Conclusion

The Hughes-Columbia 31 is of fundamentally good design and can represent excellent value if it is in good

shape and reasonably well-equipped. It’s fun to sail and makes for a roomy coastal cruiser. Most HC31s are located in Canada and range in price from \$19,000 to \$35,000. 

*Gregg Nestor is a contributing editor with Good Old Boat. His third book, currently at the publisher and yet to be titled, is a comprehensive handbook for trailersailors. His wife, Joyce Nestor, is responsible for most of the photos associated with articles by Gregg. The two choose between cruising Lake Erie aboard their Pearson 28-2 and trailersailing their O'Day 222.*



The head of the quarter berth does double duty as the seat for the chart table.



With the insert in place, the V-berth is comfortable for two.



*Whisper's* standard stovetop has been replaced by a microwave.

# Anchor Lights 101

## Complying with regulations

by Don Launer

It seems that recreational vessels anchored without anchor lights are more the rule than the exception. However, the International Regulations for Avoiding Collisions at Sea (known as COLREGS) require any anchored vessel whose length is between 7 and 50 meters (approximately 23 feet to approximately 164 feet) to show an anchor light visible from 360 degrees for 2 nautical miles in fine conditions.

It is worth noting that both the COLREGS and Inland Rule 30(e) of the U.S. Coast Guard Navigation Rules go on to state, “A vessel of less than 7 meters in length, when at anchor not in or near a narrow channel, fairway, or where other vessels normally navigate, shall not be required” to exhibit an anchor light.

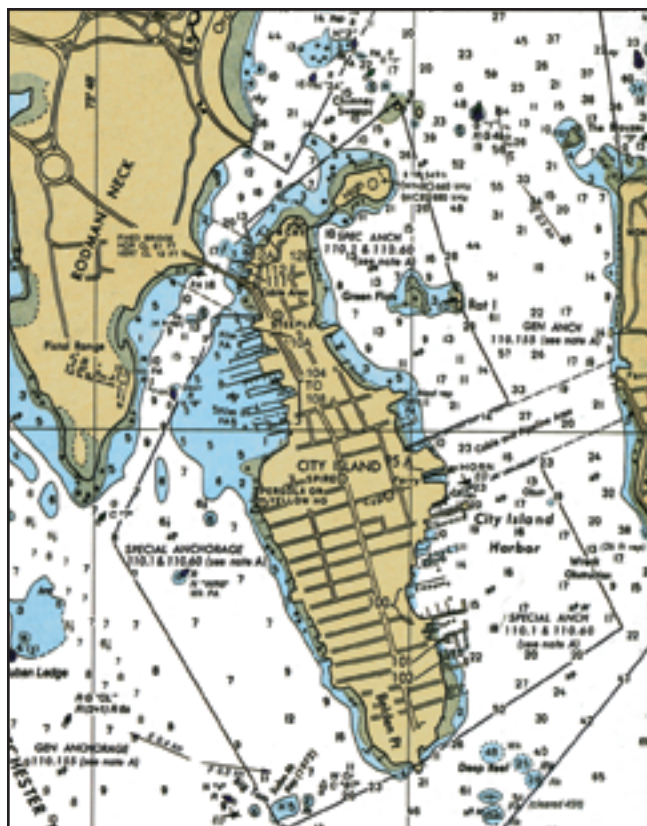


Chart showing several designated special anchorages.

In addition, it is important to know Inland Rule 30(g), which stipulates that a vessel of less than 20 meters in length, when at anchor in a special anchorage area designated by the Secretary of Homeland Security, also is not required to exhibit an anchor light. (A 20-meter vessel is approximately 65½ feet long.) Often these special anchorages are inside busy harbors or close to marinas and are

usually, but not always, enclosed by solid magenta lines on the chart with “special anchorage” printed within or just outside that designated area. (The fog signal requirements of Rule 35 for an anchored vessel are similarly waived within these special anchorages.)

So, just because an anchorage exists, is shown on the chart, and may be defined and administered by the state, county, or local government, that anchorage does not automatically become a designated special anchorage, and an anchor light is required.

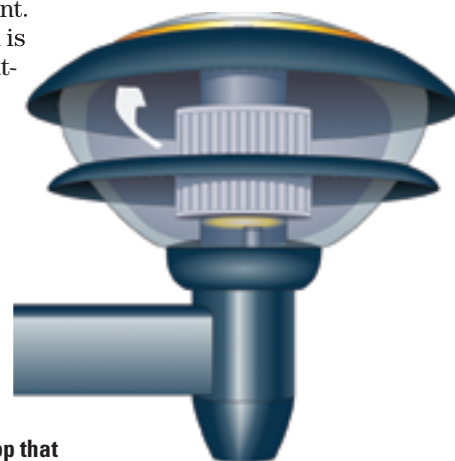
### Masthead anchor lights

It takes about 5½ candlepower to make a light visible for 2 nautical miles in fine weather. This candlepower can be obtained either by using a 5-watt incandescent bulb and a Fresnel lens or by using a kerosene (paraffin) light with a ½-inch-wide wick and a Fresnel lens. (Fresnel can be pronounced either as “frez-nel” or with its original French pronunciation, “fray-NEL.”)

Both the COLREGS and Inland Rule 30(b) state that when at anchor, “A vessel of less than 50 meters in length may exhibit an all-round white light where it can best be seen . . .” Most sailboats show an anchor light at the masthead. Although this is a convenient location, it is not the optimal spot. Better to have the anchor light near the bow of the boat and low enough so it also illuminates the deck. This is by far the best location, since boaters going through an anchorage are normally looking straight ahead and not up in the sky for anchor lights.

If you do use a masthead light, an incandescent bulb has several drawbacks. One is that it uses more power than other types of bulbs and has a relatively short life. Plus, the long wire up the mast must be of a suitable gauge so the bulb receives enough voltage to meet the 2-nautical-mile visibility requirement.

A better solution is the LED (Light-Emitting Diode) bulb, which has a much



**Self-contained solar-powered anchor light. This type of anchor light has a solar panel on top that charges a small internal battery, which then supplies the LEDs when the integral photocell turns the anchor light on from dusk to dawn.**



longer life (more than 100,000 hours) and uses less electricity. LED bulbs for anchor lights are available as retrofits for many existing anchor-light housings.

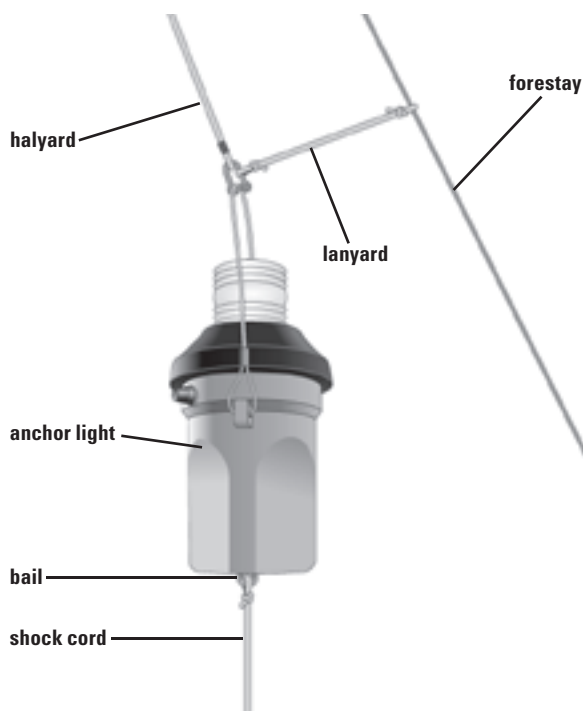
Also, some LED lights have circuits that allow their maximum brilliance to continue down to a supply voltage of 10 volts. And since some are also “bipolar,” the polarity of your existing wiring is unimportant. Others have a very rapid pulse-repetition rate, much faster than the eyes’ persistence of vision, with duration of the “on” pulse varying with the battery voltage. This conserves battery power while still maintaining the 2-nautical-mile visibility requirement.

Some LED masthead anchor lights have a photocell that turns the anchor light on at dusk and off at dawn, while other LED masthead anchor lights are solar-powered and completely self-contained. These lights have a solar panel mounted on top of the anchor-light housing and a photocell to turn them on and off. Consequently, such lights have no battery drain.

### Rigging-hung anchor lights

Although the masthead anchor light is certainly the most convenient way of complying with regulations — just by throwing a switch — many sailors opt for an anchor light hung low in the rigging. This not only provides 360-degree light and 2-nautical-mile visibility, but it also illuminates the deck. This makes the anchored boat even more visible and provides a deck light that can be handy for those unexpected middle-of-the-night deck chores.

#### Hanging an anchor light in rigging



**Kerosene anchor light.** This type of anchor light may be attached to the forestay. There is a semicircular bail under the bottom of the anchor light. Usually a shock cord is attached to this bail to reduce the anchor light’s swing as the boat rolls.

There are many small electric lights available with self-contained batteries that can handle this job. But many sailors prefer to use a kerosene anchor light. Kerosene lamps burn easily in gale winds, are readily available, are made of solid brass, and have a Fresnel lens that directs the beam horizontally. (See “The Lantern Ritual,” in the January 2008 issue.)

Portable electric or kerosene anchor lights can be hoisted using a halyard, with a short lanyard to hold them to the forestay or shrouds. Most have a semicircular metal ring on the bottom (a bail), which is handy for attaching a shock cord to prevent the light from gyrating wildly when the boat rocks. These lights can also be used for interior lighting in an emergency. ⚓

*Don Launer, a Good Old Boat contributing editor, has held a USCG captain’s license for more than 20 years. He built his two-masted schooner, Delphinus, from a bare hull and sails her on Barnegat Bay in New Jersey.*

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# Picking up buoys

*It's simple when you know how*

by Richard Smith

Coastal cruisers looking for overnight shelter are apt to find three choices: a marina berth, an anchorage, or a public mooring buoy. Many prefer the familiar routine of entering and leaving a slip. Bow, stern, and spring lines are readily available and crew members know how to use them. If they don't, fellow yachtsmen along the dock will lend a hand. There's shorepower, good restaurants, long hot showers, shopping, instant camaraderie, and varied entertainments for any nautically challenged teenagers on board.

Other sailors like to anchor. They see a visitor's dock as all-too-familiar territory and seek a contrast to the way it is back home. They look for a place of their own choosing, far from the maddening crowd. Isolation, independence, and the practice of skills that bring them closer to nature — to what life on shore is not — are their goals.

Whether our preference is for marinas or anchorages, like it or not, we all may soon be spending more nights lying to mooring buoys. In some environmentally sensitive areas, anchoring

Beth Smith points at the buoy on the final approach, at left. Below: Approaching Eagle Island State Park mooring buoy, left. Boathook inserted into top ring on shroud, center. Bottom end of boathook in shroud ring, right. Facing page: Blake Island buoy streaming kelp in strong current, left. Attaching  $\frac{3}{4}$ -inch mooring bridle to bow cleat with improvised chafing gear in chocks, center. Flipping the buoy ring to untwist the mooring line, right.

is being prohibited and mooring buoys installed, partly because of the damage anchors and chain can do to the seabed and partly to provide an alternative to building new marinas. Apart from their role in preserving marine environments, however, there are several advantages unique to mooring buoys.

First of all, we can be reasonably sure that mooring to a public buoy is secure. We're unlikely to drag because of inexperience, bad holding ground, strong winds, or shifting tides. And so are our neighbors lying to windward of us.

For some of us, there is also the advantage of simplicity: fewer lines to handle — and shorter and drier lines too. There are no anchor and chain to lift, no anxiety about scope, and no mud in the chain locker. In tidal areas, there's less worry about going aground at low water.

State or provincial mooring buoys are often located in strong tidal streams and on exposed shores where views can be spectacular but anchoring may be hazardous. Dinghy distance to shore is often shorter than it would be anchoring out, an advantage for anyone taking a dog to the beach on dark and windy nights. Among the





gaggle of dinghies to be found nearby is often a special conviviality, something between the society of a marina and the solitude of a remote anchorage.

Buoys have downsides though: they tend to be placed in areas of high use, near popular attractions. This can make for noisy nights, especially when your neighbors raft up in great gangs. In tidal areas the buoy may nudge (if you're lucky) or slam (if you're not) against the boat. This can put a swath of dullness in the gelcoat and/or an end to a good night's sleep.

### How to do it

Mooring to a buoy requires a different set of skills than coming alongside a marina berth or anchoring. A lack of familiarity with the practice can make it intimidating to some skippers.

Think ahead. Have a plan. Notice which way the wind's blowing and the set and speed of the current marked by water disturbance around the buoy. Look at the orientation of other boats but understand that differing underwater shapes and displacements; currents and windage; and mooring techniques cause boats to act differently as they lie to their moorings.

Your approach should be slow and controlled. It pays to make a pass around your target buoy to judge its condition. My wife, Beth, and I have found buoys that had no lifting rings and others that were barely above water, submerged under a weight of kelp — a sign of poor maintenance. At the same time, check depths and calculate the amount of water available as you swing toward shore at lowest tides. Groundings at mooring buoys are not unknown.

“Whether our preference is for marinas or anchorages, like it or not, we all may soon be spending more nights lying to mooring buoys.”

### Bow pickup

My preferred pickup method is to have the crew (Beth) make ready our ¾-inch bridle (the thickness is more for chafe than tensile strength), bending the eye-splice end to the mooring cleat, leading the rest through the port bow chock, under the anchor sprit, and up to the starboard side, where the free end is neatly coiled on deck and ready to slip through the ring. The final arrangement should be carefully inspected to ensure that everything is where it should be.

Beth then points the boathook at the buoy, which should wind up nudging a spot just to starboard of the bow. We close the distance (some skippers like their crew to count off the distance on approach in feet or meters), I stop the boat, and Beth hooks the ring and holds the boathook tightly with both hands (see illustration on page 22).

I put the gear in neutral (a common mistake is to leave the engine idling in gear) before I walk forward and take the boathook from Beth. She then slips the free end of the bridle through the ring and starboard chock before bending it to the bow cleat.

### Cockpit pickups

**Method 1** – Secure a line to the bow cleat, take it through the starboard chock, across the bow, and back to

the cockpit on the port side, running outside all, and temporarily make it fast. We use the jibsheet cleat. The cockpit is brought alongside the buoy, then the line is slipped through the ring (sometimes with the help of the boat-hook). Then we walk it back to the bow quickly, coiling the line along the way (see illustration on page 22). It can then be secured to the cleat or otherwise bridled as the boat falls back with the wind and/or current.

**Method 2** – Make a line fast between the bow and stern cleats, running outside everything on the port side. The cockpit is brought alongside the buoy and stopped. A short strop, about 18 inches long and fitted with carabiners at either end, is attached between the fore-and-aft line and the buoy ring and let go (see illustration on page 22). The boat is backed down until the strop and buoy are almost to the bow. The engine is placed in neutral and the buoy secured with a mooring line or bridle.

These methods, of course, can be used singlehanded or with a crew, but given a crew, I prefer the bow pickup. A strong current and a heavy buoy can combine to cause the buoy to disappear beneath the boat as you work it forward. Although I'm not sure why, I'm also in the habit of making cockpit



pickups on the port side and bow pickups to starboard.

My friend, Gary Stoop, prefers to make a bow pickup when singlehanding. With the bow as close to the buoy as he can get it, he puts the engine in neutral and walks forward with the boathook. Gary's got command of his boat, a good eye, over 8 feet of boathook, and a mighty left arm.

## The boathook

Collapsing aluminum boathooks should be handled with suspicion or not at all when picking up buoys. They have a habit of jamming or collapsing at awkward times.

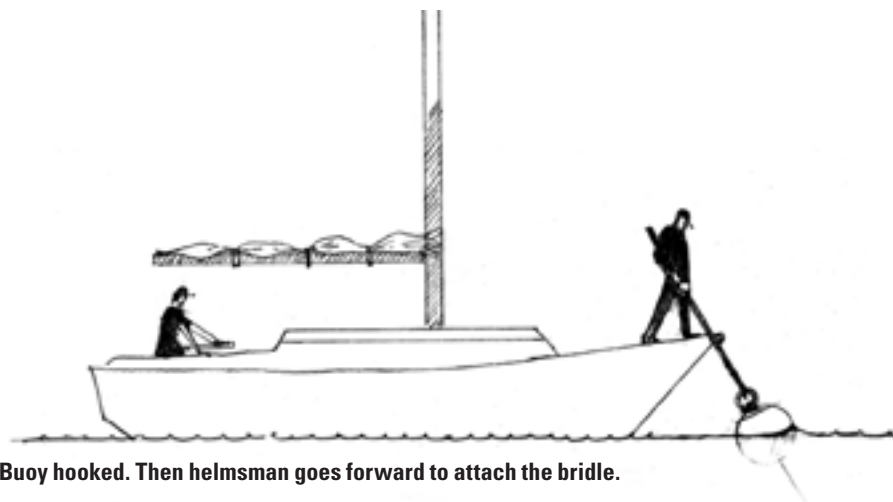
We haven't had much luck with the type of patented hook that puts a mooring line through the ring. We had trouble hooking a ring lying on the opposite side of the buoy one time and gave up. The rather light plastic molding didn't inspire confidence either. Friends, however, swear by these hooks, but they always have a solid boathook available, just in case.

I made our Douglas fir boathook years ago. It's 6 feet 4 inches long and varies between 1 and 1¼ inches in diameter. It could be longer but Beth thinks it's more manageable this way — less to get tangled up in the forestay, lifelines, and so on. It's fitted with a bronze hook, and the wood is shaped and weighted carefully so that, if dropped overboard, it floats vertically about 19 inches out of the water. (Gary reports that his off-the-shelf closet-pole boathook floats a mighty 31 inches above the water!) On board it's attached to a cap shroud in a method

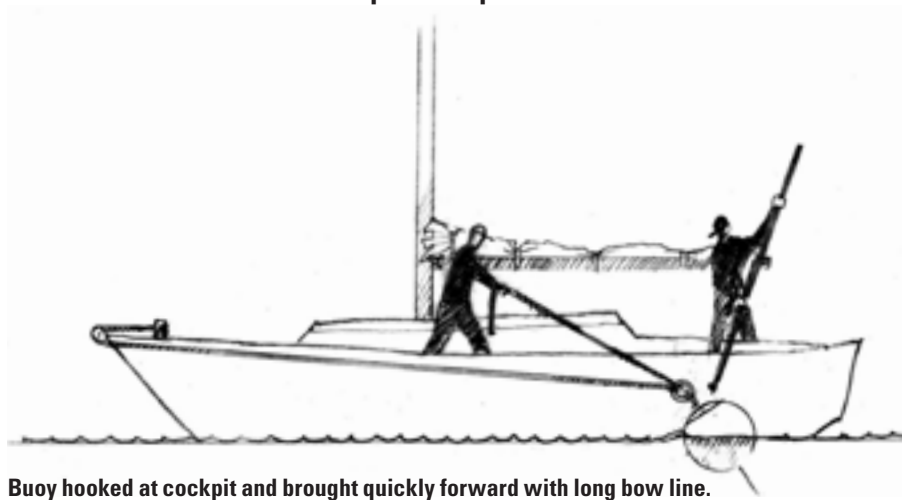


Beth retrieving the boathook, which is floating vertically.

## Bow pickup

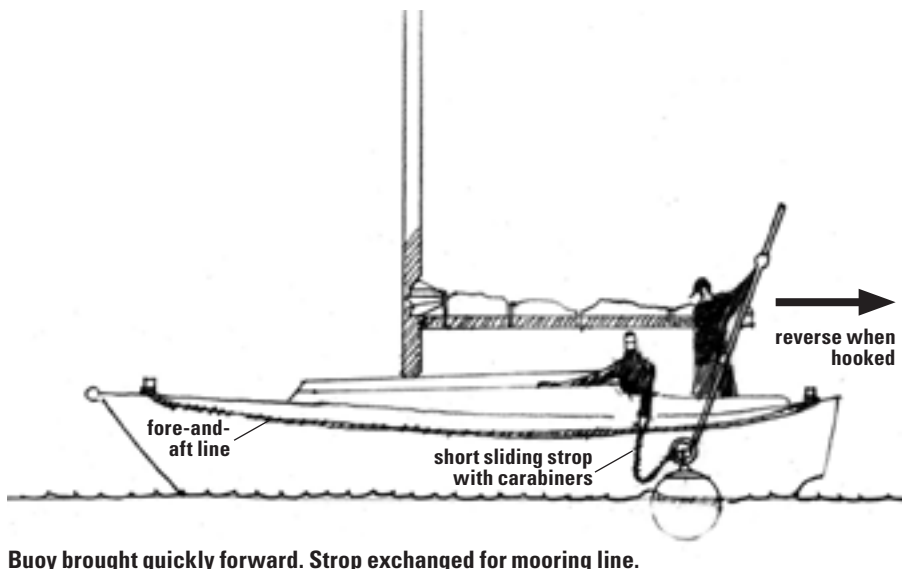


## Cockpit hookup method 1



ILLUSTRATIONS BY RICHARD SMITH

## Cockpit hookup method 2





## “Maintain good tackle and remember that it's better to go around again than keep stabbing at an elusive ring.”

described by Glyn Judson in the May 2005 issue of *Good Old Boat*. I've painted the handle white to make it easier to spot and grab if it slips overboard.

### The bridle

Some single-line painters are led over bow rollers or bent to bow cleats on one side or the other. Some powerboats moor to buoys from the stern. Our bridle seems to work well for us. *Kuma* doesn't tend to "sail" over the buoy as some boats do, although I suspect this has as much to do with her scimitar keel and low windage (no dodger) as it does our bridle.

Although the bridle can be made of almost any fiber, polyester double-braid is my recommendation. It's so short that elasticity is not a significant factor, and qualities of strength, UV-resistance, internal friction, and abrasion all favor polyester double-braid.


Distance from the buoy varies between boats. One formula sets it ideally at about two-and-one-half times the distance of the stemhead fitting from the water. Ours seems to work well in most conditions at a little less than that. Good advice would be to experiment with your boat in varying conditions.

The bridle should be fitted with anti-chafing gear at points of wear. Garden or plumbing hose or lengths of split fire hose will work well where the line runs through chocks. Rawhide is traditional, purposeful, and when well stitched,

brings credit to any sailor. We've wrapped our bridle at the chocks with lengths of old canvas.

Points of wear at the ring should be inspected after each use. A carabiner or other metal connector would be possible (and perhaps less apt to chafe), but the sound of clanking could drive you nuts. After 10 years of moderate use, our 3/4-inch braided Dacron bridle shows few signs of wear.

One of the joys of lying to a buoy is the quickness and ease of leaving it, but a rambunctious night can result in twisted lines that bind on the ring. If the ring cannot be reached from the deck, take the dinghy up to the buoy and flop the ring over and over to straighten it out before leaving.

Most of all: plan ahead. Go slowly. Learn to put your boat exactly where you want it. Maintain good tackle and remember that it's better to go around again than to keep stabbing at an elusive ring. Find a method that works for you and stick to it. 

*Richard Smith is a contributing editor with Good Old Boat. He has built, restored, and maintained a wide variety of boats and sailed them in Michigan lakes, Oregon reservoirs, and the Irish Sea. He currently sails Kuma, an Ericson Cruising 31, with his wife, Beth, in their home waters of the Pacific Northwest.*

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# Adding holes in

*New through-hulls require diligence,*

It's not unusual for sailboats to need a new hole in the hull as a consequence of interior modifications, such as installing a holding tank overboard pump for use offshore, or perhaps an air-conditioner installation in the sunny South. When I relocated the head and built in a holding tank on *Magnolia*, my previous boat, a Cheoy Lee Offshore 27, I needed two new holes in the hull. Being frugal, as self-respecting sailors are, I undertook the job of installing the through-hulls and seacocks myself, rather than having the boatyard do it. All that is required is diligence, forethought, and technique.

Cutting a hole in an otherwise watertight hull is serious business, and it is, therefore, important to put it in the right place the first time around. The right place may seem too simple a concept to give much thought to. But it isn't. The tailpiece on the seacock is going to be connected to something else, usually a pump, with a length of hose. Especially in the case of 1½-inch sanitation hose, that hose is difficult to manipulate, so the routing must be carefully considered. Will holes in bulkheads between compartments have to be cut in order to have the pump in one compartment and the seacock in another? If the through-hull is for water intake, does it need to be underwater when heeled? What about room to turn the handle?

For through-hulls and seacocks, I like plastic or, more specifically, Marelon, which is fiberglass-

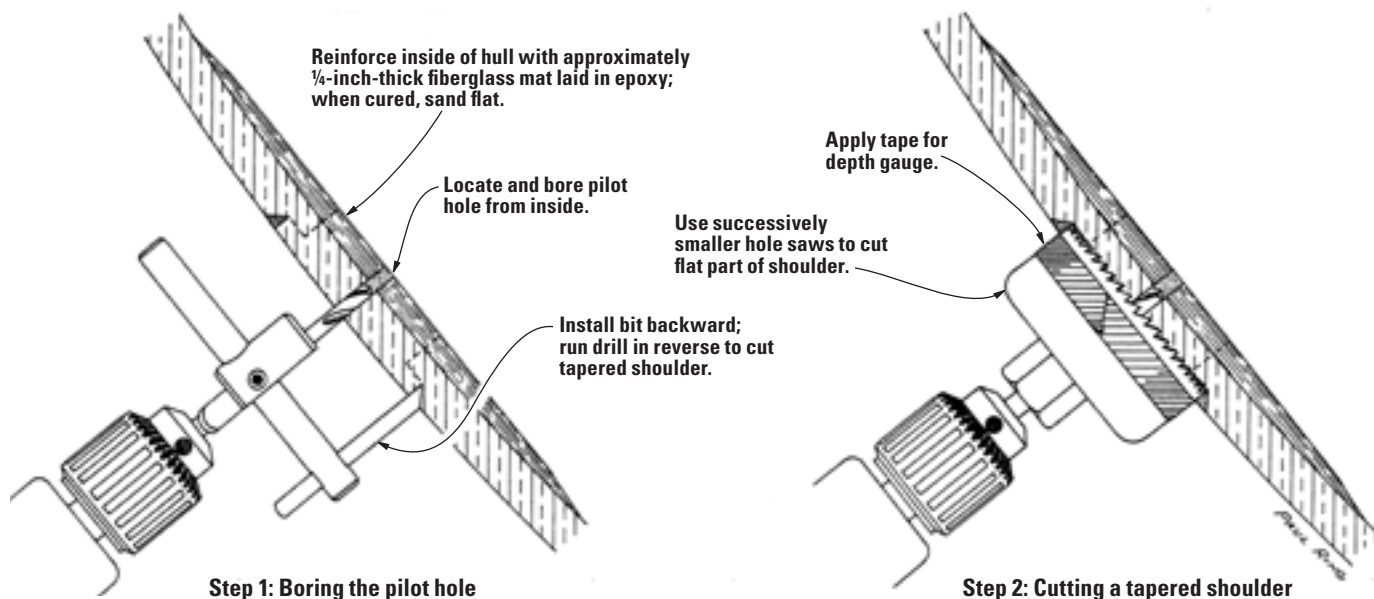
reinforced DuPont Zytel. This material works well, is strong, and isn't subject to electrolysis. And parts made from it are cheaper. Just be sure to exercise the seacock from time to time, or it can become difficult to turn off and on. When out of the water, smear a little water pump grease on the ball and work the handle back and forth.

Thoroughly clean and sand the inside of the hull where the seacock will be located. All paint must be removed with nothing but bare, clean fiberglass remaining. Then add a reinforcement consisting of layers of fiberglass cloth or mat about ¼-inch thick, applied with epoxy or polyester resin. When this has cured, sand it flat by using coarse sandpaper wrapped around a short piece of 1 x 2. Some builders use plywood for this reinforcement, but I worry that if ever a small leak were to occur, the plywood would rot, which might cause a large leak.

## Installing a flush-head through-hull

In the center of the reinforcement, and from the inside, bore a pilot hole for the cutter or hole saw to be used to cut and shape the hole for the through-hull. The illustration below depicts a method for shaping the hole needed for a flush-head through-hull, so popular with racing sailors. This is the trickiest part of the job and is where that technique comes in. (The circle cutter shown below in Step 1 is available from Sears for \$19.99.

## Shaping the hole for a flush-head through-hull





# your boat?

## forethought, and technique

by Paul Ring

After you have one, you'll find many uses for it and wonder how you ever got along without it.)

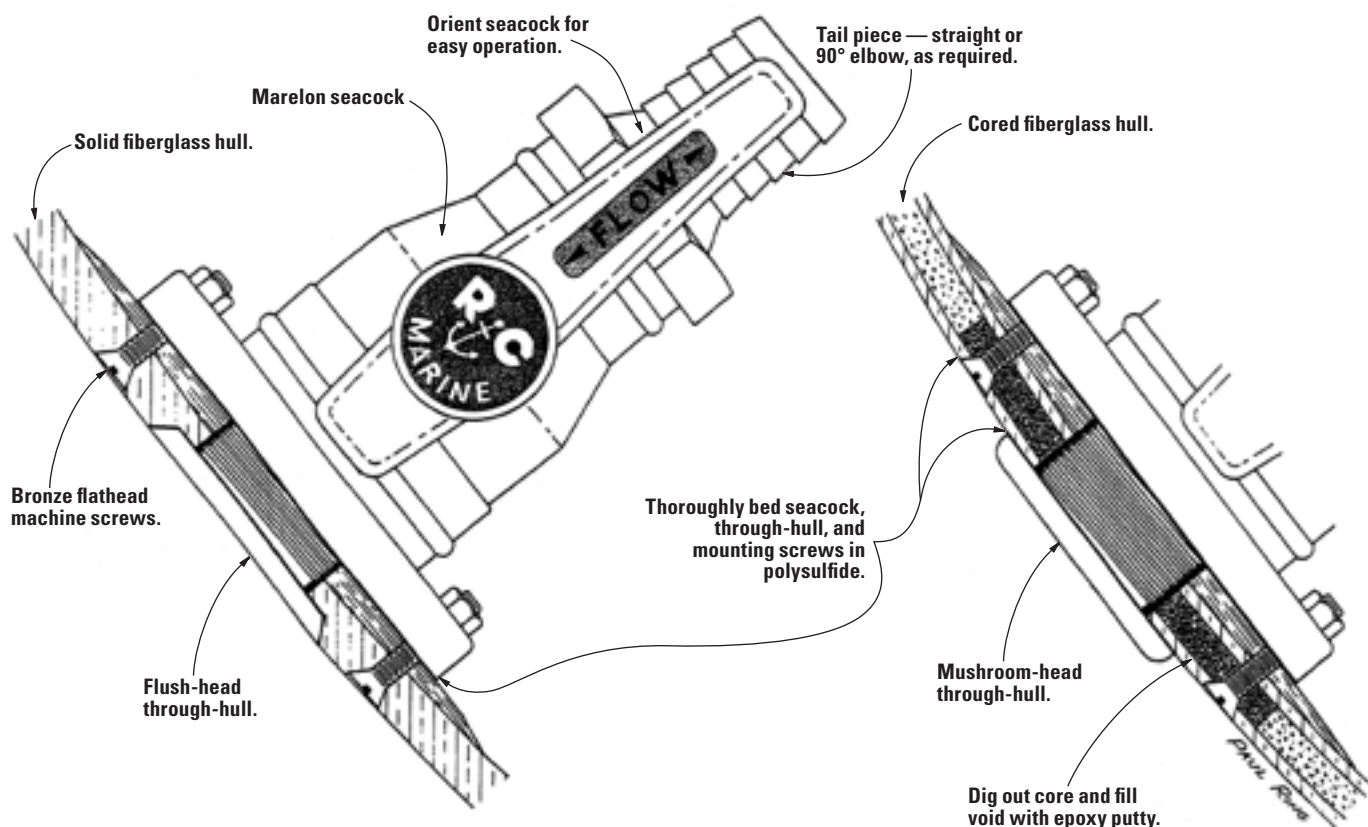
As shown, install the bit backward, so it will cut a hole with a beveled, instead of square, edge. That means you will have to run the drill in reverse, which means you have to tighten the chuck extra hard or it will loosen itself. Then adjust the cutter bar so that the outside diameter of the bevel will equal, or just slightly exceed, the outside diameter of the through-hull flange. Be fussy about this adjustment. It is better to make this cut a tad oversized than undersized. When satisfied, insert the pilot bit into the previously drilled pilot hole with the drill turning very slowly. You might want to try a practice run on a piece of plywood first. It won't be quite the same thing, because the hull is curved and fiberglass is harder than plywood. But it will give you a feel for "leveling out" the drill so the bit cuts evenly all the way around.

Hold the drill firmly. Slowly advance it until the cutter hits the hull lightly in one place. Then carefully and minutely adjust the tilt of the drill until

the cutter hits in two places directly opposite from one another. Keep going until the bit hits another spot and again adjust the tilt until the bit hits an opposite spot. As you begin to level out, gradually speed up the drill, holding tightly and steadily. I find that the depth of the bevel on the cutter is just about the same as the thickness of the through-hull flange. But check yours and compare.

You will want this cut to be just a tad deeper than the shoulder on the through-hull is thick. When you reach that depth, you will have finished the most difficult part of this job. In the illustration on the facing page (Step 2), notice the flat part of the shoulder that you will cut using hole saws of successively smaller sizes. The first (largest) hole saw should fit just inside the bevel you just cut with the circle cutter. Before beginning to cut, carefully wrap a piece of tape all around the hole saw to mark just how deep to cut. As with the circle cutter, carefully advance the hole saw and make minute tilt adjustments until you have "leveled out." As you advance the hole saw, frequently

### Installing a flush-head or a mushroom-head through-hull



check your tape “depth gauge.” Continue like this with each successively smaller hole saw until you get to the one that is the diameter of the through-hull. Then, of course, cut all the way through. There will be ridges between each hole-saw cut. Use a small chisel to cut and scrape these away.

Even though you were careful, your through-hull will not fit perfectly in the shoulder you cut. It is much better for the shoulder and hole to be slightly larger than the through-hull. Presuming they are, the way to a perfect fit is simple. Apply paste floor wax to the surfaces of the through-hull that will mate with the shoulder and hole you just cut. Then mix up a small batch of liquid epoxy and “paint” the shoulder and hole. Stir colloidal silica into the remaining epoxy until it is the consistency of mayonnaise. Apply that to the surfaces of the through-hull that will mate with the shoulder and

cock flange as a guide. A helper with an eye for “square” can help you drill straight. Then from the outside, cut the countersinks.

You are now ready to permanently install the through-hull and seacock (see illustration on page 25). Thoroughly bed the through-hull, seacock, and mounting screws in polysulfide. Don’t over-tighten; a good, snug fit is all that is necessary.

Bedding compounds such as 3M 5200, Sika-flex, or BoatLIFE, as well as others that are equally suitable, are recommended for use with Marelon. While polysulfides are not recommended as a bedding compound for some plastics, Marelon isn’t included in this proscription. In my experience, Marelon through-hulls were unaffected by BoatLIFE polysulfide. Silicone works with almost anything, although I don’t like it below the waterline because of its weak adhesive properties. If you do use silicone, be aware that there are two types: one that can be used under water and one that can’t.

There are some additional steps for installing flush-head through-hulls in cored hulls. As above, reinforce the inside of the hull with fiberglass and resin and, when cured, drill the pilot hole. Now it gets different: from the outside, using a hole saw the same diameter as the threaded portion of the through-hull, cut a hole through the outer skin and through the core, stopping just as you feel the hole saw hit the inner skin. Pry out the disc of outer skin and dig out the core material. This is usually balsa but may be some kind of foam. Continue to dig out the core until it is thoroughly evacuated beyond where the seacock flange machine screws will go through. Do a good job on this, using whatever tool works best. I’ve used flat-bladed screwdrivers with the shank bent at a 90-degree angle.

When all of the core is dug out, from the outside, put a piece of masking tape over the pilot hole you drilled earlier. Now, mix up a batch of epoxy and thicken it with colloidal silica to a mayonnaise consistency. Pack this epoxy putty into the space left when you removed the core. Work carefully to prevent voids. When the space between the inner and outer skins is filled, continue to add epoxy putty until the entire hole is filled. After the epoxy has cured, go back inside the hull and extend the pilot hole all the way through to the outside. At this point, proceed just as though you were working with a solid fiberglass hull, as previously described.

### Using a mushroom-head through-hull

For the cruisers, it’s simple. Most of us are willing to sacrifice that  $\frac{1}{1,000}$  knot of speed and go with the mushroom-head through-hull. The illustration on page 25 shows a mushroom-head through-hull installed in a cored hull. Of course, a solid hull installation is similar and even simpler: locate the best position for the seacock,

## “For the cruisers, it’s simple. Most of us are willing to sacrifice that $\frac{1}{1,000}$ knot of speed and go with the mushroom-head through-hull.”

hole, putting on enough to ensure there will be no gaps. Carefully avoid getting epoxy in the threads of the through-hull. Push the through-hull into the hole, just far enough so that the outer face of the through-hull is flush with the surface of the hull. After the epoxy has cured, pop the through-hull back out. This is the reason for the wax. Just the same, it may take a sharp whack with a hammer, cushioned with a block of wood, to knock it out.

Now temporarily install the through-hull and the seacock. Notice that inside the through-hull there are two “ears” opposite each other. These make it possible for an inserted tool to aid in screwing the through-hull into the seacock. A file of the right size makes a good makeshift tool and a crescent wrench slipped over the file will provide the necessary leverage. When you screw the through-hull into the seacock, you will probably find the threaded portion of the through-hull to be too long. Note how much, then disassemble them and cut the excess, plus just a little, off the through-hull. Use sandpaper to remove the burrs from your cut. Now reassemble them and note whether the seacock rests flush against the hull reinforcement. You may have to do a little more trim sanding on the hull reinforcement to get a good fit.

When satisfied with the fit between the seacock base and the hull reinforcement, orient the seacock so the on/off handle is easy to operate and no boat parts interfere with full movement. Then drill the holes in the hull for the machine screws that will secure the seacock in place. Drill from the inside and use the holes in the sea-



apply the hull reinforcement, drill the pilot hole from the inside, cut the through-hull hole from the outside, and install the through-hull and seacock using plenty of polysulfide.


To connect the seacock to a hose, a tail piece is required. Choose either a straight one or one with a 90-degree elbow, depending upon the direction of the hose run. Use either plumber's dope or Teflon tape on the threads to get a watertight joint. Use two hose clamps to attach the hose to the tail piece.

## Filling an unwanted hole

By the way, if this seacock is replacing one in another location, don't forget to fill in the original hole before launching the boat (see step-by-step illustrations below). A good method: from the outside, grind a bevel in the sides of the hole to about a 6:1 taper. It will look like a shallow funnel. An electric drill with a coarse sanding disc works well. On the inside, epoxy a disc of fiberglass over the hole. The disc should be about double the diameter of the hole. This disc can be cut from a small sheet of fiberglass laid up over a piece of window glass or a mirror. Apply paste wax to the mirror as a release agent, then simply lay up several layers of fiberglass cloth using

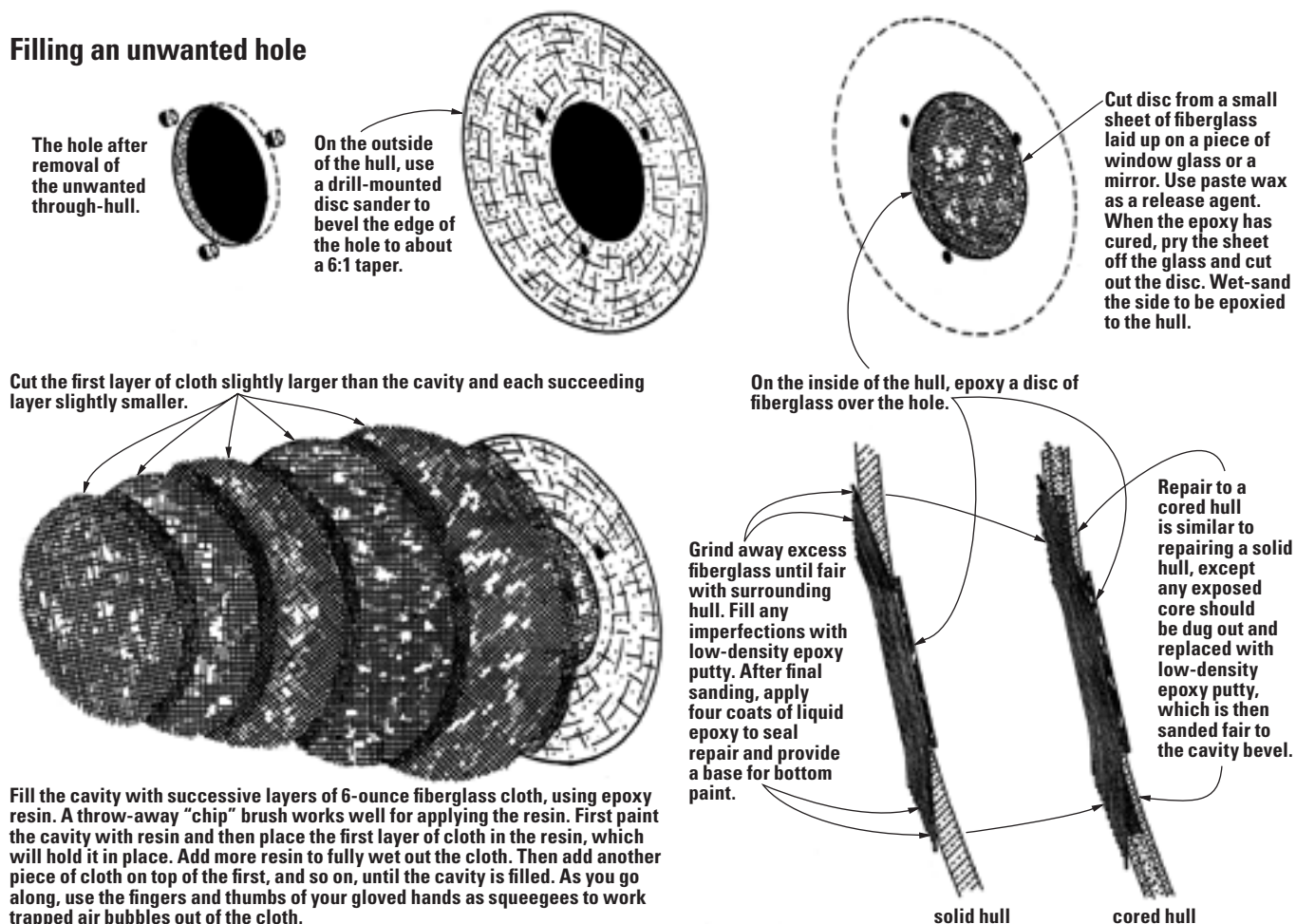
epoxy resin. When the epoxy has cured, pry the fiberglass sheet off the glass and cut out the disc. Wet-sand the side that goes against the hull.

When the epoxy holding the disc to the hull has cured, fill the hole from the outside with successive layers of fiberglass cloth, using epoxy resin. The cloth will readily conform to the shape of the hole. Begin with a layer that will bridge the cavity from edge to edge. Then by cutting each succeeding layer slightly smaller, there will be less excess to grind away when fairing the repair. After the patch is ground fair, fill in any imperfections with a low-density epoxy putty and, after it has cured, sand it fair. Three or four coats of liquid epoxy on top of that will finish the job, making the repair ready for bottom paint.

*(For more information about filling a hole, read "Fill That Hole," by Barry Hammerberg, in the November 2005 issue. —Eds.)* 

*Paul Ring is a contributing editor with Good Old Boat. He has sailed, repaired, modified, restored, and built boats for the past 42 years. Magnolia, his restored Cheoy Lee Offshore 27, graced the cover of Don Casey's book, This Old Boat. Paul currently sails his Nonsuch 260 with first mate, Barbara Brown, on Mobile Bay.*

## Filling an unwanted hole



# Installing a fishfinder

**Replace your depth sounder and get a GPS for free**

Sometimes sailing can seem like it was intended for those few folks with high standards and even higher budgets. Since that sometimes presents a problem for “the rest of us,” it’s always satisfying to find a way to beat the system a little bit by getting extra features for fewer dollars.

When we bought *Clio*, our Cal 31 based in the San Francisco Bay, her depth sounder was past its prime. When the unit finally gave out less than a year later, we knew we would need to replace it. Our boat is in a charter fleet, and there are just too many shoal areas in the San Francisco Bay to sail her without accurate depth information. The matching knotmeter on the boat was also ready to go, but given our limited budget, its replacement seemed less crucial.

As I began to investigate my options, I began to suspect that there was no inexpensive depth sounder on the market. I explored a variety of brands, looking at new units and at used equipment available on the Internet. My heart sank as I found myself preparing to spend several hundred dollars simply to receive one little piece of data. That seemed like a lot of money for just one number. (Needless to say, my hopes of replacing our knotmeter in the same fell swoop were fading fast. “Maybe next year,” I told myself.)

Eventually my search brought me to the array of fishfinders that are on display in every marine supply store.

As I poked around those displays, an idea began to take shape. What if

I were to install a simple fishfinder instead of a depth sounder on *Clio*?

These units were much less expensive and seemed to offer not only accurate depth in-



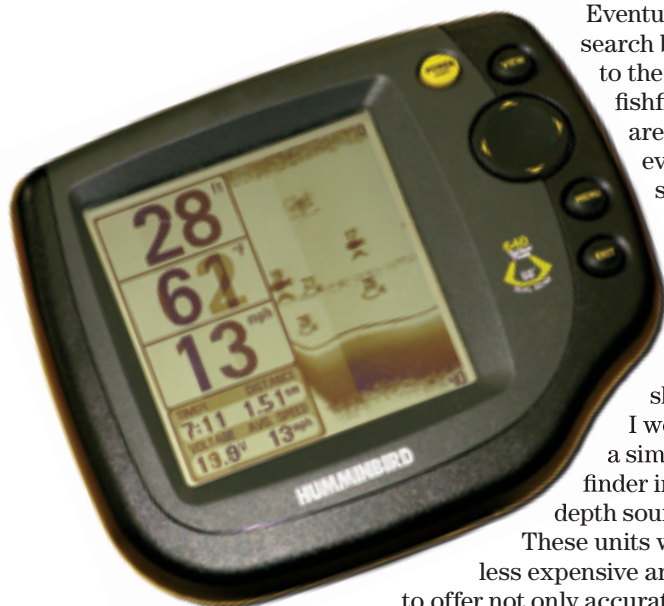
formation, but a lot of other information as well. Undaunted by the dubious looks from salespeople, I began asking more questions. Here’s what I found.

## The great divide

I learned that there is more than one side to the marine electronics industry; what happens on one side doesn’t necessarily carry over to the other. Historically, the sailing electronics industry has had little crossover with the fishing electronics industry. They have two separate market bases. But the needs of the boaters in each group are not entirely different. And when it came to depth-sounding devices, the fishing electronics folks seem to have found a way to become much more cost-effective.

My new question was this: how much electronic gear could I get for the cost of a replacement depth sounder? I figured I’d pay at least \$250 to get a traditional depth sounder. What kind of fishing gadget could I get for that amount?

The answer was that in that price range I could not only get useful real-time depth information but also water temperature and even the type of bottom below the boat. And by adding a GPS and primitive chart plotter, I could get my speed, distance to go, and other basic navigation aids. Furthermore, I could use National Marine Electronics Association (NMEA) output to connect to other electronics I might use. Oh . . . and I could also start watching the fish. Sounded good to me.





# on a sailboat

by Ron Vanderwell

The author's son, Adam, takes the helm.

## Fishfinder basics

I learned that, like depth sounders, fishfinders are sonar units that are aimed toward the bottom of the bay in order to identify the bottom. Like a depth sounder, they consist of a main unit and a transducer. The transducer broadcasts sonar waves that then bounce off the bottom or other objects in the water and return to the surface as an echo. The instrument then listens to these sonar echoes and calculates how long it took for the waves to return. From this information, it calculates how far away the bottom is.

So, a fishfinder can do exactly what a depth sounder does. And more: by calculating from numerous signals, it can begin to put together a simple picture of whatever else is underneath the boat, creating a graphic display that can show the hardness of the bottom as well as fish or other objects in the water.

In addition to the main unit and the transducer, a fishfinder may be part of a larger system that offers additional features. Optional GPS receivers are available, as well as cables to attach to a handheld GPS. Transom-mounted paddle wheels can provide speed information as well.

For our boat, I chose a Humminbird Matrix 12 fishfinder. It provided a good balance between cost and features and had received good reviews on websites I'd consulted. In addition, I liked the larger display compared with some of the other units in the same price range. I purchased the optional GPS receiver, which usually retails for around \$100. My total cost still came within what I figured I would have paid to replace my original depth sounder.

Now it was time to install these gadgets.

## The installation

Before I could start drilling holes or stringing cables, I needed to figure out how this system would best fit on our boat. Fishfinder units are designed to fit on a small dashboard, like those found on many fishing boats, with the transducer mounted nearby through the hull. A sailboat installation was going to present a few new wrinkles in this otherwise straightforward project. My boat had no dashboard or electronics panel at the helm. Furthermore, my sailboat has a 3,300-pound keel sticking several feet down into the water — would this get in the way of the sonar waves? Clearly, I had some decisions to make.

First decision: where to mount the main unit?

I concluded that the unit needed to be mounted in sight of the helm, since I sometimes single-hand my boat. That ruled out the nav center in the cabin. I considered using a bracket to mount the main unit on the forward bulkhead in the cockpit, but I was concerned about having an unobstructed view (especially if a crew member sat in front of it) and about the possibility of damage from something snagging the unit. The way I saw it, a broken fishfinder was no better than a broken depth sounder.

Humminbird offers an optional in-dash mounting kit for the Matrix series of fishfinders. This allows you to cut a hole in your dashboard the shape of the unit and provides a trim panel to cover the edges. I thought about using this method to mount the unit either in the bulkhead or somewhere in one of the coamings, but once again I was concerned about being able to see it when others were in the cockpit. Besides, I just don't like cutting big holes in my boat anywhere. As a rule, I prefer that my mistakes be reversible.

Ideally, I concluded, the unit should be mounted somewhere on the steering pedestal. This would provide optimal visibility for the helmsman. In addition, the pedestal guardrail would help protect the instrument from damage. I considered buying a GPS bracket for the pedestal guard, but an additional \$100 to \$150 for a bracket would have altered



An existing cup holder offered a good base for mounting the new fishfinder at the helm. The fishfinder can be swiveled so the depth can be viewed by a singlehander while raising sails.



**A close-up view of the transducer installation, top. The transducer is located near the bilge inside the starboard settee, bottom. No holes were drilled in the boat for this installation. The transducer is able to transmit and receive signals through the fiberglass hull.**

my conservative budget for the project.

I started eyeing the cup/binocular rack already attached to the pedestal. When I bought the boat, it already had a simple Snap-It cup-holder rack attached to the pedestal guardrails. I began to sketch some ideas and was soon convinced that I could create a mounting surface that would provide excellent visibility and protection. Most importantly, this option would cost very little. My decision was made.

I was eager to start installing the unit in the cockpit. But I realized that installing that unit would actually be the final step in the installation. To allow for accurate routing of the various cables, I would need to install all the various peripheral components first. Once they were in place, I could start to accurately run the various cables. And once the cables were in place, I could begin to set up the main unit.

That led me to the transducer.

### Transducer trepidation

A transducer is a deceptively simple device. It's small, usually made of plastic or bronze, and has no moving parts. It has a single cable extending from it. Yet any information from the fishfinder leaves and returns through that mysterious little

device. And that's what I needed to install next.

Humminbird now offers a variety of transducers. A fishing boat application may involve use of a through-hull transducer, a transom-mounted transducer, or an in-hull version in which the transducer sends and receives signals from inside the hull. During the sailing season, it's a lot of work to install a through-hull transducer on a sailboat unless the boat is stored on a trailer or scheduled for a haulout. The transom-mounted version also poses problems because the transom is not always in contact with the water when the boat is under way, especially in high winds or rough water. Naturally, this would disrupt the accuracy of readings.

I decided that the ideal application would involve an in-hull transducer, mounted low enough in the hull so it can maintain constant sonar contact with the bottom. In addition, the transducer should be mounted forward of any hull structures, such as keel and prop, which might cause bubbles or other disturbances and confuse the sonar readings. My unit came with a standard transom-mounted transducer, but rather than cutting a hole in the transom, I planned on mounting it to function as an in-hull model instead. This has worked fine.

I selected a location near the bilge beneath our starboard settee. This would be near the leading edge of the keel and low enough that it wouldn't leave the water when the boat was heeled. (I figured if the boat ever heeled far enough for the keel to start surfacing, knowing the water depth would be the least of my concerns.)

It amazed me to learn that a transducer could send and receive sonar waves through a fiberglass hull, but that's exactly what it does. Apparently, fiberglass allows the signals to pass right through. It is important, however, that the transducer be mounted securely to the hull with absolutely no air bubbles or other imperfections to disrupt the transmission. I learned that embedding the transducer in some kind of silicone sealant makes an airtight seal.

It's recommended that you test your transducer location before permanently embedding it in your hull, which only makes sense. To do that, you need some kind of temporary gel substance that can provide an adequate seal between the transducer and the hull — and is easy to clean up afterward. I found that a generous puddle of hair gel worked well. This allowed the transducer to settle securely in place but also provided for easy cleanup after the test was done. After jury-rigging a power source to the main unit and stringing the transducer cable over to the main unit, I was delighted to see that I was getting a reading on the bottom. Let the installation begin!

It didn't take long to clean up the hair gel and prepare for the permanent installation. I tested the transducer cable to make sure it could reach



the helm from this location. Then I prepared for the permanent installation. I applied a pool of silicone sealant and set the transducer securely in the middle of the sealant, wiggling it gently to make sure there were no voids or air bubbles beneath it. I weighted the transducer down lightly to make sure it stayed secure while the sealant cured. I then routed the cable underneath the settee and nav center, through the engine compartment, and up to the pedestal in the cockpit.

At last it was time to mount it in the cockpit.

### GPS receiver

Installing the GPS receiver was actually one of the simplest aspects of the job. The receiver is a small mushroom-shaped device that mounts to the deck or some other surface. I arranged to clamp mine to my pushpit rail with a simple VHF antenna bracket. I tucked it behind my LifeSling case to protect it from getting bumped. It has a cable that must be routed to the main unit. I ran the cable through an existing hardware opening in the coaming and then beneath the cockpit sole toward the pedestal.

The Matrix 12 also allows for NMEA data output from the GPS. With the help of a data cable, the GPS unit communicates navigation data to other electronics, such as my ST4000 autopilot. Someday I hope to connect this NMEA output to my laptop, but that will be another season's project. In any case, the NMEA data added another cable to be accounted for in my preparations.

### Modifying the cup-holder rack

My next step was to prepare the existing cup-holder rack to serve as a mounting base. The rack had a center area intended for storing a pair of binocu-

**“Besides, I just don't like cutting big holes in my boat anywhere. As a rule, I prefer that my mistakes be reversible.”**

lars. My design called for adding additional panels to the top, front, and sides of this area, creating an enclosed box in this space to support the display unit and hide the wiring. This design would still leave two cup holders available for use.

I went down to the marine store and purchased some white high-density polyethylene “marine lumber” to match the cup-holder rack. I then sketched out and cut the panels I would need. I used a sander to round off the rough edges and match the contours of the rack. Using a hole saw, I also created an opening in the center of the top panel for the various cables to reach the display unit (this hole would be hidden underneath the base of the main unit). I then fastened the panels in place with stainless-steel screws and used a white marine sealant to provide smooth, attractive seams.

The end result was an attractive instrument display with two cup holders. It was simple, it didn't really look homemade, and it hadn't cost very much. All good.

Now for the wiring.

### Getting wired

I was lucky in that a previous owner of our boat had already created a small opening in the stainless pedestal guardrail at the right spot for routing cables. If that hadn't been there, I would have needed to add a hole. This would not have been an easy task, given the strength of the



The mushroom-shaped GPS receiver is mounted on the pushpit rail near the LifeSling case, at left. Mounting the GPS receiver was the easiest part of the job. However, threading the cables (and the large plugs at the end of each one) through the pedestal guardrail, at right, was possibly the most difficult part of the job.



**Author Ron Vanderwell at the helm. Thanks to the fishfinder, he knows just how fast he's going and much, much more.**

stainless used in those rails. My other option would have been to use zip-ties to run the cables down the outside of the rails and then through an opening in the cockpit sole. This would have been a bit unsightly, but it would have worked.

For the power source, I wired the unit directly into an unused switch on our electrical panel. I then joined the power cable, the transducer cable, the NMEA cable, and the GPS cable together and threaded them up the pedestal rail until I could see them appear

through the little hole. Using needle-nosed pliers, I fished around until I could pull each cable through the opening. Since each cable ends in a different proprietary plug for connecting to the unit, it became increasingly difficult to get them all through the hole. I was also afraid I might damage one of the plugs, rendering that cable useless. I tried using a drill to enlarge the hole in the rail. This was when I discovered just how strong those rails really are. Eventually I had all the cables out in daylight, ready to be plugged in. Breathing a sigh of relief, I prepared for the final steps.

### The main unit

Now for the easy part. The Matrix has a simple mounting bracket that fits easily over the hole I'd created in the cup-holder rack. The four cables plug into that base and the main unit then slides down onto the base. I plugged all four cables in place and screwed the base down. I slid the main unit onto the base and turned on the power.

Houston, we have contact!

The unit powered up, recognized the transducer, and started looking for GPS satellites. I configured it to reflect my needs (time zone, salt water vs. fresh, depth offset, and so on) and I was set to go.

I took care to configure the depth offset for the unit carefully. Since the transducer won't be right at water level in most installations, there is a setting to create a positive or negative offset for the depth readings. I wanted to set the depth offset so the depth display would read actual depth under my keel, not depth under the transducer. I wanted things to be as simple as possible; in an emergency I didn't want anyone to have to mentally calculate whether a reading of 3 feet meant they had plenty of room or whether they were about to run aground. This step is necessary with any depth sounder.

This calculation took a little doing, since I couldn't precisely identify the waterline from inside the cabin. Using drawings and photos of the boat, I estimated that just over 3.5 feet of my 5-foot draft would still be below my transducer, so I set the depth offset at 3.7 feet. Then, using a weighted dockline, I measured the actual depth of the water in my slip and used that information to test my calculations. Close enough. The unit now gives a nice simple display of how much room we have before we touch bottom.

As I viewed the display, I realized that, due to the location of my cup-holder rack, the display was sitting a little lower than I would have preferred for easy viewing from the helm. I was able to easily fix this with a small stainless-steel

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hose clamp. Since the rack was clamped onto the guardrail, I found I could slide it up easily. So I slid the rack up to the height that I preferred and attached a clamp to one of the guardrails just under the rack. When I tightened the hose clamp, it held the rack at the new height.

## Results

I've really been happy with the results. I now have a simple, unobtrusive unit that provides a lot of important data that I need at the helm. Using the quick-connect feature of the unit, I can rotate and tilt the display as needed — for instance, to watch the depth readings while hoisting or lowering the mainsail. I can also easily remove the unit for cleaning or security. The display can be adjusted for contrast and for various levels of backlighting for nighttime use.

Depending on configuration, the unit makes it possible to toggle through a half-dozen views, providing a variety of data displays. Most of the views show me the depth, of course. That's what I paid for, after all.

But as I toggle through the displays, I can also see the various extras that came “free” with my depth sounder purchase: my current speed, average speed, distance to go, trip odometer, and so on. The unit also provides a simple chart plotter showing waypoints. (This function does not display actual charts, but rather a scaled portrayal of waypoint locations. It works for my needs.) There is also a bird's-eye view that portrays the boat (unfortunately portrayed as a powerboat!) traveling toward the selected waypoint. Once, in a sudden patch of heavy San Francisco fog, I found myself steering briefly with this view, as if using a video game. While I don't recommend it, it sure beat sailing blind.

And, of course, I can see fish. The system identifies small, medium, and large fish, based on the size of the air bladders inside them. An astonishing number of fish swim in our bay, and it's fun to “watch” them pass underneath our boat.

One extra plus: the sonar display allows me to get a sense of what the bottom is like, an added feature that can be helpful for anchoring. A clear, sharp bottom outline on the display indicates a hard bottom, while a thick gradient display points toward a soft, usually muddy, bottom.

As mentioned, I've also connected the GPS's NMEA data output to my ST4000 autopilot. This has been very helpful on occasion. In the San Fran-

**“I now have a simple unobtrusive unit that provides a lot of important data that I need at the helm.”**

cisco Bay, we often have strong currents that can run several knots. It's not unusual to see a navigation buoy creating a wake. In those conditions, an autopilot can become confused, since it only measures which way the boat is facing, not which direction it is actually traveling. However, aiming the GPS toward a certain waypoint, then prompting the autopilot to follow the GPS, will bring the boat right to the mouth of the channel or whatever other waypoint I've defined. It makes things easier.

Depth. Speed. Distance. Navigation. Fish. Not bad for a simple depth sounder. *A*

*Ron Vanderwell has been sailing ever since he first talked his in-laws into buying an old boat with him near Lake Michigan. He now lives in Sacramento, California, with his wife, three sons, and two dogs. He pastors a new church that meets in a movie theater, unless he's out sailing his 1979 Cal 31, Clio, on the San Francisco Bay.*



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# Expanding your range

## *Preparing for an extended coastal cruise*

by Beth Leonard

KAREN LARSON

**T**ired of the same-old, same-old? Finding it hard to get enthusiastic about sailing territory that has, through long acquaintance, become familiar and mundane? Caught yourself fantasizing about some excitement, some spice, some challenge? An extended coastal cruise can re-ignite the entire family's passion for sailing by offering new challenges and the opportunity to build your skills while creating unforgettable memories.

If you have gained your sailing experience in protected coastal waters and have come to know your home cruising ground well enough to dispense with charts and instruments most of the time, the idea of an extended coastal cruise to unfamiliar waters can seem daunting. While you may dream of taking a three- to four-week excursion up or down the coast, you may worry about whether you have the proper boat, equipment, skills, and crew for such an undertaking.

In fact, most experienced weekend sailors underestimate their abilities and knowledge and overestimate the boat, equipment, and skills necessary

for an extended coastal cruise. So take a close look at the essential ingredients — adequate time, a reliable and properly prepared boat, and a willing and enthusiastic crew — and figure out how you can put each in place for your next sailing season.

### **Adequate time**

Adequate time is the ingredient in shortest supply for busy families. If you're planning an extended family adventure, don't skimp here. As a rule of thumb, you won't average more than what your boat can comfortably cover in a half day of sailing. Even this represents a moderate, not a relaxed, cruising pace. For 25- to 35-foot boats, that translates into something like 20 nautical miles a day or 140 to 150 miles per week. If your goal is to reach a new cruising ground, you'll want at least three weeks — a week each there and back and a week to cruise the area. A month will make the pace more manageable and allow some time to sit out bad weather or to spend an extra day in a favorite spot.

To be sure you have allowed enough time, agree on goals and pri-

orities before setting off. This reduces the likelihood of conflict under way and prevents disappointments. Will everyone be happy if you just putter up the coast, or is there a specific place someone has his or her heart set on reaching? Do you want to sail every day or do you want to spend every few days ashore hiking or sightseeing? While you definitely don't want to end up constrained by a to-the-minute itinerary, agreeing on major priorities and understanding each person's preferences will help to ensure that everyone will return satisfied.

A month is a great deal of time for most families to commit, but the following suggestions can extend your range while maximizing the time cruising, as opposed to getting there.

- **Take advantage of prevailing winds.** Wherever possible, make miles downwind and plan short hops to windward. For example, if you're heading downwind to Maine from Long Island Sound, sail as quickly as you can to the farthest point you intend to reach on your trip, then turn around and cruise



slowly homeward, stopping at all the places you passed by on the way.

- **Sail overnight to increase your range.** Most boats can cover 100 miles in 24 hours of sailing, though the crew will then need a lay day to rest and recover. That increases a 25- to 35-foot boat's weekly range, bringing a more distant cruising ground within reach while increasing the skills of the entire crew.
- **Use the engine to maximize your range.** When cruising to a deadline, motoring in calm weather or motorsailing upwind will allow you to efficiently reach or return from a distant cruising ground, giving you more time to explore the new area.
- **Make contingency plans.** Locate marinas along your route where you could leave the boat if you run into bad weather, and figure out how to get home from those places. Having a friend or family member willing to pick you up somewhere will reduce the chance you'll try to keep going when you shouldn't.
- **Don't depend on non-family members for crew.** Too often, plans change and your vacation ends up the casualty. Invite crew along, especially experienced crew, and be glad if it all works out, but be ready in case it doesn't. Either be prepared to manage with your regular crew or know where you can leave the boat.
- **Cruise over two seasons.** Schedule your extended cruises for the

“As a rule of thumb, you won't average more than what your boat can comfortably cover in a half day of sailing.”

end of one season and the beginning of the next to effectively double your range. It might be cheaper to leave the boat for the winter somewhere other than in your home waters.

### A properly prepared boat

Assuming you have a boat you know and trust — one whose basic comfort level suits you for weekend cruising, one capable of carrying and accommodating your regular crew overnight, one with a reliable engine, and one you and your crew have the confidence and skills to handle under sail and power — you have a boat that can take you for an extended coastal cruise. An engine need not be considered an essential requirement for those with flexible schedules who have sailed extensively without one. However, a reliable engine offers an added margin of safety in unfamiliar waters and allows you to cruise to a schedule, which most people will have to do when trying to fit an extended coastal cruise into limited vacation time.

If your weekend sailboat meets these basic requirements, what do you need to do to thoroughly prepare it for a successful three- to four-week coastal cruise?

- **Make the boat watertight.** Boats that spend most of their lives tied to a dock, or daysailing in protected waters, often seem perfectly dry until they get out in open water in a hard rain and moderate seas. The most positive and good-natured crew will find it difficult to enjoy a month spent among wet bedding, mildewed clothes, and moldy books. Find and fix any leaks before you go! Assume you have a leak wherever you see any sign of weathered or rotting wood, green corrosion, rust, or drip marks. Dirt leaching out from under portlight surrounds or rusty bolts on deck fittings almost always signal leaks. Spend time aboard during a severe downpour and look for even a single drop of water. Under way in a moderate sea with the hull flexing, that drip will become an annoying leak.
- **Chafe-proof the boat.** Almost all boats have areas prone to chafe, but these rarely cause problems when a boat is sailed for an hour or two at a time or anchored only occasionally. But sail for a day at a time or anchor every night for a couple of weeks and those chafe-prone areas can lead to a parted halyard or anchor rode. Go over every line



If you doubt that your boat is up to an extended offshore cruise, take a look at *Isa Lei*, a 30-foot, 30-year-old Pioneer Van de Stadt, which completed a nine-year circumnavigation.



If you don't already have one, a dodger is a worthy addition to your boat if you intend to make an extended solo or family coastal cruise an annual event.





**Water damage to wood on a hatch surround, top, almost always means that the hatch is leaking and needs to be fixed. The peeling area where the overhead meets the bulkhead, the discolored wood, and the green color around the screw heads, center, all indicate a leak in the vicinity. This leak was caused by a deck fitting that had been removed without adequately sealing the resulting hole. Many coastal boats lack proper fairleads and have sharp toerails, which can easily lead to chafe, bottom.**

on your boat — all running rigging, halyards, sheets, docklines, anchor rodes — and look for signs of chafe. Reinforced water hose prevents chafe on docklines. Fire hose stows better for use on anchor rodes or snubbers. Split hose fitted around shrouds will prevent sheet chafe. Creating a fairlead by changing the angle of entry or exit for a line, or by adding a turning block in a strategic location, will end chafe on running rigging. Simple fixes can eliminate most chafe on most boats, and the small investment of time and money before you head off will be rewarded with fewer dramas.

- **Upgrade temperature control.** If you've sailed your boat extensively on weekends, you already know if you have adequate ventilation aboard. Now's the time to install that fan in the galley or buy that wind-scoop for the forepeak. A dodger will protect you in wet weather, provide shade on hot summer days, and give you a "room with a view" for cocktail hour. If you're considering a month in Maine or British Columbia, a heater will change the experience from roughing it to cruising in comfort on a damp, cold day.

In addition to reviewing the basics, take a look at the equipment aboard. Quite likely your boat already carries most or all of this gear. Where you have gaps, you may be able to buy used or borrow. With the exception of a dinghy or an autopilot, none of these items costs more than a couple hundred dollars.

- **Safety.** On any well-found boat, the safety of its crew depends first and foremost on keeping them aboard. To ensure crew-overboard equipment and procedures never have to be used in earnest, every boat should be equipped with jacklines and with a preventer for the boom so an accidental jibe does not result in a crewmember going overboard. Jacklines and harnesses should be used by everyone when overnight sailing and at all times by kids, pets, or anyone with balance problems. Netting inside the lifelines will also help keep kids and pets aboard. An accidental jibe can happen anywhere, anytime, and crew lost

during a jibe may end up injured or unconscious. A simple, safe, easy-to-use boom preventer offers the best insurance against both the jibe and its consequences. On boats up to 35 feet or so, a vang to the toerail is easy, effective, and simple enough that it will be used.

- **Ground tackle.** Many weekend boats spend most of their time tied to docks or moorings and don't carry ground tackle on the bow. But for an extended coastal cruise, marinas and moorings won't be options all of the time. From a safety perspective, the crew needs to be able to deploy an anchor quickly in case the engine dies while entering a harbor, or for use as a kedge if the boat goes aground. If the boat can carry the weight on the bow, the stemhead can often be retrofitted with a bow roller upon which an anchor can be mounted. Alternatively, lightweight Fortress or Danforth anchors stow almost anywhere; the stern pulpit or coachroof are two common choices. A 10- to 12-foot chain can be stowed in a bucket, 100 feet of nylon rode can be stowed in a mesh bag, and both can be carried in a cockpit locker. With the addition of a couple of shackles and a bit of practice, the whole arrangement can be put together and deployed in less than five minutes.
- **Sail handling.** Sail-handling arrangements must reflect the number of crew who will regularly sail the boat while coastal cruising. For most couples and families, that means setting the boat up for singlehanded in case one adult gets seasick or has to pay attention to the kids. Boats that have been set up for racing with a full crew will need to be modified to make sail handling safe and effective for one or two people. If you don't have one, consider investing in an autopilot. A simple lazy-jack solution for the mainsail will make dousing the main straightforward for one person with the boat on autopilot. Finally, properly-sized, self-tailing winches make shorthanded sailing safer and easier. Some non-self-tailing winches can be retrofitted with tailers purchased from marine stores, or a rope clutch can be used to control the line and effectively act as a self-tailer.

- **Navigation.** Most boats will already be equipped with a hand-bearing compass, binoculars, and a VHF. Crews without GPS should purchase an inexpensive hand-held model, as well as the relevant charts, tide tables, and cruising guides to the area they wish to cruise.
- **Comforts and conveniences.** The galley on most boats under 30 feet can best be described as Spartan. That doesn't mean you must subsist on sandwiches and canned soups for a month. A grill mounted on the stern can be used to cook meat, vegetables, and even pizza. A two-burner butane unit can double the stovetop capacity below. Insulated cooler bags stow more easily than rigid coolers for extending limited icebox capacity. Large thermoses keep water hot for use when washing up after the meal. With a little ingenuity and some split-second timing, the humblest of galleys can produce gourmet meals.
- **Transportation.** One other thing your weekend sailboat absolutely requires, which it may not already have, is transportation for taking the crew ashore. If your boat lacks a tender, the acquisition of something suitable need not be expensive if you can forego purchasing an outboard. Some yacht clubs allow members to borrow dinghies. Roto-molded hard dinghies can be purchased new for less than \$500. Used inflatables can often be found for bargain prices. It must be possible to stow the dinghy aboard during those times when weather or waves make it dangerous to tow.

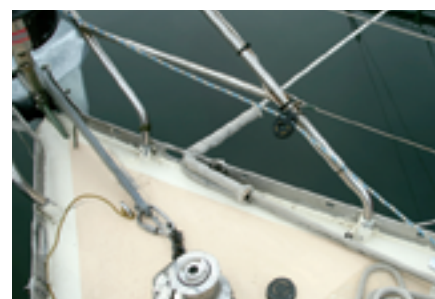
### Willing, enthusiastic crew

When contemplating an extended coastal cruise, most people's thoughts turn first to the boat. In reality, whether cruising for a month or sailing around the world, the boat matters far less than the crew's interactions, expectations, and attitudes. Most deficiencies in the boat can be made up for with a smile, some laughter, and a dose of good cheer; but no boat or equipment can make up for a negative attitude aboard.

Whatever interactions and attitudes exist between crewmembers during a daysail or a weekend cruise, they'll be the same — but more so — on an

extended cruise. Your first step in preparing for three or four weeks aboard consists of honestly evaluating those interactions and talking about them with your crew. The following rules ensure clear communication, which in turn facilitates good interactions (though Evans and I often find them easier to articulate than to implement).

- **Use words well.** Anyone with any sailing experience appreciates the need for proper terminology. Halyards, sheets, vang, outhauls, downhauls, rodes, and docklines all have different names because we need to quickly and clearly distinguish between them. But using words well extends beyond using the proper terms for things aboard. When there are 25 white boats in the harbor, "We'll anchor behind the white boat" does nothing to clarify the situation. Words like "no" and "go" can be easily confused, with disastrous results. Evans and I both tend to say "OK" too frequently and in too many different situations. When coming into a harbor to anchor, an "OK?" that means "Is that fishing boat heading for the pier and, if so, are we OK or are we about to be run over?" sounds exactly like "OK, we're in the perfect spot; go ahead and drop the anchor."
- **Develop a shared action plan.** Before any maneuver, no matter how routine, take a few minutes to agree on a plan of action. This can be as simple as "We'll drop the anchor between the black ketch and the sloop with the blue sailcover and fall back into the gap behind them." In other situations, like entering an unfamiliar harbor with unmarked hazards, it may take 10 or 15 minutes to agree on a plan and some contingencies. Knowing which crewmember will drop the anchor if you can't find the church steeple that acts as a leading mark reduces the tension, increases your safety, and increases your self-confidence and enjoyment.
- **Know when not to say anything.** For some reason, boats seem to remove a certain inhibition that we naturally assume on land. Yet on a boat, one person's bad attitude quickly infects everyone. So a major part of clear communications aboard lies in not commenting on



Short sections of reinforced water hose, top, are easy to coil and store and can protect docklines from chafe. Fire hose, center, stows readily in chain lockers or bags and makes excellent chafe protection for snubbers and rodes as well as for docklines. Sanitation or water hose, bottom, can be split and then fitted around shrouds to prevent sheet and sail chafe.





**These jacklines, consisting of a ¼-inch Spectra line threaded through the red webbing, are strong but won't roll underfoot.**

the irrelevant, uncontrollable, or annoying — unless you can do so humorously. If you're wet and miserable, chances are everyone else is as well. If a crewmember overreacts to something, just let it go! If it still bothers you an hour or a day later, then sit down and go over it calmly and rationally and agree on how you will avoid similar situations in the future.

Finally, talk through everyone's expectations with respect to life aboard. Some people find it easier to "rough it" on a small, simple boat than others do. But rather than buying a new boat or not going at all, find ways to compromise by putting money into



**This 34-foot boat has a robust bow roller capable of holding a large anchor. Bow rollers can be retrofitted on many boats.**

pampering yourself once in a while. If your galley is cramped and difficult to work in, plan on eating out several nights a week. If you don't have a shower aboard or the necessary water tankage, arrange to stay in a bed and breakfast once or twice during the cruise.

In addition to a positive attitude on board, you also need a complement of basic sailing skills. Your crew needs to have mastered sail handling (raising, reefing, and dousing); coastal navigation, using traditional aids to navigation (not just the GPS!); boat handling, including maneuvering under sail and power, anchoring, and docking; and crew-overboard procedures. Most weekend sailors don't realize the range

and depth of skills they have acquired, but can easily identify where they lack experience. In those areas, take a bit of time to practice before you head off on your longer cruise. Anchor out instead of staying in the marina; sail in winds strong enough to require a reef; use the hand-bearing compass to locate your position on the chart during a daysail; and practice crew-overboard techniques. By the time you get ready to leave your home waters, your crew does not need to have mastered all of these skills, but all should know what's expected of them and be willing to do their best.

If you and your family enjoy sailing, but have found that you're using your boat less and less, planning and preparing for several weeks or a month aboard just may re-ignite your interest and remind you why you bought that lovely sailboat in the first place. The first step — leaving your home waters and mastering the skills necessary to enter strange harbors with confidence and handle new challenges like tides and currents — is the hardest one. From there, it's only another small step to six months or a year spent cruising down to Baja or out to the Bahamas. *▲*

*Beth Leonard started out as a weekend sailor on the Great Lakes but her range now extends to the bottom of South America, where she and her husband, Evans Starzinger, spent the Southern Hemisphere winter of '07-'08 aboard Hawk, their 47-foot Van De Stadt Samoa sloop. Read more about their adventures at <<http://www.bethandevans.com>>.*



**Anchors like the Fortress and Danforth stow well in chocks on the coachroof or pulpit.**



**A block-and-tackle or vang strapped to the toerail makes an adequate and easy-to-use poor man's preventer.**



# Fridge-less cruising

***No regrets with this lifestyle alternative***

by Connie McBride



**Connie shows how hatches in the cabin sole provide easy access to these cans for daily use.**

**A**t some point in everyone's life, it becomes necessary to stop and think. Consider for a moment: are you doing what you are doing today because it is what you *want* to do or because it is what you did yesterday?

The lifestyle Dave and I have chosen is not always easy. Our 34-foot sailboat is our home, our ticket to see the world, and the sum of all of our assets. So when the boat seems too small, the ocean too big and scary, or life in general just too hard, we ask ourselves, "Why do we do this?" The answer varies but always revolves around a simpler, slower, and easier way of life for us and our three sons.

Any system you have on a boat will break, creating stress. Since we are trying to eliminate stress from our lives, it is no surprise that when something quits working on *Eurisko* we do not run to the nearest chandlery to replace it. Instead, we consider if we really need it at all. For the last seven years, except when it concerned rigging, the answer has often been

"no." Once we remove the broken piece of equipment, the boat is lighter and faster, we have more room aboard, and our lives are simpler.

We applied this philosophy to our refrigerator years ago when it died of old age. There was no need for a family meeting or discussion; Dave simply removed the entire system and gained another tool locker in the process. Cooling our perishables with ice was the logical solution until we realized that we now had to find civilization at least once a week. We tolerated the icebox alternative for a few months until it became an expensive hassle. In Georgetown, Bahamas, in 2004, an 8-pound bag of cubes cost \$6.

This outrage led to the familiar question: "Why buy ice?" The answer was: "So our food does not spoil." Which led to another question: "But do we have to keep food cool . . . or are we doing it *only* because we always have done it this way?"

Like most boaters, we had heard — but did not quite believe — that chilled

food is a luxury, not a necessity. We decided to try it for ourselves, and the results were better than we had hoped. We can keep most "refrigerate-after-opening foods" at room temperature for as long as it takes us to use them, even when the room is rarely cooler than 80 degrees. (I just checked the inside boat temperature: 95 degrees in October in Trinidad.) There are a few tricks to keeping perishables from perishing, though, so we have had to alter how we handle food. When compared with the bother and expense of refrigeration and ice, these changes seem minor.

Many cruisers have written about storing eggs for a maximum length of time. Lin Pardey, in *The Care and Feeding of Sailing Crew*, mentions coating the eggs with Vaseline or sodium silicate. She has kept eggs for as long as three months by turning them three times a week. "If they sit for a week without turning, they'll start to deteriorate after 25 days or so," she writes.

## **A different technique**

Unlike Lin, I have never been on a passage longer than 14 days. I am rather forgetful and admittedly a bit lazy, so my technique is different. I buy the eggs, put them in the warm box that out of habit we still call "the fridge," and use them when I am ready. In other words, I do nothing special except that I crack them into a separate bowl, rather than into a pan or a bowl containing other ingredients, to check for freshness. Using this do-nothing method, I have kept eggs for as long as



Dave provisioning.

three weeks and have lost fewer than a dozen in four years — less than the price of even one bag of ice.

In *Care and Feeding*, Lin also writes that you do not have to keep mayonnaise cold if you never put a dirty utensil back into the jar. From experience, I know that kids are forgetful and unlikely to make such a subtle distinction. For them, we needed a consistent rule:

never put *any* utensil in the jar. Instead, we shake mayo into a cup and use it from there. Not only does our mayo last up to a month after opening, we have even eaten leftover potato salad the following day for lunch.

We buy plastic jars of mayonnaise when possible to make this easier, since you can squeeze the jar. Shaking mayo out does work with a glass jar, albeit more slowly. Since mayonnaise and jelly are now sold in squeeze containers, this is the best option when they're available. We have also bought single-use packages from a restaurant-supply store. When neither of these choices is available, we buy jelly in small jars. Since it is nearly impossible to shake jelly out of a jar, we use a spoon to remove it but a knife to spread it, thus making the dirty utensil easy to identify. Before we instituted this jelly rule, what remained in a jelly jar would mold within a week. With our new rule, we have learned that jelly will keep for at least three weeks. (These days the jar is empty before the jelly spoils.)

## Keeping dairy products

Mustard, ketchup, hot sauces, pickles, relish, hot peppers, and salad dressing have rarely spoiled in our "warm box." Butter and margarine, however, must be handled carefully. Sticks of margarine do not melt and will keep for up to a month. We store each pound in a clean plastic food-storage container, date it, and rotate our stock. We found

that margarine in a tub generally melts at a lower temperature and the containers do not seal well enough to prevent disastrous accidents. Butter melts more easily than stick margarine too, but since I enjoy baking, we always have a pound or more that I use before it turns rancid. As an emergency backup, we store a pound of canned butter, something we have found only in the Bahamas and Dutch islands. Canned margarine is really just yellow shortening, and you can only use it as such without being disappointed.

Other dairy products, such as cheese and milk, required us to change our behavior when living without a cooler. We now buy cheese in small portions, store each one in a separate airtight container, and try to use it all within a few days once we open a package. Unopened, it does not mold for weeks, though it does get sharper. Hard cheeses, such as Parmesan and Romano, stay fresh much longer.

We used to buy UHT milk (Parmalat, for example) until a few of the unopened boxes spoiled. After opening, they lasted less than a day without refrigeration. Now we carry canned cream, evaporated milk, and condensed milk for cooking and baking. For everyday milk we use Nido or other brands of powdered whole milk and mix only what we need. We use this in cereal, coffee, and for cooking, and it tastes . . . like warm milk.

## The problem with meat

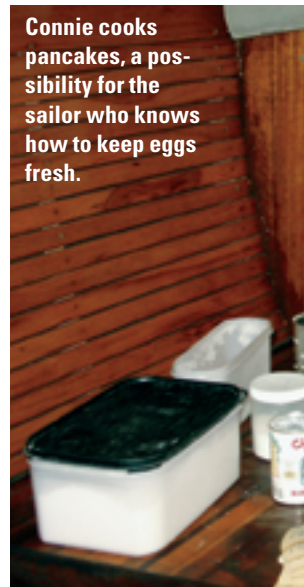
Meat presents its own set of problems when you have no means of keeping it cool. In port, we often buy fresh meat only a few hours before we plan to cook it.

We wrap frozen meat in layers of towels and are able to store it in an insulated cold/hot bag for up to 24 hours before cooking. On passages, in secluded anchorages, or on wet and windy days when we do not want to leave the boat, we



Son David's 23-pound record fish, soon to add variety to the McBride family menu.

Connie cooks pancakes, a possibility for the sailor who knows how to keep eggs fresh.





choose from our other options.

Canned meat is the first solution most boaters consider, and we do eat a considerable amount of it. We store Spam, corned beef, canned hot dogs (found in Dutch islands and Trinidad), ham, tuna, salmon, meatballs, turkey, chicken, and roast beef. A special treat we discovered in Trinidad is canned tuna with potato salad, Mexican salad, or pasta salad — a complete meal in one can. In some places, certain canned meats are unavailable, and we try to stock up on these when we can. We have also ordered canned chicken, turkey, and beef from Werling and Sons, <<http://www.werlingandsons.com>>, 888-375-1998.

Chorizo and ham tidbits are sold warm in the States, and we have kept them for several weeks before using. Once opened, we treat them like fresh meat and cook them immediately. We buy cured hams when we find them and have taken up to a month to finish one. After opening it the first time, we wipe the ham down with vinegar. Anytime we use some, we wipe the newly exposed area with vinegar, as well. On French islands, we have found a hard, waxed sausage that we store at room temperature for weeks before opening and then use within 24 hours.

Since these meats are often expensive and high in sodium, we have found several alternatives. Soya chunks (textured vegetable protein) are available in a variety of sizes for different dishes. The smaller pieces are an acceptable replacement for

### Dave McBride's Bean Burgers

In a medium mixing bowl combine:

2 cans black beans (drained)  
4 cloves of minced garlic  
2 teaspoons cumin  
½ teaspoon thyme  
1 tablespoon smoked paprika  
black pepper

Mash with a potato masher until most, but not all, of the beans are broken.

Stir in:

3 to 4 tablespoons dark soy sauce  
½ cup flour

Let stand 20 minutes.

Fry over medium/high heat in olive oil. Drop into the skillet and form into patties with the edge of the masher.

Beans and accompanying side dishes — one example of the healthy and filling meals that can be prepared with advance planning.



Fry until patties are firm, with a nice crust, generally four minutes per side. Drain on paper towels and keep warm in oven until ready to serve. Makes eight burgers.

Options:

Include soaked diced chipotle peppers. Substitute sage for thyme. Substitute wood smoke for smoked paprika. Form into sausage shapes, roll in bread crumbs, and fry.

meat in shepherd's pie, for example.

By far, our favorite meat alternatives are beans. We carry dry lentils, split peas, garbanzo beans, red beans, pink beans, and black beans. For those occasions when even a pressure cooker is not going to be quick enough, we also have cans of garbanzo beans, pigeon peas, and black beans. Dave is becoming quite proficient at making tortillas and pita bread. We use the tortillas for bean and rice burritos and for chimichangas, and the pitas for hummus and dhal (lentils). Meatless chili, three-bean salad, curried chickpeas and vegetables, and lentil soup are some of our bean meals, but the family favorite is bean burgers. When the boys have friends over for dinner we generally do not even tell them the burgers are not real and they rarely ask. In color, texture, and flavor, bean burgers are nearly identical to ground beef burgers. The five of us actually prefer them, even when ground beef is readily available. Much of Dave's bean-cooking knowledge, and a few recipes, came from Janet Horsley's *Bean Cuisine*. He also uses *The Joy of Cooking* as a reference.

### Fresh produce challenges

Keeping produce fresh without refrigeration is a challenge. We remove any plastic wrap or bags immediately and keep produce separated. Over the years as I have learned new techniques for

storing produce, I have jotted them down. Reviewing my notes, I see that onions are best stored in the light and definitely not with potatoes, which should be stored in the dark, preferably with apples. Apples, on the other hand, should never be stored with citrus fruits. Unfortunately, we can never seem to remember any of that, so we store all of our produce in separate hanging baskets. Since so much of our food is canned, Dave cooks with a lot of garlic and onions to liven meals up a bit.

Our lifestyle requires that we stop traveling for a few months each year to earn money, so we occasionally get to put down roots. Literally. Our middle son enjoys gardening, and we enjoy the results. When we are stopped, he grows tomatoes, peppers, and herbs in small pots on deck. We are still eating dried jalapenos and cayenne peppers from his last garden six months ago.

### Little is wasted

In the four years we have been without a fridge, we have thrown away a surprisingly small amount of food. One exception is leftovers. Until last year, there were few leftovers; we had three teenage boys. With two boys away at college now, things have changed. If we have enough food left for lunch the following day, we put it in a clean airtight container. We simply store one-pot meals, such as soups and casseroles,







Cooking eggplant parmesan.

covered in the pot. The next day, if whatever is in the pot still smells fine, we reheat the food for a minimum of 10 minutes before eating.

The sense of smell is a well-used tool when living without refrigeration. We give everything a test sniff before eating it: eggs, mayo, jelly, leftovers, and even canned food. We know some foods will mold overnight. For example, if Dave

food lifestyle occurs when we go offshore. The boys fish sunrise to sunset and often catch tuna, dolphin, mackerel, and wahoo. Even five of us cannot eat an entire fish before it spoils. Therefore, before we leave we ask friends to freeze gallon jugs of water for us to keep in the fridge. We can enjoy each fish for several days this way, perhaps until we catch another one, if we're

wants to include fresh tomatoes in a dish, he will put them on the side instead so they will not ruin any leftovers. Using our noses and common sense, none of us has ever suffered any ill effects from food prepared on board.

One concession to our warm-

lucky. The ice lasts about 10 days, and since we only have a 42-gallon water tank, the five extra gallons of water after the ice melts is a nice bonus.

A friend cruising on a large boat with all of the latest gadgets states firmly, "Refrigeration is the root of all boat problems." If his statement and our techniques seem extreme to some boaters, perhaps a compromise is more appropriate. Less food to cool means a smaller space and therefore a smaller and cheaper refrigeration unit (or less ice) necessary to cool it. Before purchasing your next fridge or bag of ice, consider all of your options, and you, too, may decide to cruise without a fridge. *▲*

*Connie McBride left Kent Island, Maryland, in June 2002 with her husband, Dave, and three sons. Aboard their 34-foot Creekmore, Eurisko, they cruised the U.S. East Coast and are sailing onward to yet-to-be-determined destinations.*

## Five-year-old apple pie

### Keeping track of 600 cans sensibly

I baked a pie last year using a perfectly good can of apple pie filling that was five years old. Before I started making the crust, I knew it was my last can and I knew exactly where it was. Considering that we have as many as 600 cans aboard *Eurisko*, there is a trick to knowing what is where for so long.

When we return to the boat with our provisions, we label and date every can with a permanent marker. Then we remove the paper labels. Part of our can storage is under the dinette table and impossible to get to when we are offshore. Therefore, half of each food type is stored there as a backup while the rest of the cans are stored in the bilge. Dave installed hatch openings in the cabin sole to allow for easy access to these lockers for daily use.

Every storage area has a name, and we write down where we stow each can. Later, we transfer this information to the alphabetized list that tells us how many cans of what food are stored in which locker. We can label, stow, and record 600 cans in an afternoon. Considering how much time we would spend searching for the ingredients for dinner without such a system, it is time well-spent. When we remove a can, we write a hash mark in the margin so we always have an accurate record of the food remaining. We take this list with us the next time we provision to help us remember what we need to replace.

Many boaters coat their cans with varnish or vegetable oil before storing. Since we generally have a




dry boat, we decided to line the lockers with Dri-Dek and see how long the cans lasted with no extra preparation. Once a year, before a large provisioning run, we remove all of the remaining cans (usually about 100) and move them

to one locker so we know to use those first. At this time, we throw away any cans that appear to be bulging or are possibly rusted through . . . about two cans a year.

After one particularly wet passage (beating to windward for 1,500 miles), we discovered salt water in some of our can lockers. We removed all of the cans, rinsed them in fresh water, and set them in the sun to dry. Before returning them to the newly cleaned and dried locker, we wiped each can with a bit of vegetable oil. These cans have lasted as long as others that have never been wet.

When I decided to bake a pie, I looked up "pie filling — apple" on the 13-page list and saw that there was one left in "Aft 3." I lifted the lid to the bilge lockers, moved a few cans around, and saw one marked "apple pie filling 6/02." That is how, for dessert last year, we ate a five-year-old apple pie.



You might say Jim Mumper and his 1968 Cal 36, *Diamond in the Rough III*, have bonded. His wife, Linda, and their two children enjoy sailing, but this is definitely Jim's boat.

# *Diamond in the Rough*

*One man's workboat has become a gem*

by Karen Larson

**J**im Mumper found two of the most significant things in his life in a bar: his wife, Linda, and his career. While we can't recommend this practice for everyone, visiting a bar on occasion certainly worked well for Jim. Their children are significant, of course, but the stork brought them.

And then there are boats. Sailboats play a significant role in Jim's life and played a defining role almost as soon as he discovered wind power. From his teens and onward, Jim has been messing about in boats.

A southeastern Pennsylvania boy, Jim always had a love for the water and was building and captaining log rafts at an early age. During his high school years, a friend — another Jim — from Annapolis invited him to visit. "Come on down, my dad has a boat" may very well have been the sentence that changed Jim's life.

"That was it," Jim recalls. "Sailing bit somehow. I liked the rigging, the boats, the wind, and the water."

College and time in the service intervened, but once Jim was free of these obligations, his life compass pointed toward Annapolis, where he and his family continue to live.

When he moved to Annapolis as a young man, he bought a 24-foot Rainbow and became an instructor in the early days of Jerry Wood's Annapolis Sailing School. After founding the sailing school, Jerry Wood and his wife, Cathy, also founded the United States Sailboat Show, more commonly known as the Annapolis Sailboat Show.

## **Jobs with sailing focus**

Working for Jerry Wood and his sailing school in the mid-1970s was an opportunity like none other for a young person, in terms of growth and experience. Jim recalls: "Jerry and Cathy were good mentors. Jerry was also building the Rainbows, which had been commissioned from Sparkman & Stephens. He put young people in charge of the school and the yard. He

gave them leadership responsibilities at an early age."

Jim's uncle was a product rep, and Jim decided he'd like to represent marine equipment lines. With that goal in mind, he next went to work at Fawcett's Boat Supplies in downtown Annapolis. He was working there, but not sure retail was for him, when he met a friend in a bar who told him that the U.S. Naval Academy in Annapolis was looking for a civilian to manage its sail-training craft. He got that tip 26 years ago and has been on the job with the Academy ever since.

"I'm working with the Academy's sailing fleet — 20 McCurdy & Rhodes 44s, Colgate 26s, IRC raceboats, 420s, Lasers — plus the Academy's powerboat fleet," Jim says. It's a dream job if you like messing about in boats." This position has enabled Jim to make deliveries and ocean crossings and to participate in several Annapolis-to-Bermuda races. After Dodge Morgan donated *American Promise* (in which





Dodge circumnavigated) to the Naval Academy, Jim was among a group of 12 who sailed her to Dartmouth, England, as a training voyage for midshipmen. Another group of midshipmen and experienced sailors brought the boat home to Annapolis. Each crossing took about 20 days.

In the mid-1970s, Jim met Linda (in a bar, remember) and they sailed the Rainbow on the Chesapeake Bay. “This first boat, *Diamond in the Rough*, was our dating boat,” Jim says. They were married in 1979 and the Rainbow was sold soon afterward. Another defining moment that any sailor would remember fondly was the time when Jim was struggling — in the small cabin of the Rainbow with no standing headroom — to zip up the back of Linda’s dress so they could attend the Oxford Regatta dance. He tells the story often and with great relish, “It’s a big day when your wife turns to you and says, ‘Honey, we need a bigger boat.’”

## Time for a bigger boat

The following year they found a Cal 29 to their liking. This boat was *Diamond in the Rough II*. This Cal was actively raced and cheerfully cruised for 15 years as their children — Sally and Jimmy — grew up. During this time another larger Cal caught their eye. “We saw a Cal 36 in the southern end of the bay,” Jim says. “I left a note on the boat telling the owner of our interest if he ever wanted to sell it . . .”

Fast-forward a couple more years. Jim finds a 1968 Cal 36 — a real fixer-upper boat — and buys it in 1994. He spends a year fixing it up and launches it the following July. During that time Jim is seldom home, as the project boat steals his time after work. Once he’s fully committed to this particular fixer-upper, the fellow with the boat that turned their heads to begin with gets in touch to tell them he’s now ready to sell the boat. Worse, he is asking *less* than the fixer-upper cost! But it’s too late. Jim is too far down the road with the project boat to turn back.

**The Cal 36 has wide sidedecks and a deck with few obstructions, top. It’s easy on the eyes, easy on the crew, and easy on bare feet. While *Diamond in the Rough III* looks great today, bottom, Jim Mumper has spent so much time on her refit that he calls his baby a “workboat.”**



"I put another 10- to 12-grands' worth of materials into this boat," Jim recalls. He added a new roller furler, three new sails, and new cushions. It had a structurally sound hull and there was no delamination, but it was cosmetically and mechanically bad. "Everything was mildewed. Paint was flaking. The systems were worn out: engine, plumbing, wiring . . . basically, I bought the hull and mast."

Jim says, "That boat should have been named *Driven*, because that's what I was. I worked on it every day except for Linda's birthday, Mother's Day, some of Father's Day, and Christmas." Instead of *Driven*, the Cal 36 was named *Diamond*. But after Jim raced her for a season and was disappointed by the less-than-stellar race results, superstition stepped in. "Notice how he added the rest of the name as an afterthought," Linda notes while observing the boat's stern. "That's why." These days Jim is sailing *Diamond in the Rough III*, and her race record is much improved.

### Good old workboats

"Workboats," Jim says. "They should be called workboats. Because from the day you buy 'em to the day you sell 'em, that's what they are." The first year with *Diamond in the Rough III*, Jim rewired, replumbed, got the old Atomic 4 running soundly, and painted the interior. "That first year I had her up and running and looking good again," Jim says. "After that, the work was less intense. The projects were more fun."

The next year involved replacing the halyards, replacing the original wooden spreaders with aluminum ones, sanding and varnishing, adding a barrier coat, and doing cosmetic work on the interior wood. Another year, Jim overhauled the mast, basically renewing the whole system including new wiring, new chainplates, internal halyards, and a paint job.

There was the dining table project, which required taking what Jim

---

**In the photos to right: Jim scrubbed the interior from top to bottom, painted the white surfaces, refinished the interior wood, added a new curtain-hanging system and new curtains, cut 11 inches off the "huge" dining table, and installed those small additions that make a boat a home.**







describes as a “huge” dining table and cutting it down to a more reasonable size by cutting off 11 inches and adding a drop leaf.

There’s a diesel engine in the long-range plan. But the 25-year-old



**Jim and Linda Mumper have sailed together on three boats named *Diamond in the Rough*, starting with their “dating boat” in the mid-1970s.**

Why trouble yourself continually improving a boat that is already bringing home silver in the local racing fleet? Jim is quick to reply: “When I retire we’d like to sail *Diamond* to Maine and to the Bahamas. If we can do that, I’ll be happy ... or should I say, more happy and proud of *Diamond in the Rough III*.” *Δ*

*Karen Larson didn’t become passionate about sailing until she met Jerry Powlas. They bought a C&C 30 soon after they were married and (within the limits of a sailboat and short vacations) have been sailing farther and farther afield ever since. They hope to increase their potential range with a trailerable C&C Mega 30, the infamous “project boat.”*

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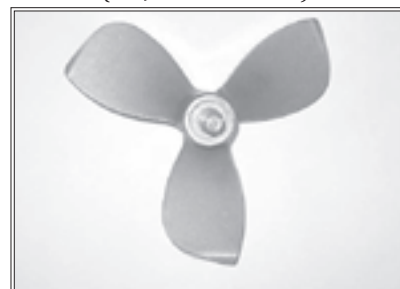
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# The Cal 36

## An inexpensive and economical cruiser/racer

by Ted Brewer

**A**fter the success of the revolutionary fin-hull/spade-rudder Cal 40 in 1963, it was inevitable that Bill Lapworth would create similar designs in other sizes to meet the demands of Jensen Marine, the Cal 40's builder, as well as those of the sailors who wanted to win races. It was equally inevitable that other builders would produce fin-keel production yachts in competition for the growing market. The three designs compared here are all California-built, as the yachtsmen of that state were the first to widely accept the fin for distance racing. The Eastern establishment was harder to wean away from the full-keel and keel/centerboard hull, but it slowly came around as the Cal 40 and other fin-keel yachts proved their worth in race after race.

The Cal and Columbia 36s were both designed by Californians, but the Islander was from the board of Alan Gurney, a young Scottish designer who also created the magnificent 73-foot ketch, *Windward Passage*, which set many records in her day. In any case, the three boats are quite different from each other, although all were developed as cruiser/racers at three-year intervals during the same general period.

Off the wind, the Cal 36, having the highest sail area/displacement ratio, should come into her own. The Cal 36 has a very clean underbody profile, but her fin is fairly long and the lateral plane area is generous by today's standards. The Islander's fin is shorter, slightly deeper, more shark-like, and of smaller area. She is the only boat of the three with a skeg-hung rudder, although the Columbia's spade rudder is fitted below a shallow skeg. I came across another drawing of the Columbia that showed an unusual scimitar-shaped fin some 400 pounds lighter than the squared-off fin in the sketch. It seems the scimitar fin may have been a patented type by another designer, over Bill Crea-lock's objections, and the return to a more conventional fin was done to improve performance.

All three of these boats will perform admirably, but I would have to give the Islander an edge in windward ability. Her taller rig with its much higher-aspect-ratio mainsail will go a long way to make up for her sail area/displacement ratio. In addition, her extra beam and displacement will increase her stability and, with her efficient fin, will add to her weatherly qualities. The Columbia 36 appears to be quite under-



Cal 36

Columbia 36

Islander 36

canvassed in comparison with the others. That is a result of her small mainsail, some 52 square feet smaller than the Cal 36's main, although both rigs have about the same mast height. This may be the result of the influence of the Cruising Club of America rule of that era and will not affect the yacht's usefulness as a cruiser. However, it could well reduce her chances in club racing, particularly in lighter air.

Off the wind, the Cal 36's big 304-square-foot mainsail will help make up for the Islander's larger foretriangle. Also, the Cal's clean underbody, without skeg or bustle, will let her get up and surf when the breeze is favorable. An around-the-buoys race between these two yachts would be very interesting indeed and, in my opinion, would be decided by the skill of the rival skippers and crews, the breeze that day, and the usual luck of the game. None of these three yachts will prove a serious contender against modern ocean racers, but both the Cal and Islander could provide a great deal of fun and competition for local club and area events.

Any one of the three yachts will give her lucky owners a great deal of pleasure as a relatively inexpensive and economical cruiser within the limitations of their accommodations. The Columbia 36's arrangement, with the chart table up forward across from the head, may be a bit unhandy at times but the other two boats have fairly straightforward, late-1960s layouts. As well, all three yachts come up with a reasonable comfort ratio for their size and a reassuring capsize number. Given a thorough going-over by a competent

marine surveyor, and a refit as required, any of the yachts will prove to be capable of comfortable coastal cruising — and even adventurous bluewater voyages — in the hands of a competent skipper. *△*

*Ted Brewer is a contributing editor with Good Old Boat and one of North America's best-known yacht designers, having worked on America's Cup boats, as well as boats that won the Olympics, the Gold Cup, and dozens of celebrated ocean races. He also is the man who designed scores of good old boats . . . the ones still sailing after all these years.*

	Cal 36	Columbia 36	Islander 36
<b>LOA</b>	35' 6"	35' 9"	36' 1"
<b>LWL</b>	27' 0"	28' 3"	28' 3"
<b>Beam</b>	10' 4"	10' 6"	11' 2"
<b>Draft</b>	5' 8"	5' 5"	6' 0"
<b>Displ.</b>	11,200 lb	12,000 lb	13,450 lb
<b>Ballast</b>	4,500 lb	5,000 lb	5,500 lb
<b>LOA/LWL</b>	1.315	1.265	1.277
<b>Beam/LWL</b>	0.383	0.372	0.385
<b>Displ./LWL</b>	254	238	266
<b>Bal./Displ.</b>	0.402	0.416	0.409
<b>Sail area</b>	600 sq ft	557 sq ft	612 sq ft
<b>SA/Displ.</b>	19.18	15.43	17.3
<b>Capsize no.</b>	1.85	1.83	1.88
<b>Comfort ratio</b>	25.9	26.3	27.1
<b>Introduced</b>	1965	1968	1971
<b>Designer</b>	Bill Lapworth	Bill Crea-lock	Alan Gurney



# Apalachicola Noel

## The Spirit of Christmas Cruising

by Zora Aiken

**A** Halloween departure from Lake Michigan guaranteed a winter arrival in Florida. It also put us considerably behind the usual snowbird fleet. We'd been so busy practicing cruising, we hadn't stopped to realize that in nearly two months on the water, we'd not met another cruising boat going our way. Or any way. Soon we'd be forced to leave the relative protection of a confined waterway to cross the Gulf of Mexico on an overnight sail from Apalachicola, in Florida's panhandle, to Clearwater, on the west coast near St. Petersburg.

Though only an estimated 36-hour sail, it would still be a major undertaking for Great Lakes sailors whose chief experience with night travel was running along a visible shoreline counting harbor lights. This southbound journey took place long before the availability of GPS. Surely we couldn't miss the west coast, but finding the right harbor on that coast might take some searching.

So it was a happy surprise to arrive in Apalachicola and find not one, but three other cruising boats, all with the same Gulf-crossing plan. We were excited to see *Flyaway*, a Cal 34 we'd spotted weeks before at the Chicago Yacht Club, looking totally out-of-place with its anchors, dodger, weathercloths, even a windvane — all gear that most Chicago sailors would never need on their stripped-down racers. We thought *Flyaway* would be basking in southern sunshine by now, an idea once shared by the crews of the other two boats too. *Willow*, a graceful 40-foot ketch from Wisconsin, and *Quest*, a 28-foot sloop from Missouri, were both owned and sailed by young couples on their first extended cruises outside the Midwest. At 27 feet, our *Munchkin* was the smallest of the bunch.

The three boats had already spent three weeks in Apalachicola, playing the cruiser's favorite game of waiting-for-weather. Though unlucky for them, the delay was great from our view: now we'd have company for The Crossing. It was unusual for the weather to be so consistently awful in December. Ordinarily, a two-day window would not be too much to expect, but this was not an ordinary season. One after another, strong northers had been swooping through, roiling the shallow Gulf waters enough to keep the sailors in port.

### Adopted for the duration

*Flyaway*, the only boat whose crew had years of cruising experience, was staying at the city dock, perhaps wisely maintaining some distance from the novices. The rest of us shared an extension of the loading dock at a local crab-canning facility. The dock's owner, Roger, also owned the only sailboat in Apalachicola, noteworthy because the area is notoriously shallow oyster country. Because of our common interest, Roger adopted us for the duration. No charge for dockage. Electricity was

provided by usurping the power from the factory's soda machine. And there was free crabmeat, fresh and canned, both lump and claws. We were so new to seafood, we didn't realize what a special gift that was!

Our three boats were rafted to a retired shrimper that was tied to the dock, though tying it at all was hardly necessary, since its keel was firmly planted in the bottom goo, stuck in a permanent list to port. Since we were the last boat to arrive, we were rafted farthest out, a good position in regard to uninvited critters from shore, but less desirable from the perspective of taking ourselves to shore.

With the date pushing December 20, it was obvious we'd soon see one more chilly Christmas, even if this *was* Florida. The prospect of spending the holiday with new boating friends quickly canceled any disappointment about a change of holiday plans; in our case, we had none to change and were delighted to be part of the mini-fleet. We stopped looking at weather and started thinking celebration.

What's a party without decorations? One of the captains soon embarked on a green-finding expedition, checking out the availability of miniature evergreens. He returned with enough fresh pine boughs to tie up and around all the masts, adding the requisite contrast of red-ribbon bows. Twinkling lights soon outlined cockpits and illuminated entries, while inside each boat a charming variety of handmade ornaments twirled from every convenient handle or

**“We stopped looking at weather and started thinking celebration.”**

hook. Oversized Santa socks came out of hiding to be hung by the kerosene heater with extreme care.

Cruising budgets being what they typically were at that time, presents were not a problem — they were hardly a consideration. Cheerful cards and colored foil or paper would make welcome gifts of a gallon of stove alcohol (a gift that truly does keep on giving) or perhaps a new Vise-Grip to replace the one currently resting at the bottom of Mobile Bay. Through all the happy preparations, Christmas cheer was served in the form of eggnog, hot cider, or the jug wine that satisfied budget restrictions, if not an educated taste test.

### Dinner by committee

As for Christmas dinner, we discovered a real bonus at our substitute dock. The shrimper's galley had a full-sized oven, something none of our little boats could boast. And miraculously (in keeping with the season), the oven was still functional. An afternoon of scrape-and-scrub teamwork

brought the borrowed galley up to user specs, allowing us to plan the meal around a true holiday center. With a real turkey to dress, how could dinner be bad?

It couldn't and it wasn't. Traditional side dishes were assigned to each small-boat galley, and the collective result was as grand a feast as any a reformed Ebenezer could want (or any a land kitchen could produce). It was all made even more enjoyable with the ongoing consumption of more of the jumbo-bottled cheer, whose bouquet had long since ceased to matter.

Dinner ended, but of course the party did not. The sound of music drifted through the hatch and our haze: a familiar song of Christmas was coming from the direction of town center. What a good idea — what better way to celebrate the season than to share the day with others of like mind!

An enthusiastic hike up the street brought our party to the source of the music. A small crowd had gathered around a flatbed truck that was serving temporary duty as a stage for a lady at a piano. The mobile choral director led the carolers about, and we eagerly, if uninvited, joined in, having by now cleverly dubbed ourselves the Tabermackerel Choir. A few flakes of white actually fell from above, surely a sign that someone was pleased with the spirit of our song.

When the piano lady quit playing and the original choir members quietly drifted away, we didn't even wonder why; we kept right on singing. As we walked around the town, porch lights were turned off at our noisy approach, but still we didn't get the message. We were determined to find someone who would listen, and ulti-

mately we succeeded. Sort of. Arriving in front of the city jail, we lined up and gave our best efforts — or at least our loudest efforts — to a few choruses of “God Rest Ye Merry Gentlemen.”

In retrospect, that particular carol was probably a poor choice despite its upbeat lyrics, as the residents of that particular building might well have had reason to dismay. Who were we to suggest otherwise?

But, in the true spirit of the season, we finally got a response. A quiet “Right on!” echoed through one of the barred windows, followed by a comment that may have been exactly the message we needed, if not precisely the one we sought: “And God rest y'all, too.” ▲

*David and Zora Aiken have been meandering by boat since 1974, finding inspiration for painting and gathering material for writing. Their books include Good Boatkeeping, Second Edition; Cruising, the Basics; and Fiberglass Repair: Polyester or Epoxy. “Home” since 1978 is a good old classic 1963 Chris-Craft sloop, Atelier.*



DAVID AIKEN



**Note:** John Vigor is well-known in the sailing community as an accomplished writer of non-fiction. What our readers may not know is that John also has written three delightful novels for youngsters 8 to 12 years of age. These works of fiction feature rollicking adventures at sea while exploring issues that any young adult (or grown-up, for that matter) can relate to. His first novel, *Danger, Dolphins, and Ginger Beer*, was such a success that John penned a sequel, *Sally Steals an Elephant*, featuring the same cast of characters. His final work of young-adult fiction, *So Long, Foxtrot Charlie*, is a standalone. The second two novels were never published in print format and are available as Good Old Boat audiobook exclusives. We are pleased to offer excerpts from all three books here. —Eds.

# Danger, Dolphins, and Ginger Beer



As they plunged on into the darkness, Sally could tell they were getting near the island. The land sheltered them from the wind. The waves were getting smaller too.

It was dangerous to sail too close to the reef in the dark, but perhaps, now that it was calmer, if they went very slowly . . .

"Light dead ahead," yelled Andy.

Sally understood as soon as she spotted the first leaping sparks. "Good old Peter!" she said. "He's building up the campfire to guide us home." She suddenly felt all her mus-

cles go limp with relief.

Daniel's [their rescued dolphin's] injection must have worn off by now, but she was still keeping quiet. Now they had a chance to get her back into the lagoon in time.

"Get the flashlight out of the locker," Sally said. "Keep shining it at land, so Peter knows where we are. He's going to have to tell us when to tack." Only he could guide them in.

Sally sailed with all her skill in the dying wind, judging its direction by the feel of it against her cheek and the way it ruffled her hair.

Peter had seen their

flashlight. Now he was shining his. "He's flashing," said Andy. "Dit-dah-dit-dit."

Morse code. Just like Dad had taught her. "That's L," said Sally. "He wants us to turn left. Ready about! Lee-ho!"

*Redwing* tacked smartly, then angled in slowly toward the reef they couldn't see. It felt very strange, like a blind person being guided by a dog.

"Dit-dah-dit," said Andy.

"That's R. Ready about again . . ."

As they neared the gap, Peter made them sail in shorter tacks. Sally could see the fire better now. Shadows jumped on the walls of the tent. They must be getting close.

Suddenly Andy's voice was shouting: "Reef ahead!"

Sally yelled: "Are we okay? Are we heading for the gap?"

"Yes, keep going straight!"

Straight? That didn't sound correct. Surely the gap was off to the right? Andy must be mixed up. He was guiding them on to the sharp coral reef.

She turned *Redwing* toward the right, where the gap should be.

"No, no!" yelled Andy. "Turn back the other way!" He pointed the flashlight ahead. It shone on unbroken reef. It was close now. In the pitch blackness *Redwing* seemed to be moving very fast.

Andy yelled desperately: "Turn left, turn left!"

At the last moment she thrust the tiller down and *Redwing* spun to the left. They scraped past a coral ledge with inches to spare and, before she knew it, *Redwing* was dashing through the entrance gap.

"Straight now!" cried

## Ginger Beer

½ yeast cake	ground ginger	sugar	water	lemon
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Start the ginger beer "plant" in a jam jar with half a cake of yeast, 2 teaspoons each of ground ginger and sugar, and 2 cups water. Every day for a week add a level teaspoon each of ground ginger and sugar.

At the end of the week strain through a cloth and dilute the liquid thus obtained with about 14 cups of cold water. Make a syrup of 4 cups boiling water and 3 cups sugar, plus the juice of a lemon. Stir well and add, still stirring, to the strained ginger liquid.

Fill bottles with this up to 3 inches from the top and screw or cork securely. Leave to stand for a week before using.

The sediment left in the cloth after straining is the "plant," which continues to double itself each week. Put each half of this immediately into separate jars and add 2 level teaspoons each of ground ginger and sugar and 2 cups water.

Continue to feed these plants daily with ground ginger and sugar for a week.

Original recipe for ginger beer from a Durban, South Africa, newspaper (circa 1965). Tested by John Vigor (with occasional explosive results).

Andy. "Keep straight!"

Peter came running to meet them.

"Are you all right?"

"Yes, we're fine." Sally hopped out of the boat. Her legs felt shaky. "It's a good job *Redwing* turns quickly," she said, "otherwise we'd have hit the reef."

Peter said: "Why are you dragging the tent bag?"

"Daniel's in it. It's a long story," said Sally.

"We've got a lot to tell you," said Andy.

"And I've got something to tell you," said Peter.

"Well, let's get Daniel settled first," said Sally, "then we can talk our heads off."

They towed Daniel along to her old place in the shallows and pulled the bag off.

"He sure looks a lot more normal without the duct tape," said Peter.

"She," said Andy.

"What?"

"It's a she," said Sally.

"And she's going to have a baby."

"Wow! Is that why you brought her back?"

"Yes. And that's why we took so long."

Sally stroked Daniel's head, digging her fingers into the soft flesh and dragging them back. She traced the edges of a dark patch on her side that looked like a horse's saddle.

Daniel seemed to be quite happy to be in her old place once more. She looked tired after the long journey. But she was breathing regularly and her eyes looked bright.

"It's a good job she didn't struggle on the way back," said Andy.

"I think she trusts us," said Sally. "She knows we're try-

**“Redwing tacked smartly, then angled in slowly toward the reef they couldn’t see. It felt very strange, like a blind person being guided by a dog.”**

ing to help." She gave Daniel a pat. "Now you just have a good night's rest and we'll see you in the morning. Tomorrow you can have some food."

"I'll catch her some fish," said Peter. "I know a good spot . . . but will she stay in the lagoon tonight? Won't she swim away?"

"I don't think so," said Sally. "She's exhausted. And she knows we're her friends. When she has her baby we'll fetch some netting from *Freebooter* [their father's boat] and sling it across the

lagoon entrance."

Now that the action was over, Sally felt weak. For the first time she noticed the delicious whiffs of meat and vegetables simmering over the campfire. Her stomach ached with emptiness. "I'm starving," she said.

"Me, too," said Andy, "what's to eat?"

"*Freebooter* stew," said Peter. "The best there is."

"Oh boy," said Andy, "oh boy! Three cheers for Chef Peter!"

**O**om Carel came through from the Production Department when he heard the door bell jingle.

"First customers today," he said, waving them in.

Sally swung back the wooden flap in the counter. "We're not customers." She darted into the front office and flung her backpack into a chair. "We have a confession to make."

"Oh," Oom Carel said, pulling his snuff box from his shirt pocket. He tried to look very serious.

"We did what you said," Sally went on. "We stole the elephant."

Andy added: "You said someone should steal her, so we did."

"And now we've lost her," Peter said gravely.

Sally stood directly in front of Oom Carel. Why was it so hard to say the words? "We need . . ." She

## Sally Steals an Elephant



coughed and put her hand to her mouth.

"What do you need?" Oom Carel asked.

"Um, we need, we need . . ."

Oom Carel filled in for her: "Help. Is that what you need?"

"More like advice, really," Sally said. "Well, actually, yes, help. Help." It felt better now she'd said it.

Oom Carel screwed a pinch of snuff carefully into each nostril and took a deep sniff. He sneezed with a short explosive blast. Footsack, who had been asleep on the typewriter, woke up with a start. She walked slowly and stiffly across the room, stretching her legs as she went, to inspect the visitors. Peter put out a hand and she rubbed her head against it.



## “You tried to steal an elephant, and failed. She got away on her own and disappeared into the forest, which is exactly what you wanted. Now — what’s the problem again?”

“Sorry, Footsack,” Oom Carel said. “Did I wake you?” He turned to Sally. “So,” he continued, “you say you stole an elephant?”

“Yes.”  
He bent down and looked her in the eye. “Oh yes. I see. Three kids stole a huge elephant?”

“Yes.”  
“Um. And then you lost her? A great big beast, as big as a barn, and you lost her?”

“Yes.”  
Oom Carel smiled knowingly. “Pull the other one,” he said.

“I beg your pardon?”  
“Well, I’m not so stupid that I can’t see you’re

pulling my leg.”

“But it’s not a joke,” Sally insisted.

“Oh, it’s quite all right. I like jokes. I have two young nieces who play jokes on me. I like clever jokes.”

“It’s true.”

“Hmm.”

“No, really. Honestly.”

“Well, explain this then: This morning Hennie Swart reported to the police that his elephant was missing. He said she pulled up her stake last night and escaped into the forest.”

“Well, yes. But . . .”

“So, are you still telling me you stole her?”

“It’s true,” Sally protested. “It’s true. We did.”

Oom Carel pulled out his red and white polka dot handkerchief just in time to smother another huge sneeze.

“We did steal her,” Peter said. “We took Dad’s bolt cutters.”

“They were going to cut the lock,” Andy said earnestly. “It’s true. They told me.”

“But I tripped, and she got a fright and pulled the stake out,” Sally said.

“Hmm,” said Oom Carel. He looked deep in thought as he led the way back to the Production Department. He sat down at his Linotype machine. “Suppose I believe you so far,” he said cautiously. “Just suppose. Now — what happened after she pulled the stake out?”

They all spoke at once.

“She followed us down the road.”

“Clanking like anything.”

“We couldn’t get rid of her.”

“She only ran into the forest when she heard Hennie Swart’s voice,” Sally said.

“And we thought that would be OK. But now I think she’s

going to get her chain caught in some roots. I think she may starve to death.”

“Ja, well, maybe.” He looked long and hard at Sally. “Maybe you did do what you say.”

“Yes.” She sighed with relief.

Oom Carel took some warm metal type from the machine and placed it in a big steel tray the size and shape of a newspaper page. Then he turned to look at them again and scratched his head.

“Let me see if I’ve got this right,” he said. “You tried to steal an elephant, and failed. She got away on her own and disappeared into the forest, which is exactly what you wanted. Now — what’s the problem again?”

“The chain and the stake,” Sally said. “They’ll get stuck in something. She won’t be able to get food.”

“You think so?”

“Oh yes, yes. We’ve got to find her before she starves. We must get the chain off her leg.”



## So Long, Foxtrot Charlie

He grabbed the microphone for the VHF radio. “Coast Guard group San Diego, this is the vessel *Orca*. Do you read?”

Fox, Sara, and Owl pressed close around the radio. It was silent. Not even the scratchy sound of static came through. Mr. Brooker tried again.

Fox stared hard at the radio in its smart gray metal

box. He willed it to speak. He traced the name, Icom, with his forefinger, and followed the little halo that went over the “I.” After a while he said: “It’s dead. Is it the batteries?”

Mr. Brooker tore up the floorboards in the wheelhouse and a gust of hot air wafted up from the engine room. It reeked of hot oil and diesel fuel. He peered

down at the engines. "Batteries are disconnected from the alternators," he yelled. "The batteries have run down. Those fools must have disconnected the alternators when they installed the new steering cables." He slammed the floorboards down. "You're right, Foxtrot Charlie. No batteries."

And no radio, Fox thought. And no fuel. And no spare fuel. And no engines. How could Mr. Brooker be so dumb? No fuel? That was Rule Number One.

Dad never ran out of fuel. At sea, you can't just walk to a gas station, he always said. If you run out of fuel at sea your life's in danger. Other people's lives, too, maybe — the ones who have to rescue you. Fox could hear him saying it. That's why Dad always liked sailboats. You could always get home.

But *Orca* wasn't a sailboat. She was a powerboat without power. She was drifting and helpless out at sea in a storm.

A big wave slammed against her topsides and Fox ducked, from pure habit. A sheet of spray jetted high in the air and landed with a loud rattling on the cabintop, like hail on a metal roof. Cold rain was driven sideways against the wheelhouse windows and slid down in wide, twisting dribbles. A low, moaning howl came from an open deck ventilator.

Mr. Brooker hung on to the kicking wheel and peered out at the darkening skies. Owl tugged at his arm. "Will we be all right?" he asked.

Mr. Brooker patted his back. "No problem. Handling it well. Good, seaworthy boat."

Fox felt sick deep in the pit of his stomach. It wasn't seasickness. He didn't suffer from that. It was the sickness he always felt when an adult let him down. Mr. Brooker couldn't be trusted any more than any other adult. He couldn't even be trusted as much as Mom. At least Mom had never let him down before Dad died and before she got sick. Mr. Brooker didn't have that excuse. He wasn't sick.

"Where are we going?" Sara asked. "Will we see another boat?"

"Getting a bit dark for that." Mr. Brooker spread his legs farther apart as *Orca* rolled. "No problem. We'll just drift southeast until morning. Then we'll see someone. Get a tow back."

Fox peered at the chart Barnacle had been sitting on. He ran a finger southeast. The first bits of land in their way were the Coronado Islands, 20 miles away in Mexican waters. Nobody lived there. There was no harbor. Just reefs, dangerous rocks, and steep cliffs.

"I'm scared," Owl said. He took off his glasses and rubbed them nervously on his shirttail.

"Mom will be worried," Sara said. "She won't know where we are."

"My mom, too," Owl said. "She panics."

"Sea World will tell them I picked you up," Mr. Brooker said. "They'll know we're all together."

"Maybe they'll call the Coast Guard," Fox said brightly. "They'll come looking for us."

"Never find us in the dark." Mr. Brooker twisted the useless wheel savagely. "No navigation lights. Just our old kerosene lantern."

An extra-large wave

**“And no radio, Fox thought. And no fuel. And no spare fuel. And no engines. How could Mr. Brooker be so dumb? No fuel? That was Rule Number One.”**

broke high to windward and surged down against *Orca's* side in a smother of white foam. It hit with a solid thump that sent a judder through the boat from stem to stern.

Mr. Brooker weaved across the wheelhouse and grabbed his waterproof jacket. "Think I'll drop the anchor."

"Will it stop us from drifting?" Fox asked.

"No. Water's too deep. It's the drag we need. Slow us down. Keep her head into the waves."


"I can help you," Fox said. "I know what to do."

"No. You stay. I can do it."

Mr. Brooker slid back the heavy wheelhouse door and stepped on to the deck to

leeward. He clung tightly to the high bulwark and edged forward.

Up in the bows, he let go of the bulwark and held tightly to the big black windlass with the rust-streaked anchor chain wound around it. He pulled the long, yellow lever to free the chain, but his foot slid on the wet deck. His leg slipped under the heavy, fast-moving chain. It scraped over his jeans, ripping the material away just below his knee.

Frantically, he pushed the lever and the surging chain stopped with a jerk, whipping and crashing down on his shin, smashing through the bone. 

## Read more . . .

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# Working-class heroes



The Colin Archer Redningskoite was originally designed for pilot and rescue work on the coast of Norway.

## The origins of classic cruising sailboats

by Charlie Doane

It is not an exaggeration to say that the famous early American yacht *Cleopatra's Barge*, perhaps the first purpose-built cruising boat ever conceived, was actually a working boat in disguise. Built in 1816 for George Crowninshield Jr., a wealthy merchant mariner from Salem, Massachusetts, who wished to embark upon a "voyage of amusement and travels," *Cleopatra's Barge* was a conventional hermaphrodite schooner of the era and superficially resembled many other commercial vessels found in Salem at that time. Her hull form

was quite ordinary, with a bluff, full bow section that tapered off to a narrow underwater run aft. This classic "cod's head and mackerel's tail" configuration represented the acme of early 19th century naval architectural theory, wherein it was presumed a vessel's underbody must be most efficient when shaped like a fish.

What was unusual about *Cleopatra's Barge* was the extravagant manner in which she was furnished. Her cabins featured exotic inlaid paneling and floors, gilded deck beams, velvet grab ropes, fireplaces, chandeliers,

and cupboards crammed full of the finest silver, porcelain, and glassware. Her furniture, inspired by Crowninshield's admiration of Napoleon Bonaparte, was decorated in Empire style with imperial eagles. Her appearance above the waterline, meanwhile, was eccentric. Her starboard side was painted with bright, multicolored stripes, while her port side was painted in an elaborate herringbone pattern. Her deck, sporting 12 cannons with no apparent purpose, was dominated by a life-size wooden Indian that seemed to have silent command of the entire vessel.

Throughout the remainder of the 19th century, very wealthy people sailing extravagant vessels came to dominate the sport of yachting. The sport's primary focus was on racing, wagering, and social status, with rather less emphasis on cruising. The designing of yachts became a specialized practice, and gentlemen's sailing vessels — once little more than working vessels dressed up in all sorts of finery, as was the case with *Cleopatra's Barge* — became more refined in every respect.

By mid-century, yachts such as *America*, of America's Cup fame, had demonstrated the superiority of more scientific theories of naval architecture. By the 1880s, empirically based racing handicap rules began to supplant older rules based on commercial measurements devised originally for tax purposes. Toward the end of the century, as the U.S. entered its so-called Gilded Age, upper-class tycoons did most of their racing in large, highly specialized sailboats and most of their cruising in very large, grandiose steam yachts.

Meanwhile, more middle-class recreational sailors were finding ways of their own to get afloat. Inspired by pioneers like R. T. McMullen and John MacGregor, of Great Britain, and Nathaniel Bishop, of the U.S., the number of middle-class folk engaged in

**The Friendship sloop, now considered a classic coastal cruising design, began as a working lobster boat in the 19th century. The very large cockpit and wide horizontal gunwales surrounding it were designed to facilitate the handling of traps.**

cruising aboard their own small boats steadily increased from the late 19th century onward. This sort of unobtrusive sailing — small

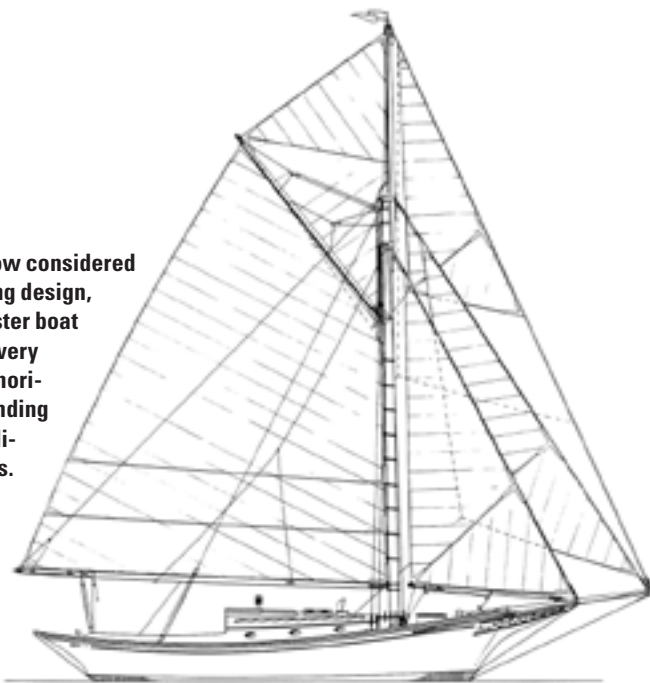
voyages for pleasure undertaken by ordinary people in very modest craft — was not of immediate public interest.

But there was something very powerful at work here: a seductive fantasy of autonomy and adventure that cruising under sail somehow promised to make real. John MacGregor summed it up very neatly in *The Voyage Alone in the Yawl Rob Roy*, his account of a cruise he made to France in 1867 in a 21-foot boat. “Often as a boy,” he wrote, “I had thought of the pleasure of being one’s own master in one’s own boat; but the reality far exceeded the imagination of it, and it was not a transient pleasure.”

### Workboat to cruiser

While wealthy yachtsmen originally sailed newly constructed vessels derived from working craft designs, sailors of more modest means found that the easiest and cheapest thing to do was simply to buy an old workboat and refurnish it. By slapping on new paint, tacking in some furniture down below, and perhaps altering the rig a bit, many such boats could be made into perfectly serviceable cruisers. It helped, of course, that in the late 19th and early 20th centuries, working sailboats were steadily being replaced by power vessels and hence were available in increasing numbers.

Fishing boats were the most popular candidates for conversion. Some



types established secondary reputations as cruising boats, ultimately eclipsing their primary identities. We tend to forget, for example, that two popular American craft now considered classic coastal cruisers — the Cape Cod catboat and the Friendship sloop — were both originally designed and operated as inshore fishing boats.

In Britain, in particular, lifeboats were seen as ideal candidates for conversion. This practice, which continues to this day, started at least as early as 1886, when E. F. Knight made a name for himself by cruising from England to the Baltic and back aboard *Falcon*, a converted lifeboat he purchased for just £20. Much later, in the mid-20th century, Tristan Jones established an even larger reputation voyaging aboard his converted lifeboat, *Cresswell*.

Pilot boats also were a logical choice for conversion, as they were usually designed to be both fast (so they could compete with other pilot boats racing out of a harbor to do business with inbound vessels) and seaworthy enough to go out in all weather. Several different types were pressed into service as yachts on both sides of the Atlantic. Old Bristol Channel pilot cutters became particularly popular as cruisers in Britain, and imitation pilot cutters (most notably those originally built by Sam Morse and now by Cape George Marine Works) are still in production today.



**This 100-year-old Morecambe Bay prawnier, designed and built as an inshore fishing boat, was rebuilt and refurbished as a cruising boat in the late 1990s. Such conversions were common in the late 19th and early 20th centuries.**



**Old gaff-rigged cutters that once worked for a living are still commonly used as cruising boats in Great Britain. This well-maintained example cruises out of the River Medway in the Thames Estuary on the southeast of England.**



**The Bristol Channel Cutter boasts a classic full-length keel characteristic of a 19th-century working boat. Many cruisers still value such keels for their directional stability and seakeeping ability.**





Thomas Colvin is one of several contemporary cruising-boat designers who have mimicked old workboat designs. His pinky schooners, such as *Papillon*, are derived from inshore fishing boats that first appeared in New England waters in the early 19th century.

By far the most influential type were the beamy, double-ended 47-foot pilot and offshore rescue boats conceived by Colin Archer in 1893 for work along the coast of Norway. The simple symmetrical lines of these boats, known as Redningskoites, were copied very explicitly by others seeking to create durable, all-purpose cruising boats. The most well-known examples were the Tahiti ketch, designed by John Hanna in 1923, and *Eric*, a scaled-down 32-foot Redningskoite designed by William Atkin in 1925, which was reincarnated in the 1970s as the iconic Westsail 32. The huge success of the Westsail had a tremendous impact on the evolution of production fiberglass cruisers and begat numerous imitators. A few of the more modern variations with fin-keeled underbodies — the Valiant and Pacific Seacraft lines, for example — are still in production today.

### The Slocum factor

The most famous converted working boat, of course, was Joshua Slocum's *Spray*. Slocum does not at all fit the template of the amateur cruising sailor described here, but his influence on the sport was extraordinary. In terms of his background, he had, ironically, much in common with George Crowninshield. Like Crowninshield, he gained all his nautical expertise as a professional merchant mariner. Unlike Crowninshield, however, Slocum lived in the latter part of the 19th century,

when commercial sailing was being driven into extinction.

Whereas Crowninshield became a cruiser simply because it amused him, Slocum became one mostly out of desperation. His professional life had been destroyed and he was very down on his luck when, in 1892, a fellow ship captain, perhaps as a joke, made him a gift of a decrepit 36-foot Delaware oyster smack that had been left to rot in a field. With characteristic tenacity, Slocum rebuilt the boat and, after a very brief attempt to earn a living fishing her, he set out to sail around the world single-handed. This voyage not only helped to legitimize "alternative" cruising in the minds of the yachting establishment, it also spread the seed of the cruising dream much farther than ever before.

What perhaps is most significant about *Spray* as a boat is how anachronistic she was. Even at the time of her circumnavigation, which Slocum com-

John Hanna's Tahiti ketch, at left below, the first "cult" cruising boat to inspire a generation of wannabe bluewater sailors, became popular during the 1930s. The design, which featured a jaunty double-ended hull form, was derived from Colin Archer ketches conceived nearly a half-century earlier as durable all-purpose workboats. The double-ended hull of the famous Westsail 32, below right, is identical to that designed by William Atkin for his *Eric* in 1925. Like the Tahiti ketch, *Eric's* lines were based on those of Colin Archer workboats.



pleted in 1898, she was completely obsolete. She was, by Slocum's account, approximately 100 years old when he acquired her, and her hull form reflected her age. Her shape tended toward the old "cod's head and mackerel's tail" school of design and featured a fat entry, with her maximum beam a little forward of amidships and a finer run aft on her waterline. She was quite wide (over 14 feet) with relatively shoal draft (about 4 feet) and short ends (her waterline length was approximately 32 feet). She also was immensely heavy for her size, displacing 24,000 pounds, and carried all her ballast in her bilges, with none at all in the keel.

*Spray* had nothing in common with modern turn-of-the-century yachts (a fact in which Slocum took great pleasure), but she still served well enough as a cruiser. Indeed, her performance was nothing short of extraordinary. Slocum reported achieving top speeds on the order of 8 knots and routinely averaged 150 miles a day on passage — numbers more typical of modern yachts displacing half as much. He also boasted of the boat's ability to steer herself, but credit for this, and for the speeds achieved, must in fact go to Slocum himself. He was a master mariner who had the skill and nerve to drive vessels very hard, and he was an intuitive expert when it came to sail trim.

What is also significant about *Spray* is that, in spite of her putative obsolescence, she is still considered a viable cruiser today. Contemporary boats that mimic her lines, most particularly steel hulls built to plans

**“*Spray* had nothing in common with modern turn-of-the-century yachts (a fact in which Slocum took great pleasure), but still she served well enough as a cruiser. Indeed, her performance was nothing short of extraordinary.”**

drawn by designer Bruce Roberts, though not exactly common, are not hard to find. Some devotees, in fact, still ardently insist that *Spray* represents the ultimate cruising boat.

What this demonstrates is that unlike racing boats, which are subject only to the ruthless criteria of winning and losing, the worth of a cruising boat can be measured in a number of ways. One very good reason, for example, why some (but certainly not all) traditional designs based on old workboats like *Spray* are still viable is that they yield lots of interior accommodation space, which for many cruisers is a key consideration. They also are considered by many to be extremely seaworthy. But perhaps the most powerful and also most subjective reason people still choose to cruise in such boats is because of their strong romantic appeal.

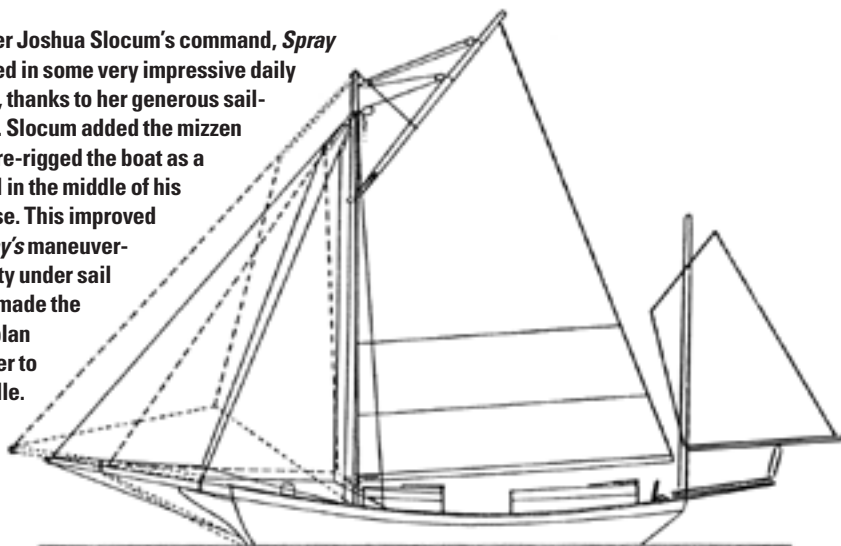
### Fishing schooners

Ultimately, the culture of the modest amateur cruiser precipitated a growing interest in the sport of ocean racing. This interest was initially fueled,

or perhaps was even created from whole cloth, by Thomas Fleming Day and his evangelistic boating magazine *The Rudder*. Ocean racing between large gold-plated yachts dated back at least as far as 1866, when a group of flamboyant tycoons pitted three vessels against each other in a spontaneous mid-winter transatlantic gambit for an enormous wager of \$90,000. Subsequent ocean races were occasionally held under more or less similar circumstances, but what Day managed to do was transform ocean racing into an organized sport featuring much smaller boats.

Day sponsored his first distance race from Brooklyn, New York, to Marblehead, Massachusetts, in 1904. It was contested by six vessels, none of which had waterlines longer than 30 feet. The following year he sponsored another race from Brooklyn to Hampton Roads, Virginia, and in 1906 launched the first Bermuda Race, which Day himself won in a 38-foot yawl. He vociferously promoted this sort of competition in his magazine, presenting it as a challenge to mem-

**Under Joshua Slocum's command, *Spray* turned in some very impressive daily runs, thanks to her generous sailplan. Slocum added the mizzen and re-rigged the boat as a yawl in the middle of his cruise. This improved *Spray's* maneuverability under sail and made the sailplan easier to handle.**



**The legacy of *Spray* lives on. Modern boats with lines based on those of the old oyster smack that carried Joshua Slocum around the world more than 100 years ago are still popular. This Bruce Roberts design was built in steel.**





bers of the upper-class yachting establishment, whom he described as “a lot of grey-headed, rum-soaked piazza scows . . . who spend their days swigging booze on the front stoop of a clubhouse.”


Day staged more Bermuda races from 1907 through 1910, then abandoned the effort in 1911 to take his own 26-foot boat, *Sea Bird*, on a transatlantic passage. Competition of this sort then died out for several years, thanks largely to the start of World War I, but was revived in 1923 by members of the fledgling Cruising Club of America (CCA), which officially assumed custody of the Bermuda Race the following year and has maintained it ever since.

In terms of boat design, this egalitarian blending of cruising ethos and ocean racing yielded serendipitous results. The most successful American ocean-racing boats in the immediate aftermath of World War I proved to be very seamanlike schooners. They were designed by men such as John Alden and William Hand and were both comfortable and relatively fast in open water. These boats were heavily constructed, relatively beamy, and of moderate to deep draft, with ballast distributed both in their bilges and low in their keels. They also featured short-to-moderate overhangs and full keels gently cut away forward.

These fisherman schooners, as they were known, were, in the context of their time, nearly perfect dual-purpose vessels. They had enough space below for comfortable accommodations, were heavy enough to feel safe and solid in a seaway, yet were just fast enough to win races. They were the

result, interestingly, of a very active cross-pollination between yacht and workboat designs. That’s because they were based on Grand Banks fishing schooners, which in turn had been refined by yacht designers. One of those designers was B. B. Crowninshield (a descendant of proto-cruiser George Crowninshield), who had been asked to improve upon older 19th-century fishing boat designs that had proved unsafe in open water.

Fisherman schooners, particularly Alden’s Malabar series, dominated the first decade of CCA Bermuda racing but were steadily supplanted by more modern designs that refined the schooners’ essentially conservative full-keeled underbodies by narrowing beam, stretching overhangs, and placing all ballast low in the keel. Another very important change, of course, was the adoption of the more aerodynamically efficient Marconi rig. By the mid-1930s these new designs came to dominate amateur ocean racing, but they were controlled in their development by the CCA’s new rating rule.

The basic hull form of CCA-rule boats, as descended directly from those of the fisherman schooners before them, is still considered by many to be among the most aesthetically pleasing ever conceived. More importantly for contemporary cruising sailors, the CCA rule still controlled the evolution of yacht design a quarter-century after its introduction, when the advent of fiberglass boat production in the late 1950s and early ’60s made the sport of sailing even more accessible to people of modest means. The result was a flood of sturdy, attractive, full-keeled fiberglass sailboats produced by firms like Pearson, Bristol, Hinckley, Allied Boat, Seafarer, and C. E. Ryder, many of which are among the most affordable and most seaworthy older boats still available on the brokerage market today. 

*Charlie Doane is completing a reference book about cruising sailboats, to be published by International Marine. Over the years he has owned and maintained a 1964 Pearson Alberg 35, a 1977 Golden Hind 31, and a 1985 39-foot hard-chined aluminum cutter designed by Yves-Marie Tanton. He lives with his family in Portsmouth, New Hampshire.*

**The Cornish Crabber Pilot Cutter 30, top, is a modern fiberglass production boat that deliberately evokes the romance and tradition of old British pilot boats. Classic CCA designs dominated both racing and cruising for many decades. Originally built in wood, like the gorgeous Concordia sloop, center, many CCA designs were also built in fiberglass starting in the 1950s. Some are still built today and are valued for their aesthetic appeal. The first fiberglass boat to win the Bermuda Race was a Pearson Invicta yawl, *Burgoo*, bottom, in 1964. By this time successful CCA designs often featured yawl rigs and keel/centerboard hulls. *Burgoo* is owned by Milton Ernst of Providence, Rhode Island.**

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## Boats



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**David Berry**  
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804-462-6101



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**C-Dory 25**  
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**Richard Wiebke**  
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**Stone Horse 23**  
1980 Edey & Duff. Custom trailer, BMW diesel runs well. RF jib and stays'l. C-cushions. Tanbark sails, new fully battened main. Blocks and running rigging. New forward hatch and power vent. Polished brass cowl vents. Located in Tulsa, Okla. \$24,500.

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**Vancouver 25**  
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**Bristol 27**  
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# Shadows in the sand

## *Hidden treasures on the beach*

by Patricia Lucas

**T**he waters of Shelburne Bay on the far northern coast of Queensland, Australia, are pristine, isolated, and exquisitely beautiful despite the persistence of the ever-blowing southeast trade winds . . . winds that, due to their strength, are reported to blow the milk out of your tea!

Ashore, exploring the soft white sands is a treat when you discover the starfish that inhabit the shoreline. When they sense your approach they submerge beneath the sand, leaving their shape etched on the surface. If you pause, the starfish emerge and resume gliding across the sand, leaving a trail behind them. Start moving again and they will start submerging themselves once more, until all you see is their outline.

Then the tide washes in and the starfish are hidden from view, waiting quietly until they think it's safe to rise to the surface. A very special experience and a photographer's delight! 

*Patricia and Alan Lucas are longtime Australian sailors. Patricia says the only trepidation she feels in this photographer's paradise is that many crocodiles also inhabit the area. "We could feel their eyes on us," she recalls.*



First sign of the starfish emerging in the shallows, at left. Coming to the surface after the tide recedes, above.

In flight!



**A starfish decides to bury itself as soon as it becomes aware of something moving in the vicinity.**



Soon to disappear . . .





# This is where I belong!

## Sailing is like flying on the water's surface

by Jyllian Lippmann

*Subscriber Michael Lippmann writes: "My wife and I have three kids. The youngest, Jyllian, is the most avid sailor of the three. When Jyllian was about 7 years old, she and I went boat hunting. This is her story, which she wrote at age 14 for a school project."*

It seemed like I had spent an eternity cramped into our enormously tiny car.

"Dad, please, we don't need a boat. You're going to get tired of it after a while. It's a waste of money and you probably don't even remember how. Can we please go home?" I would plead every weekend after inspecting dozens of deteriorating, dirty, dilapidated old boats.

Finally Dad did find a boat that he felt was worth the money. To my great displeasure, it was located right here in good old Kingsville.

"What amazing luck!" said Dad.

Jyllian and Michael, her dad, in 2005. Yes, this is truly Jyllian. Like many teens, her hair has been known to change color on occasion.



Jyllian at the helm in 2005. The white object in the foreground is Michael's homemade nav station.

"What an amazing waste of time we spent in the car," I said.

### First sail

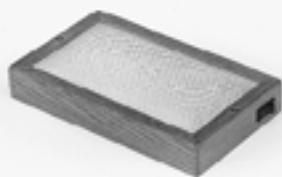
I quickly hoisted the mainsail as directed by my giddy, grinning father. I trimmed the jib, loosened the Cunningham, and eased off the mainsheet. Sailing seemed to be way too much work. Finally I had time to relax. I stumbled my way up to the windward side and stood on the rail, tightly gripping the shrouds for support. All I could see was water for miles, brilliant turquoise water. I closed my eyes and imagined I was a bird, soaring over the smooth, silky sea. Sprays of chilly April water interrupted my dream as I licked my face. But the sensation of flying didn't leave me. It was like a dream.

I turned my back to the wind and glanced at my Dad. The look of pure serenity and bliss on his face was astounding. The glint in his eyes was entrancing. He really loves this, I thought to myself.

He caught me staring at him and beckoned for me to return to the cockpit. I slowly climbed down hesitantly,

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**BottomSiders**

like a baby bird leaving its nest, and sat next to him. He put his arm around me and observed my face for a short while. Then he whispered, "This is where you belong."

I stayed next to my dad for a while contemplating these words until I got too restless. I then ran as fast I could without falling to the bow of the boat. I lowered myself to the deck and watched the water flow by steadily.

It was then I realized that he had seen the same expression on my face as I had seen on his.

I closed my eyes once more and whispered those five little words, "This is where I belong." I felt a smile spread across my face. It was true. I belong with the water, with the waves and the wind, sailing over the smooth, silky, sea! 

*Jyllian Lippmann, now a 17-year-old licensed sailing instructor, is very active in sailing of all kinds. She has competed in a Port Huron to Mackinac Race, several Canadian Islands Night Race regattas, Inland Lake Yachting Association Bay Week regattas, and many other sailing races and adventures. She sails her family's Hunter 31, Bear's Mistress, out of Cedar Island Yacht Club in Kingsville, Ontario, one of the prettiest and friendliest little sailing clubs on the Great Lakes.*



Jyllian as captain of her family's Hunter 31 during the 2007 Canadian Islands Night Race.

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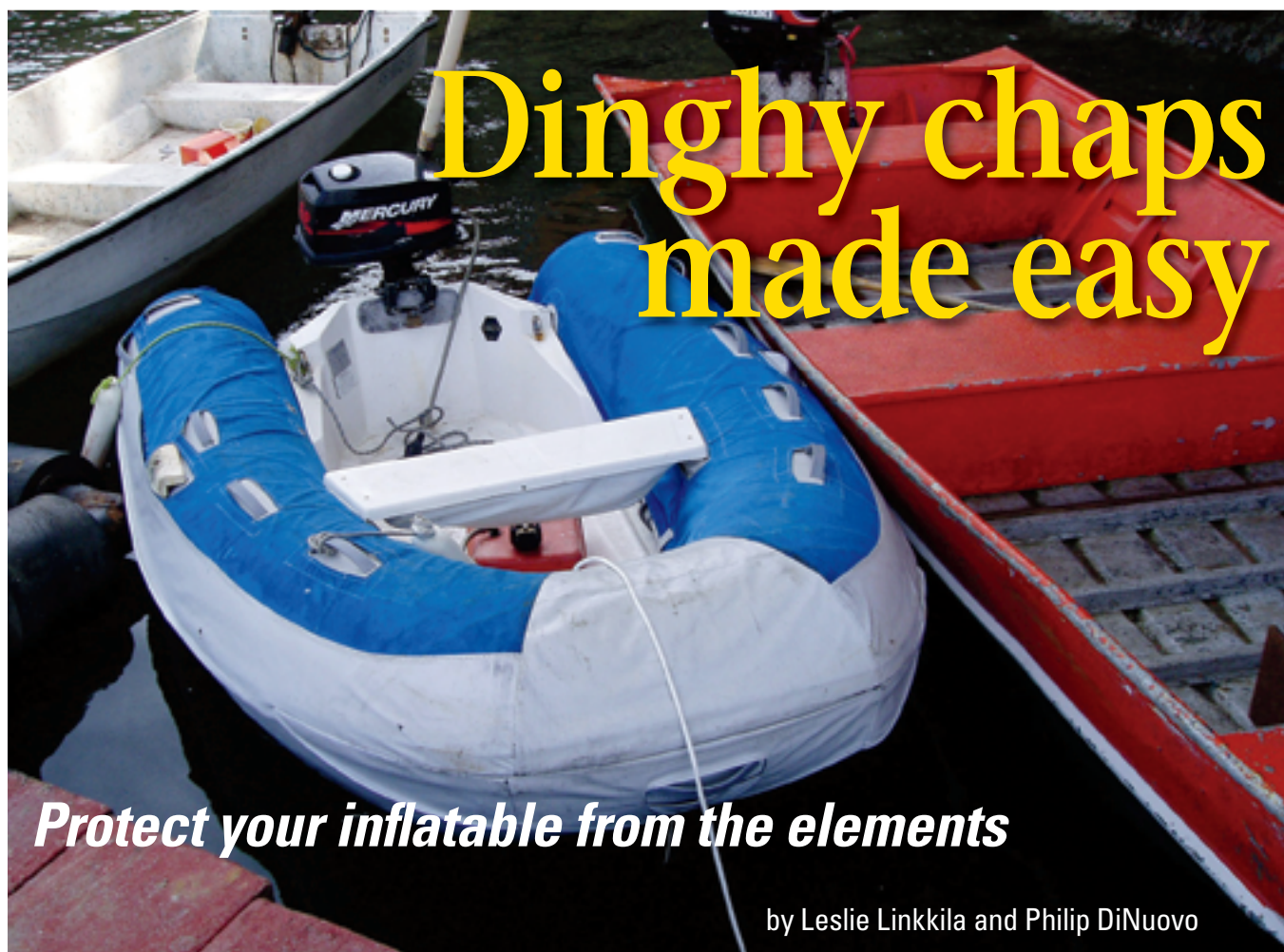


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PHOTOS BY LESLIE LINKKILA

**I**nflatable dinghies, sport boats, and roll-ups are the most common types of cruising boat tenders in use today. Their popularity is related to the fact that they can get up on plane and cover great distances when driven by large outboard motors. Their large inflatable tubes also make them inherently stable, allowing for easy entry from a boat, a dinghy dock, or the water after snorkeling or diving. Many inflatable dinghy design options allow for stowage in a small space on deck or in cockpit lockers.

Most inflatables are constructed of fabrics coated with Hypalon (chloro-sulfonated polyethylene) or polyvinyl chloride (PVC). Hypalon dinghies are much more resistant to the sun's ultraviolet (UV) rays and abrasion than PVC.

Yet all inflatable sport boats that are used regularly will eventually suffer from UV exposure, especially when used in the tropics. To preserve these inflatable tenders, it is necessary to

cover them with chaps constructed of a durable, UV-resistant fabric.

UV protection is the main reason for chaps, but there are other benefits as well. A cover will also protect the inflatable tender's rubber structure against abrasion and dirt from dinghy docks, hulls, and fuel spills. In addition, because rubber surfaces of inflatables get extremely hot in the tropical sun, a cover constructed of an appropriate material will protect passengers from discomfort or burns. Deteriorated rubber tubes can also become very sticky, leaving ugly, dirty stains on anything they touch. Maybe the best reason for dinghy chaps, from a practical standpoint, is that they allow for the incorporation of pockets for dinghy anchors, personal flotation devices, hand-held VHF radios, flashlights, and other gear.

The many inflatable boat designs available on the market today have made it impossible for mass production of dinghy chaps, so construction

of a set of chaps is a custom project. Your favorite canvas shop will accommodate your needs and you'll get a wonderful product, though prices vary widely. We think the better option for budget-minded cruisers with modest skills is to make their own dinghy chaps. All you need is a sewing machine, a few supplies, and a little time and patience.

Note: many cruising friends have used tapicerías (upholstery shops) in Latin America to produce an acceptable set of chaps at a modest cost. Others weren't so pleased with the results, so if you choose this option, ask for cruiser references before committing to purchase.

### **Choosing materials**

**Pattern** – You need clear, non-porous, low-stretch plastic patterning material (polyester) with enough thickness to maintain shape when tugged snugly and taped down. Clarity is critical because details for the location of seams,

**Without protection from dinghy chaps, inflatable sport boats are damaged by abrasion, fuel, and UV radiation, especially when used in the tropics. These dinghy chaps, on facing page, incorporate extensive areas constructed of vinyl material for protection against chafing hazards.**

cuts, hems, and cutouts are drawn directly on this pattern and pattern pieces can be overlaid to match seams and create a tailored fit. In Latin America, we have found suitable materials in convenient widths up to 10 feet at modest prices (27 to 70 cents per foot) in upholstery shops and hardware stores.

**Cover** – Choose a cover material that provides maximum UV protection. It is also important that the material is easy to work with, is water- and stain-resistant, and won't become slippery when wet. Lighter colors are preferable since dark colors absorb more heat and can be hot to the touch, though bright white can create uncomfortable glare in the tropical sun. A solution-dyed acrylic material, such as Sunbrella, is a perfect choice. However, materials as diverse as cotton/polyester blends and waterproof denim have also been used successfully. Another option is Vivatex, also known as Sunforger, which has a nice soft hand and is easy to work with. If expense is an issue, generic solution-dyed acrylic materials are available, although we've observed that the water resistance of these materials is poor.

**Thread** – A high-quality UV-resistant thread in appropriate weight is necessary. Bonded polyester in V92 weight (or B92 depending on manufacturer) is commonly used with fabrics such as Sunbrella. We prefer to use white thread for all applications, but many colors are available.

**Chafe guards** – For reinforcement and edge finishing of details such as handholds, inflation ports, or oarlocks, use premium marine tanned leather or a heavy exterior-grade vinyl. Leather is more durable but more expensive and difficult to work with.

You may also wish to use leather or vinyl to finish the exterior of cutouts

in combination with a less expensive material, such as Shelter-Rite or reinforced dry bag material, to finish the interior. Webbing may also be used for finishing edges of cutouts, but use only nylon or polyester webbing for maximum life; polypropylene webbing (the type commonly used for sail ties) will disintegrate quickly in the sun.

Also beneficial to long service of dinghy chaps is the incorporation of a generous chafe guard completely around the outside to prevent damage to chaps from dinghy docks and barnacle-encrusted pilings. Exterior-grade vinyl or wide heavy webbing may be used for this purpose.

**Tube ends aft** – For tube ends aft, you may also need a swatch (approximately 1 yard) of open-weave synthetic mesh material, such as the vinyl-coated polyester, Phifertex. Mesh allows water to escape when the dinghy is under way prior to getting up on plane. Otherwise, water may be caught under the chaps and inhibit forward progress.

**Securing chaps to the inflatable** – You may use spur grommets (attached with die and installation tools), snaps (cloth-to-cloth or cloth-to-surface), webbing and side-release buckles, or Velcro or shock cord (for the external hem), depending on your design. Most cruisers utilize a shock cord or line that runs through a channel around the outer perimeter of the chaps to secure the chaps to their dinghies.

## Taking measurements

**Minimum material width** – With the dinghy in the water and loaded normally, measure the circumference of the inflated tubes from the waterline, up and around the tubes, to the desired hem height inside. Then add a minimum of 6 inches to the measurement to allow for hems. This will determine the minimum width of patterning and cover materials required for your project.

**Estimating pattern material** – Measure the total length of the dinghy's tubes around the outside of the dinghy at its widest point. If the dinghy has a rubrail that stands proud, this is a good place to measure. Pur-

chase a length of pattern material (of suitable width) that is at least 75 percent of this length. For example, if the total outside dimension of the dinghy at its widest point is 22 feet, purchase a length of pattern material that is at least 5 yards (15 feet). The reason that you do not need a full length of pattern material is that



**A good chaps design option may include an additional panel that extends below the rubrail at the bow to incorporate the area around the lift handle.**



**This dinghy chap design includes Velcro tabs to secure the cover to the inflatable. This option requires a compatible adhesive.**



**These chaps incorporate handy features such as a splash guard, as well as pockets for storing safety equipment.**



mirror-image panels of the dinghy can be cut from the same pattern piece, so only the bow panel and the panels of one side require a pattern.

**Estimating cover material** – For cover material, take the total length of the dinghy's tubes (as determined for the pattern material) and add approximately 50 percent to determine the overall length of cover material needed. For our theoretical dinghy that is 22 feet around at its widest point, a minimum of 10 yards (30 feet) of material length should be purchased. This generous amount of cover material will allow for proper alignment of fabric pieces to avoid bias stretch, to account for cutting errors, and for construction of accessories such as pockets, plus a bit of extra material for future patches in high-abrasion areas.

**Estimating finishing supplies** – For finishing edges of cutouts for oarlocks and towing lines, measure each cutout, then add 4 inches to the length and 4 inches to the width to allow for borders. Convert this area measurement to square inches and double this value to determine the minimum amount required in square inches. We advise purchasing 30 percent more of the material than this calculation to account for cutting or sewing errors, plus additional or future abrasion patches. This amount of material will allow for reinforcement patches

on both sides of the cover material at each detail. Note: a yard of 45-inch material consists of 1,620 square inches (36 inches per yard multiplied by the 45-inch width).

To add a perimeter chafe guard, add a quantity of reinforcement material that is approximately 6 inches wide times the total length of the outside dimension of the dinghy, plus a 1-inch seam allowance for each seam. For our theoretical dinghy with an outside dimension of 22 feet (264 inches) and reinforcement material that is 60 inches wide:  $264 \text{ inches} / 60 \text{ inches} = 4.4$ . Therefore, five pieces that are 6 inches wide by 60 inches long, joined by  $5\frac{1}{2}$ -inch seams, would be sufficient. This would be  $\frac{7}{8}$  yard of 60-inch-wide material. If you are using wide webbing for this purpose,  $7\frac{1}{2}$  yards would be sufficient ( $264 \text{ inches} / 36 \text{ inches per yard} = 7.33$ ).

**Tube ends aft** – Regardless of the size of your dinghy, a yard of mesh material should be sufficient.

**Other supplies** – To facilitate the patterning process, make sure you have a roll of high-quality duct tape, sharp scissors, and a set of water-resistant markers in at least three different colors. Note: markings made with green markers have, for some unknown reason, faded very quickly.

You will also need a stiff ruler, available from sewing stores, or a small 6-inch hand-held steel ruler with

an adjustable sliding reference point (Snap-on Tools, ruler 602; also available at fabric stores), which allows for more rapid and accurate marking of seam allowances. A plastic bucket is also useful for carrying these items and for holding small pieces of cut duct tape prior to their use.

### Making a pattern

Accurate patterning of the tubes is critical. Some tailoring is generally necessary after the panels are assembled, but an accurate pattern will reduce the effort necessary for final fitting.

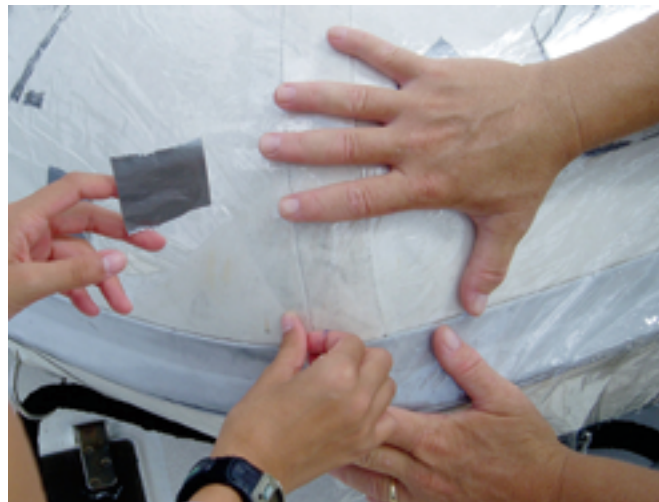
Assemble a team of at least two others to help you make your pattern. Bring your dinghy to a place where you and your helpers can easily walk around and climb inside it. Select a cool, calm day since strong afternoon breezes make working with plastic pattern material a challenge and the hot sun can make duct tape sticky and messy.

For inflatables with blunt bows, make a pattern for the bow section and only one side since the dinghy's structure is symmetrical and side sections are mirror images. So both sets of side panels may be cut from one set of patterns. Inflation ports and other features may not be present on both sides of a dinghy, but cutouts for these may be incorporated into the cover at a later stage in the construction.

For dinghies that are configured with a point joined by a seam at the



PHOTOS BY GABRIELLA AMBERCHAN



Use a small metal ruler with an adjustable reference to rapidly label a panel cut line relative to a seam line, at left. Use small pieces of duct tape to secure clear plastic patterning material to the dinghy for a snug fit, above.

bow, begin at the bow seam and pattern each tube section on either the port or starboard side. As with a blunt-bow dinghy, one set of plastic patterns can be used to cut mirror-image pieces for the other side.

Beginning at the bow, cut a piece of pattern material roughly the shape of, but much larger than, the bow section. Begin by laying this on the bow and taping it to the rubber dinghy tubes with small (roughly 2-inch) pieces of duct tape. This is the most difficult pattern piece to make. You will do quite a bit of manipulation before you get it placed where you want it. The goal is to mimic, in this plastic, the individual tube sections of your dinghy from inside at deck level, completely over the top, and down to the waterline. As a design feature, you may also wish to consider securing the chaps at the bow to the tow ring using a strap or an additional piece pattern. You should make this decision before determining the cut line of the bow-section panel.

Provide for a wide margin (3 to 4 inches of pattern material) for the overlap onto adjacent sections of tube. Excess material can be cut away later. Fold back areas of excess pattern material, and cut slits, if necessary, for details such as handholds. The trick is to lay the pattern plastic flat.

Note: if it seems impossible to lay a pattern piece flat over the entire surface of a blunt-bow section, it may be necessary to pattern exactly half of the bow section. When it comes time to cut your fabric, you will lay this half-pattern on a folded edge of fabric (a doubled piece of fabric) during cutting to acquire a full piece.

Next, label the pattern piece with helpful hints such as the name of the piece (e.g., “bow section”), orientation (using arrows to indicate starboard, port, inside of dinghy, bow, or stern), and a large cross to show the linear lay of the fabric for layout. Also note on the pattern material how many of this particular panel you will cut: one only or two as mirror images.

Using a different colored marker, begin making a dashed line on the pattern material down the center of the boundary between the bow section and the adjacent section. This will be your seam line, so label it as such. Note the marker color you have chosen for seams and always use this color

for drawing seams. Once seams are drawn, take a ruler and yet another color of marking pen, then mark on the pattern material the seam allowances  $\frac{1}{2}$  to 1 inch outside of the seam lines. Label these as cut lines. Use that marker color only for cut lines.

To align where panels intersect, use letters and arrows to indicate the meeting point, A to A or B to B and so on, writing the first matching letter on one piece and the second on the adjacent piece exactly where the pattern pieces match. We cannot emphasize enough the importance of information written directly on pattern pieces since, once removed from the dinghy, the pattern pieces by themselves become a difficult puzzle.

Next, outline design details (safety lines, oarlocks, filler caps, seat supports) that require cutouts, and label them appropriately in yet another color of pen. Also note whether the design element is present on both sides (port

and starboard) of the inflatable. Make slits or holes in the pattern to accommodate elevated design elements while allowing the pattern material to lie flat. Optionally, tape another piece of pattern material over the panel pattern and trace on it the outline of the reinforcement patch. This creates a separate pattern for leather or vinyl reinforcement pieces. Note on the pattern the border of reinforcement or abrasion patches you will add to your chaps.

Next, climb inside the dinghy, tug the pattern material snugly, and mark the inside hemline in yet another color marker. Depending on your cover material, you can then determine how much you need to allow for a hem. Materials such as exterior vinyl may not require hemming, while Sunbrella requires a generous hem or edge finishing to avoid unraveling. For Sunbrella, 4 inches is generally sufficient. Measure and mark the cut line below your hemline in the color of pen you have



SHIRLEY DUFFIELD



GABRIELLA AMBERCHAN



SHIRLEY DUFFIELD

**Pattern pieces should be labeled generously with information such as panel name, orientation, fabric lay, and so on, at left above. Notes for cut lines and seam lines should be made in different colors and the chosen labeling scheme should remain consistent throughout the pattern, at right above. All pattern pieces should be left secured to the dinghy until the patterning process is complete, at left.**



designated only to be used for your cut lines.

To complete this panel's pattern, step outside the dinghy and determine the outside chap border that best suits your dinghy's design. If you have a rub-rail that stands proud, this feature offers a natural boundary. Allow at least 4 inches of fabric below this desired outside border for your cut. Measure and mark your cut line.

Without removing the pattern you just created, move down the port or starboard side of your dinghy to the next panel, lay pattern material over the next section, roughly cut a piece that completely covers this next panel (inside floor to outside at the waterline), and generously overlap the panel you just made. Cut, fit, and tape this pattern material until it is flat and secure, making sure you have not affected the location of the first panel pattern. Give this panel a name and generously label the piece with helpful hints about orientation, again using arrows (to indicate such things as port, inside of dinghy, bow, and stern), then generate a large cross to show the linear lay of the fabric. Indicate mirror images, if appropriate.

Through this new pattern piece, you will see the seam line you drew on the first pattern piece at the intersection

of this panel and the adjacent panel. Using the color marker you selected for seams, trace the seam line of the first panel onto the new pattern piece. Label the seam line. Then, using a stiff ruler, measure and mark the seam allowance ( $\frac{1}{2}$  to 1 inch beyond the seam line) in an appropriate marker color, and overlap the first panel. Label this as the cut line. Measure and mark for inside and outside hemlines and cut lines as described above.

Continue this sequence for all tube sections of the dinghy, leaving all pattern pieces taped in place while you work. Continuously check pattern piece alignment to prevent shifting during the manipulation. When you reach the transom, place a vertical slit in the pattern material to accommodate the transom's thickness. This allows you to continue this panel beyond the transom to its natural boundary. This slit will require reinforcement with vinyl or leather material.

The final panel, at the stern end of the inflatable where the tubes narrow to a rounded or pointed end, is best constructed of an open-weave material, such as Phiferex. Create a cone shape in the pattern material (including the seam allowance to the adjacent cover panel) with a snug-fitting cap that can be secured with shock cord or strapping. Don't completely encircle the end piece since it may catch water while under way.

Finally, if you wish to create patterns for the vinyl or leather abrasion patches, make them by layering and taping pattern material over the panel patterns while the panel pattern is still taped to the inflatable.

Before removing the pattern from the dinghy, walk around the whole thing and confirm that every seam, hem, cut, and dinghy design detail is labeled. Then, beginning at the last pattern piece you made, gently lift the duct tape from the dinghy and fold the excess tape under the edge of the pattern piece. Do not try to remove the duct tape from the pattern piece. Lift the pattern pieces and gently fold them.

### Creating the layout

Trim all pattern pieces of excess material but avoid cutting away any labels you made. Place your cover fabric on a flat surface and lay out all your pattern panels (except the end caps, if they are

to be made from a different material), making sure to follow the guides you made for pattern orientation relative to the linear orientation of the fabric. Mirror-image pieces may be cut from a double thickness of cover material. However, if the material has dissimilar properties top and bottom, the like sides need to be facing each other to create mirror-image panels. Generously staple or pin the plastic pattern panels to the fabric and carefully cut out along your cut lines. (If you're using a fabric such as Sunbrella, seal the cut fabric edges with a hot knife.) Using pins or a long-arm stapler (available at office-supply stores) facilitates cutting panels from the pattern. Leave the pattern pieces attached to all pieces of cut fabric until assembly.

Cut reinforcement pieces from leather or vinyl, two per detail to allow for reinforcement of both sides of the fabric. You may use leather or vinyl on the outside and a reinforced rubberized material on the inside.

### Assembling the chaps

**Preparation** – Adjust your sewing machine tension by sewing test scraps of cover material fabric in a thickness that represents the thickest layers your project will require. Consider replacing your machine's needle with a new one and using specialty cutting needles (such as Schmetz DI or SD1) for leather or vinyl detail-reinforcement material.

**Panels** – Begin with the bow section or sections. If your bow is constructed as part of two mirror-image side panels, join these panels by sewing them together at the bow. Then proceed to the next set of panels. A double row of stitching will ensure long seam life. After each set of panels (port and starboard) is sewn to the previous pieces, test-fit your unfinished chaps on the dinghy. It is easier to fix major mistakes while the assembly is in progress.

**Tube ends aft** – After all panels are assembled but not yet hemmed, add the tube end caps of mesh material. Rounded tubes may have a darted end piece, while pointed tubes may require an open-ended design. Either way, this piece may require the greatest amount of creativity to achieve a snug fit. Phiferex and similar mesh fabrics are easy to work with and may not require hem-

## Resources

### Beacon Fabric & Notions

<<http://www.beaconfabric.com>>  
800-713-8157

### Great Lakes Fabrics

<<http://www.glfi.com>>  
800-652-2358

### Outdoor Fabrics

<<http://www.outdoorfabrics.com>>  
800-640-3539

### Sailmaker's Supply

<<http://www.sailmakersupply.com>>  
877-374-SAIL

### Sailrite Enterprises

<<http://www.sailrite.com>>  
800-348-2769

### Seattle Fabrics

<<http://www.seattlefabrics.com>>  
866-925-0670

### Snap-on Tools

<<http://www.snapon.com>>  
877-762-7664 (U.S. customers only)



PHOTOS BY SHIRLEY DUFFIELD



Alignment points of adjacent panels should be labeled clearly, at left. This greatly facilitates proper panel alignment later during chap assembly. Plastic patterning panel pieces should overlap generously so that cut lines may be accurately determined. The red cut line for the transom panel, at right, appears to be on the tube end panel when, in fact, it is showing through the plastic pattern piece from the piece underneath.

ming, so if you are not satisfied, reworking of tube ends is not onerous.

**Reinforcement patches** – Assemble all panels, including mesh-material tube end pieces, before adding any detail reinforcements since a slight shifting of location can occur. It will likely be necessary to cut an X-shaped opening in the cover fabric to accommodate oarlocks, rings, fill ports, and other details.

After all the pieces are assembled and fit to your satisfaction, cut the final openings for cutouts using a hot knife, and sew on reinforcement patches. Stapling or pinning leather or vinyl reinforcement pieces to fabric is preferred but gluing is also possible. Be careful: excess glue will permanently stain dinghy chaps. Working with leather or vinyl can be tricky, as it may not move easily through your sewing machine's feed dog mechanism. To mitigate this problem, sandwich waxed paper or plastic bag material above and below the material and reinforcement pieces during sewing. The paper or plastic can be torn away later.

**Hems** – Once the pieces are assembled and reinforcement patches have been added, measure and pin or staple the inner hem. Unless you finished your fabric with a hot knife, a double hem is advisable for woven materials such as Sunbrella, though webbing may also be used to finish raw edges. You could also use a zigzag stitch around unfinished fabric edges before sewing the hem.


**Chafe guard** – If you wish to incorporate a sacrificial chafe guard around the perimeter of your finished chaps, add this before completing the outer hem. A wide strip (approximately 6 to 8 inches) of exterior-grade vinyl, sewn with its lower edge along the desired exterior hemline and abutting the tube end caps, is perfect for this application. Once this piece is in place, finish the outside hem.

**Exterior hem** – It is common to incorporate a piece of shock cord or line into the exterior hem to allow the chaps to be secured to the dinghy, particularly at a pronounced rubrail. The location of the channel to contain this shock cord or line will have to be determined by fitting the chaps to the dinghy.

Sewing shock cord or line into the channel during assembly is easier than trying to pull the cord through the channel after sewing. Add large grommets to the outside of the chaps to allow the shock cord to exit the channel and to facilitate shock-cord adjustment once the chaps are completed.

**Extras** – A splash guard or a covered pocket at the bow creates a convenient place to stow water-sensitive equipment (such as cameras and phones) and towels, plus anchors, chain, cables and locks. Interior pockets may also be designed to carry equipment.

### Enjoying your handiwork

May your new dinghy chaps protect your inflatable tender from damage by sun, chemicals, fuel, and abrasion! 

*Leslie Linkkila and Philip DiNuovo, cruising sailors since 1991, dreamed for years about sailing out of the executive fast lane. In 2003, they and their cat, Jake, moved aboard their Mason 33, Carina, and cast off their docklines in Kingston, Washington, on an open-ended international voyage. Their experiences have made them strong proponents of cruisers helping other cruisers, as shown by the hours spent on their sewing machine. And although they have helped many cruisers construct dinghy chaps (and repair canvas and sails), their own tender, ironically, is a stitch-and-glue nesting dinghy, the second they have built themselves.*

### Read more . . .

**Canvaswork & Sail Repair** by Don Casey (International Marine, 1996) is an outstanding collection of projects for sailors, including projects like leecloths, handy pockets, cushions, duffel bags, dodgers, sailcovers, and a range of do-it-yourself sail-repair projects. **The Complete Canvasworker's Guide** by Jim Grant (International Marine, 1992) is a classic bestseller from Sailrite, with projects like sea anchors, awnings and enclosures, spinnaker socks, tote bags, and wind catchers. Your editors never begin a sailcover, a sailbag, or a winch cover without having this book open. Go to [http://www.goodoldboat.com/books\\_&\\_gear/good\\_old\\_boat\\_bookshelf](http://www.goodoldboat.com/books_&_gear/good_old_boat_bookshelf) to order both books. If you'd prefer to talk to a human, call 701-952-9433.



# Varnish-storage systems

## Two ways to protect your investment

by Ted MacKinnon

**V**arnish is typically not used up all at once. The more that is used, the quicker a skin forms on top of what remains in the can. When the can is opened weeks or months later, this skin must be removed and, with it, some of the important goodies in the varnish are lost.

The trick is to eliminate, or at least minimize, the quantity of air in the can above the surface of the varnish. There are two ways to accomplish this. The first method is best; the second is a quick stopgap.

### Caulk gun solution

The best option is to abandon the can altogether. Transfer the varnish to empty caulk tubes from a local paint supplier or to West System's empty epoxy tubes. These tubes have a capacity of 10 ounces. Since a pint is 16 ounces, one tube holds a little more than a half pint of varnish, and three tubes almost handle a quart. Since skin formation does not become apparent until the varnish level in a can is reduced somewhat, the contents of an opened quart should fit into three tubes without a problem.

To fill the tubes, follow these steps:

- Prepare a tube by cutting a little bit off of the end so that the hole diameter is just a bit smaller than  $\frac{1}{8}$  inch. Don't cut off too much!
- Cut a small dowel to about 2 inches in length, and taper

the end so that it plugs the open end of the tube. Insert the dowel securely into the tube.

- Hold the tube upright in a vise with the dowel end down, or get someone to hold it — don't crush the dispensing end that holds the dowel.
- Take the top off of the varnish can, and place the can above the large open end of the empty tube.
- Using an awl, make only one hole in the center of the bottom of the varnish can so that the varnish drains into the caulk tube. Make the hole from above, down through the liquid. Do not pull the awl out of the hole you just made, because you may need to stop the flow when switching to a second (or third) tube. Let the contents drain into the caulk tube. If it looks like one tube won't hold the contents, plug the hole in the can with the awl while you get ready to drain it into another tube. If more than one drain hole is made, you will have an expensive mess while switching to another tube.
- Now insert the piston into the open end of the tube, just enough so that it is secure and will not slip out. Put this varnish-filled caulk tube into the caulk gun.



**Prepare the empty caulk tube by cutting a little bit off of the end, at left top, so that the hole diameter is just a bit smaller than  $\frac{1}{8}$  inch. Plug the open end of the tube with a small dowel, at left bottom. Use an awl to make only one hole in the center of the bottom of the varnish can to allow varnish to drain into the caulk tube, at right. Make the hole from above, down through the liquid. After the hole is made, leave the awl in the hole; you may need to stop the flow when switching to another tube.**






For a stopgap fix, replace the volume of used varnish with marbles that are  $\frac{3}{8}$ - to  $\frac{1}{2}$ -inch in diameter.

- With the small end pointing up, remove the dowel and activate the caulk gun so that the piston moves the column of varnish up within the tube until just a little bit squirts out the end. Reseal the tube with the dowel.
- Now you have a varnish-storage system that prevents air from producing a skin. To use, remove the dowel and carefully squirt just as much as you need into a paper cup or other container of your choice. Do not forget to re-insert the dowel; the varnish is a liquid and it will drain out before you know it.

### Quick fix

A quick stopgap method involves replacing the volume of varnish as you use it with marbles  $\frac{3}{8}$ - to  $\frac{1}{2}$ -inch in diameter. This works well, but in the end the can will be full of marbles and you will not be able to reach varnish stored between the marbles. Of course, if you use this marble method, you can recover hidden varnish by inserting the awl through the marbles and varnish, then draining the varnish into a tube as described above. 

*Ted MacKinnon lives in Beverly Hills, Michigan, having retired from GM Truck Engineering in 1992. He sails his 1980 O'Day 22, Scherzo (which is in a constant state of upgrade), on an inland lake in northern Michigan during the summer. The rest of the year he builds small wooden boats.*

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# Eyeglasses solution

## As plain as the nose on your face

by Marv Crompton

**A** favorite way to hang my drugstore reading glasses while doing deck or dock work was to hook an arm of the glasses into the neckband of my shirt. After losing two pair of glasses over the side within a week, I decided there must be a better way. I tried parking them on my head or using a cord attachment to keep them around my neck. Neither tactic worked well for me.

Some research turned up alternatives: a lorgnette, a fussy affair that requires the use of one hand, and a monocle, which screws up depth perception. (And two monocles require a long nose!) I quickly dismissed these "solutions."

Further thought led me to use a 3/4-inch paper clamp affixed to a shirt collar, with one of the glasses' arms threaded through the exposed lever. Placing the lenses against the garment fabric lessens the chance for damage, plus the glasses are free to dangle and won't catch. The clamps are available in office-supply stores and, for the fashion-conscious, can be purchased in different colors. 

*Marv Crompton started sailing in the 1950s on a Snipe. He now sails his '83 Catalina, Valkyrie, on Lake Erie when he's not bicycling, playing tennis, or generally enjoying life.*



Paper clamps, also called binder clips, are readily available in different colors. An arm of the eyeglasses slips through the exposed lever of the paper clamp to adhere to securely to a shirt collar.

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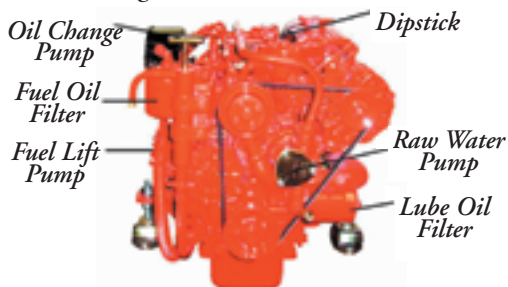
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# Easy furling

## *Tame your mainsail with strategic bungee cords*

by John Butler

**U**nfurling your sail may be a great joy of anticipated sailing. Or it may just be one more tedious chore when getting under way.

Furling it may be another tedious chore, the inevitable end of a day of great sailing. Or it could be a dangerous chore, if you are in a wicked blow while simultaneously engaging the iron jenny. This could be worse yet if you are plunging around in heavy seas while entertaining *mal de mer*. Where are those sail ties when you need them?

But picture this: with the breeze a bit off your starboard bow and with your mainsail lying relatively quietly in its lazy-jacks, reach your left hand under the boom at a mark. Grab a loop hanging there on the port side, raise it up, reach over the sail, and grab the loop with your right hand. Against the tension of a shock cord (a.k.a. bungee), pull the loop up and over the sail, then down, and place the shock cord over the hook on the boom's starboard side.

"Whoa," you say, "bungee? Not on my boat! I've had that stuff sun-rot the second year it supported a fender."

Read on. There's hope.

Depending on the size of your mainsail and the length of your boom, you may do that "cord over the hook" just once more, or perhaps several times, and then your mainsail is snugly and neatly frapped down to the boom.

No tasty sail ties in your teeth or chafing your sun-burned neck. None lost overboard in that blow. None hiding in a cubby somewhere, leaving you searching when you should be furling.

This system is so simple I'm on my fourth installation. The first was on a little Montgomery 15, the next was on an elegant Cape Dory Typhoon. Then I installed the system on a Cape Cod Catboat that was just 18-feet overall but boasted 271 square feet of canvas under a solid and heavy Sitka spruce gaff. Now I'm sailing another Montgomery 15. Good old boats, one and all.

My system of frapping down the main consists of lengths of bungee tensioned along the port side of the boom and pulled over the sail to the starboard side. Lazy-jacks aren't essential, but they sure do help.

Two small eye straps, one at each end of the boom, hold the bungee snugly against it. Larger eye straps guide a working loop as you pull it over your sail, and a fender hook holds the bungee and sail in place.

Eye straps and fender hooks are easy to find, even in my landlocked boondocks. My local Lowe's, a big-box building supply store, carries a fair selection of the economical Atwood stainless-steel marine supplies.

However, finding a good source for marine-quality shock cord, offered in a full variety of sizes and colors and only in



**Mainsail frapped down using bungees. Lazy-jacks help.**

the needed length, was not easy until I connected with R&W Rope Warehouse (see Resources on facing page).

Installation of these goodies is fairly simple. First, determine how many cords you need. Since each cord effectively snugs the sail to the boom in two places as it is pulled over, count the number of sail ties you use now and divide by two. Odd number of straps? Just round up to the next even number.

The foot of my little Montgomery 15's mainsail is only 7 feet 6 inches. Since I previously used just three sail ties to furl it to the 8-foot boom, now I use only two bungees. Progressively greater distances between the hooks on the starboard side and the guiding eyes on the port side gave

**“First, determine how many cords you need ... count the number of sail ties you use now and divide by two.”**

me four angled bungees across the sail. As each one crosses over the sail from two turning points they double, and my sail is held down in four places. Great!

Longer booms will require mainsail frapping in more places, of course. Each installation is different, but not all that difficult for the average sailor who dotes on the process of continual improvement. With no furling straps to stow and fewer to fasten, you'll love it.

### **Installation notes**

Cut the shock cord about 12 inches longer than your measured distance: 6 inches for the knots in each end to hold it and 6 to form a loop. Determine the best location for this loop by temporarily installing the cord, then pulling it over the sail and into the fender hook, ensuring an equal amount of tension in each direction. Mark that point and take the cord off. Back at your sewing cubicle, double the cord at the



Aft end of boom showing the 5/16-inch eye strap securing two 1/4-inch bungee ends. The arrangement is the same at the other end of the boom.



Port side of boom showing two 1/2-inch eye straps providing turning points for two bungees.



Starboard side of boom showing fender hook with the bungee hooked on.

mark, then secure the sides about 3 inches from the mark. I used a needle and heavy thread.

For that final touch, mark the boom where the loop is hanging down. It won't be opposite the hook, and black electrical tape works well.

As the initial constant tension stretches the shock cord, it will lengthen a bit. Just shorten it with a new knot at either end or both ends.

Enjoy your simplified start and finish to that fantastic day of sailing! 

*John Butler was a Coast Guard search-and-rescue pilot, flying amphibious helicopters and fixed-wing planes. He retired as a commander in 1974 and now lives with his wife, Mary Lu, near Beaver Lake in northwest Arkansas. He sails his 1968 Montgomery 15 sloop, Rejoyce!, whenever he is able.*

## Resources

### R&W Rope Warehouse

For marine shock cord go to: <[http://www.rwrope.com/recreat\\_marine/sailboat\\_rig.htm](http://www.rwrope.com/recreat_marine/sailboat_rig.htm)> and check the last item on the page. Note the excellent quality specs: five diameters (from 1/8-inch to 3/4-inch) and six colors. R&W Rope Warehouse will custom-cut too. Call 800-260-8599.

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# Shrink-wrap vents

**Help that plastic cover breathe this winter**

by Joseph Orinko

**T**hose of us who defend our boats against Ol' Man Winter with that distinctive blue or white shrink-wrap cover are aware of the importance of providing ventilation. There needs to be a method of wicking out the moisture that can accumulate under the cover.

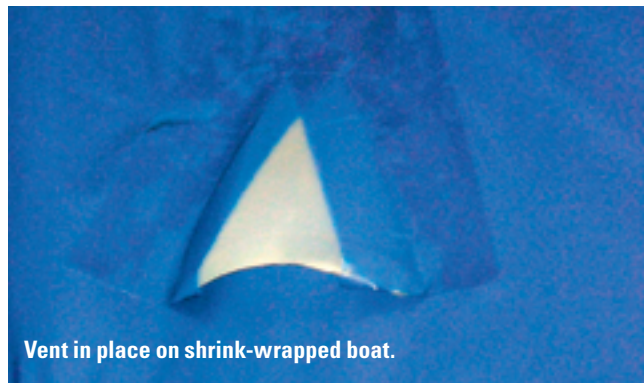
I've seen some primitive vents made out of leftover scraps of shrink-wrap plastic, but there's a free alternative that works very well.

## Here's how

- Take a couple of empty RV/marine antifreeze jugs. You probably used these to protect your water lines. If you didn't keep the empties, you can do a little dumpster diving to retrieve someone else's discarded jugs.
- Cut out two (almost) heart-shaped pieces per jug, as shown in the picture to the right. Leave on some of the jug bottom curve for stiffness. Cut rounded corners on the bottom to guard against chafe.
- Use shrink-wrap tape to tape the left and right sides of the vent onto the vertical surfaces of the stretched and fitted shrink-wrap cover.
- From inside the cover, find the vent area, and cut a 2-inch hole in the stretched wrap directly behind the attached cover.

Add about six vents for a 30-foot boat. The plastic vent keeps water and snow from entering the hole; the rigid jug bottom curve keeps it open. 

*Joseph Orinko has sailed the waters of Presque Isle Bay and Lake Erie for 26 years, 20 of them in his O'Day 23, Unicorn, and six seasons in a Catalina 30 named Unicorn.*



Vent in place on shrink-wrapped boat.



The basic materials for making a shrink-wrap vent are shrink-wrap tape (not shown) and a clean empty plastic jug. Cut a shape depicted by the dotted lines, making sure to leave some of the jug bottom on for stiffness. Cut two of these pieces from each jug.

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# 5200 forever!

## There's no end to the creative uses

by John Gambill

**S**ailors of good old boats are creative problem-solvers. So it's great to discover a product that can be used in more ways than its manufacturer intended.

Take 3M's 5200, for example. I've found that I can wrap wires or wire splices with 5200-saturated cotton or polyester cloth. Thus protected, the wires can be led through a hole so that the assembly provides strain relief or a secure and waterproof electrical connection (like for bilge pump wires in the bilge). Wire wrapped in 5200-saturated cloth isn't a real pretty solution but it's secure and, if you paint it, the result lasts a long time under the tropical sun.

This type of cloth can replace wire clamps. I've used it to glue wires inside the frame of solar modules (and other places). The application is probably not approved by the American Boat and Yacht Council (ABYC), but it looks nice inside a refrigerator box. Use blue masking tape to hold the wires in place for a day or more while the 5200 sets up.

### Hull material, perhaps?

Speaking of painting, I've decided to paint my boat with 5200 since the stuff is so rugged. To heck with patching holes, why not just start with 5200 as hull material? Wait — that's what my dinghy is already.

It can be used to patch an inflatable dinghy too. But make sure there is no silicone wax on the surface or the patch will come off.

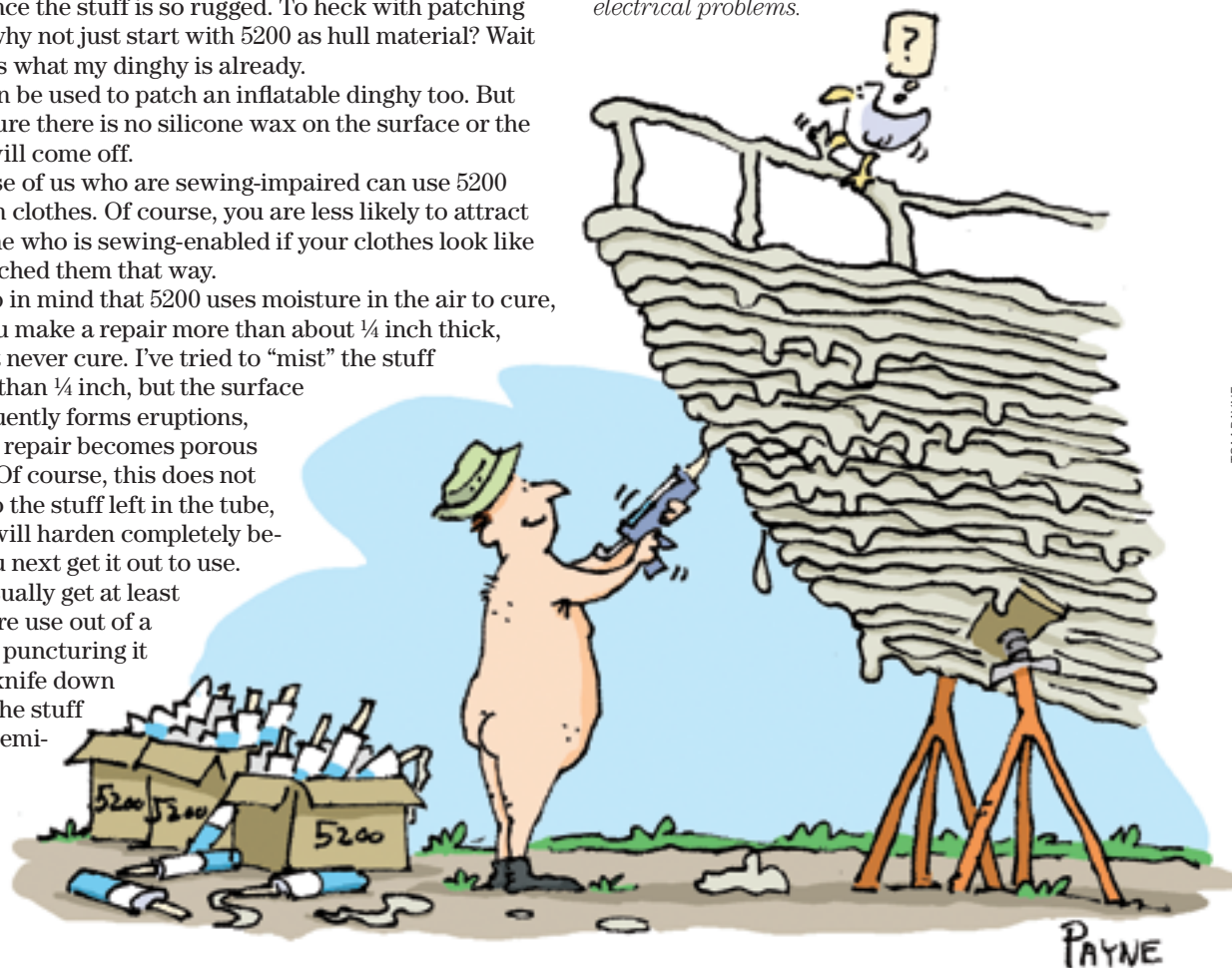
Those of us who are sewing-impaired can use 5200 to patch clothes. Of course, you are less likely to attract someone who is sewing-enabled if your clothes look like you patched them that way.

Keep in mind that 5200 uses moisture in the air to cure, so if you make a repair more than about ¼ inch thick, it might never cure. I've tried to "mist" the stuff deeper than ¼ inch, but the surface subsequently forms eruptions, and the repair becomes porous inside. Of course, this does not apply to the stuff left in the tube, which will harden completely before you next get it out to use. But I usually get at least one more use out of a tube by puncturing it with a knife down where the stuff is still semi-liquid.

Mineral spirits work great for thinning, can be used for cleanup, and help file an edge around something that has been seated on 5200. If you place masking tape next to the file area, then use a rounded surface (like the end of a popsicle stick) to remove the excess, you end up with very little extra 5200 to remove and a nicely rounded corner.

This stuff is durable — there is evidence that the ancient Egyptians were developing something similar for preserving the dead. So you don't want to get it on your clothes. My wife has figured out how I can avoid that disaster: use it in the nude. *▲*

*John Gambill and his wife, Libbie Ellis, sailed the Caribbean for four years on their 36-foot Bruce Roberts cutter, Hotwire. They returned to the U.S. in 1998 with a plan to sell KISS wind generators and make enough money to go cruising again. They currently sail OPBs — other people's boats — for pleasure or on deliveries. John is a former motorcyclist, musician, baker, airplane/car mechanic, and blackjack player. He spends most of his time working on electrical problems.*



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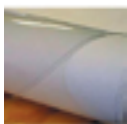
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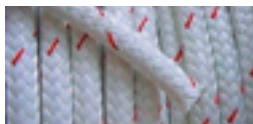
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