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Issue 140: September/October 2021

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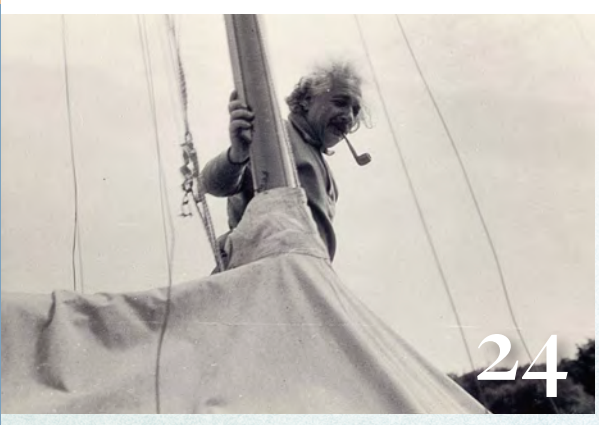

Good Old Boat

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On the Cover
Summertime, and the livin' is easy—and indeed it is for Eileen Chiang, as she takes in a hazy sunset from the foredeck of *Freyja*, a 1979 Cape Dory 36. Eileen's husband, Jacob Palmborg, took the shot while anchored in San Francisco Bay's Paradise Cove, an open anchorage that can be rolly during the day due to ferry traffic, but generally calms down at night.

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The sailing magazine for the rest of us.

Contributing Boats

A few boats behind the stories in this issue.

c'est le bon, 2006 Beneteau Oceanis 423

"We love that she is a very fast boat and easy to sail shorthanded. Plus, she is very easy on the eye. And, with our large cockpit and cockpit enclosure, she is the go-to party center in all weather conditions when anchored in company with friends."
Read about the bridge collision on page 34.

Designer: Groupe Finot
Owners: Hal and Terri Wells
Home Port: Anacortes, Washington
Fun Fact: The boat's name was inspired by the Supertramp song.

Fast and Furry-ous, 1994 Corsair F-24 Mkl

"I was looking to downsize to something small and sporty after sailing a cruising cat for 12 years. I had seen the F-24s when they first came out and thought they looked like a good bit of fun. This took me back to my small-boat roots (I had previously owned a beach catamaran and a Stiletto 27 catamaran)."
Check out the projects on pages 30, 46, and 51.

Designer: Ian Farrier
Owner: Drew Frye
Home Port: Deale, Maryland
Fun Fact: The boat was named after a classic Road Runner cartoon.

Entr'acte, 1977 Nor'Sea 27

"We would be lying if we said we have never thought about something different, larger...Over the years we looked and could not find anything that gave us what we already had. As a Frenchman said when we explained this, 'It sounds like a definition of love to me!' "
Catch part two of the big refit on page 38.

Designer: Lyle Hess
Builders/Owners: Ed and Ellen Zacko
Home Port: Minneapolis, Minnesota
Fun Fact: Ed and Ellen built her from bare hull and deck over three years.

ILLUSTRATIONS BY FRITZ SEEGERS

Nurdle, 1979 Bristol 35.5

"I love her combination of great sailing abilities and shallow draft. She only draws 3 feet 9 inches with her centerboard up, which is important here in Florida. She is no lightweight fin-keeler like my former Olson 30, but she moves well in very light air, as well as being stable when things pick up."
Check out the quarter berth hack on page 37.

Designer: Ted Hood
Owners: John and Robin Churchill
Home Port: Ocala, Florida
Fun Fact: *Nurdle* is among John's fleet of over six smaller boats.

Serendipity

BY BOB MUGGLESTON

A few summers ago, my buddy Travis and I were powerboating on the Connecticut River when mechanical issues forced us into the nearest marina. While Travis looked for help, I walked around the yard. As usual–and I knew this would be the case, having meandered among the jack stands at Midway Marina on numerous occasions–the place featured a healthy assortment of older fiberglass sailboats.

Suddenly I froze mid-stride. Hey now. Could that really be an S2 9.1? I walked over. On the boat's white hull was the name *Pursuit.*

At this point, Travis, who'd found what he needed, unceremoniously hustled me back to the docks. The sailboat had to be a doppelganger, I thought. After all, her Arlington, Vermont, hailing port was two states away. And aren't there a million sailboats named *Pursuit?*

Flash-forward to early summer 2021, and Travis has been bitten by the sailing bug. At the moment, he is interested in J/30s.

"You know," I say ("Beavis and Butthead" light bulbs simultaneously flashing), "there's a boat similar to the J/30 that performance-wise is nearly identical but might be a better family cruiser. It's called an S2 9.1. I think I might know where one is."

A quick internet search confirmed that the boat was indeed still in Haddam, so one drizzly morning we made our way north and there she was, sitting in the exact same location. The marina owner wasn't aware of her provenance, other than that she'd come from Vermont. She must have been a serious race boat at some point, he said, because she arrived with a quiver of high-end sails. The boat had been upgraded to rod rigging, and the yard had fully re-cored the boat's deck from below. He visibly winced as he told me this last detail. They probably had $30K into the boat, he admitted, and her asking price was half that.

I circled the boat in the rain, looking for clues. This was, after all (unbeknownst to Travis), the main reason we were there. I just had to know.

And then, suddenly, the evidence I was looking for, a barely discernible outline left behind by stickers long ago removed: *Madison, CT.*

As sailors, some of us have a tendency to anthropomorphize to an embarrassing degree the boats we intimately know and admire. I know I do. It's hard to describe the feelings that rushed over me when I discovered the vessel's true identity. After all, this was the boat I'd raced on as a college student in the mid- to late-'80s. Back then, its Madison-based owner campaigned out of the Groton-Long Point area in Connecticut, and the crew he'd assembled—me being one of the few exceptions—was a veritable who's-who of local top guns, folks who referred to themselves as "Mudheads." Needless to say, we won a lot of races. And vanquished many a J/30.

Nothing puts you "in it" like racing, and I saw just about everything there was to see from the foredeck of this sailboat. Near-collisions, crash-jibes flying the chute, a mini-white squall, unintentional groundings, and weather bad enough to render all but two of us seasick. The Mudheads knew how to work hard and achieve results, but they also had fun and drank copious amounts of Busch, Olympia, and Hamm's while doing so.

Standing there beside *Pursuit*, I thought of the long journey this boat had made (built in 1986, she was exactly 20 years younger than me), the incredible experiences she must have had. And of course, I couldn't help but think about my own journey, and the ways that serendipity comes into play as we travel along our paths.

Several years ago, at the celebration of life for this magazine's former senior editor, Jeremy McGeary, I met Michael Robertson. This spring out of the blue, I got a phone call from him. Now, he and his team have asked me to take his place to be your new helmsman.

Needless to say, it's a thrill to be aboard *Good Old Boat,* which, after nearly a quarter-century, is still an independently owned magazine, with a deep understanding of older fiberglass boats and the people who love and care for them. And yes, who anthropomorphize them.

My goal, as always, is to work hard and achieve excellent results, and to have as much fun as possible while doing so. Questions? Comments? Want to know what Hamm's tastes like? Email me at bob@goodoldboat.com.

I'll be standing by.

Hatchboards, Hooks, and Helping Each Other Handle Boat Problems

Hooking the Hook

In light of the recent anchoring issue (May/June 2021), I thought I'd share what I currently do to ease the work of retrieving our anchor.

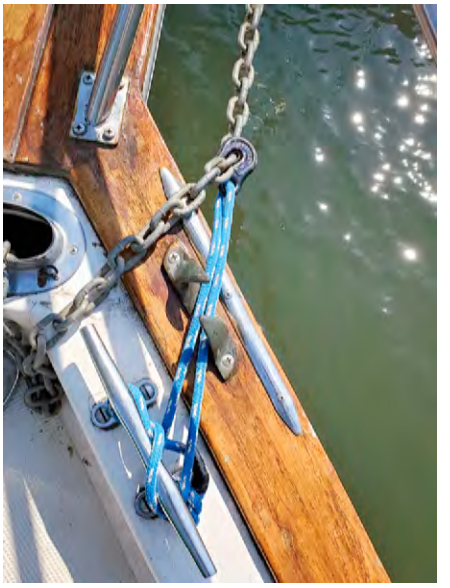
On our Island Packet 31, to ensure that we stay put we use a 45-pound Mantus with 45 feet of chain and 200 feet of rode. We currently do not have a windlass; instead I use a 4:1 block-and-tackle with a chain hook to help me get the anchor back aboard.

The block-and-tackle is dead-ended on a midships cleat. I find it's easy enough to haul all the rode aboard by hand. Once the going gets tough, I'll put the chain hook into the chain and use the block-and-tackle to help me get the anchor up. The built-in cleat on the fiddle block ensures that I don't lose any of my hard-won progress. There is a second chain hook secured to the bow cleat by a short loop that is used to hold the chain, in case I have to reposition the block-and-tackle to pull up another increment.

—**Matt Koch**, Pointe-Claire, Montreal, Quebec

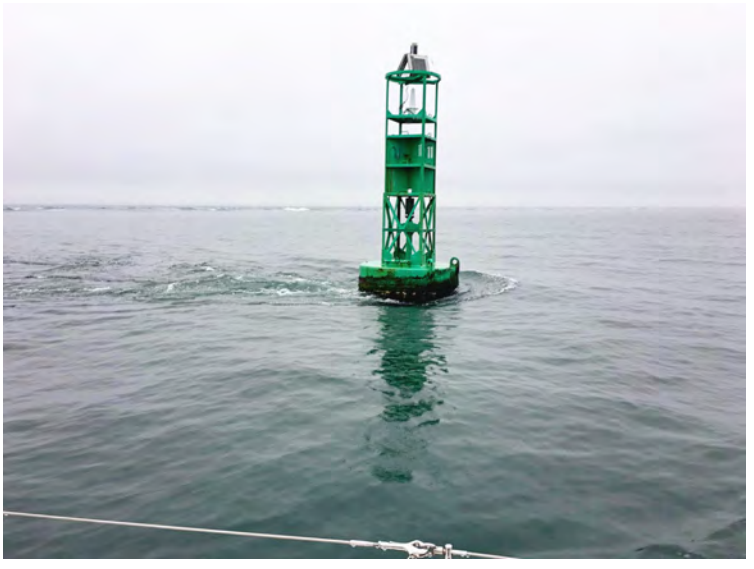
A-pawling Ambiguity

When I saw John Vigor's article "Putting a Stop to It—A pawl, aka chain stopper, can take the strain when your windlass won't," (May/June 2021), something about the pawl definition didn't seem right. I've always thought that a pawl is the piece that stops a ratcheted wheel from slipping backwards. A quick internet search yielded these results, which more or less mirror the definitions of other online dictionaries: 1) A pivoted curved bar or lever whose free end engages with the teeth of a cogwheel or ratchet so that the wheel or ratchet can only turn or move one way; and 2) Each of a set of short stout bars that engage with the whelps and prevent a capstan, windlass, or winch from recoiling. So while it would appear the "aka" part of your headline had the right term—chain stopper—the term "pawl" was used incorrectly.



—**Andy Vine**, Cortes Island, British Columbia

Technical Editor Drew Frye responds: *Yes, "pawl" is a word or phrase that is sometimes used ambiguously. Context helps, but not always enough. I couldn't find any clear-cut references in recreational sailing*



Good Old Boat **Editor Bob Muggleston took this shot of Valiant Rock Lighted Whistle Buoy 11 from the deck of *Vixen*, a friend's 1994 X-442, while on the way to Block Island, Rhode Island, from Essex, Connecticut, several years ago. This aid to navigation marks a submerged reef and serves notice that one is about to enter The Race, which is the easternmost entrance to Long Island Sound. Severe depth changes and converging tides often create a rip line, which is just visible in the background of the photo.**

Do you have a good photo of an aid to navigation? Send it to us at bob@goodoldboat.com. If we use it in this space, we'll send you a *Good Old Boat* hat or shirt.

books (several on anchoring) or something traditional (A Sea of Words, or a number of older texts). In my book Rigging Modern Anchors, I referred to a riding stopper as a "pawl-type chain stopper" and only used the phrase once. In all other cases the reference was generic (anything you used to stop the chain).

But the distinction on ships is clear and universal. This, from the U.S. Coast Guard: "Anchor windlass brakes, riding pawls, and devil's claws must be used as designed and periodically maintained to ensure effectiveness and safety."

In this case, a devil's claw is a hook placed over the chain and tensioned with a turnbuckle or other mechanism. It's a type of chain stopper (but not a pawl).

I like the U.S. Navy definition of riding pawl as-is: "Riding pawl. A safety stopper that works like a ratchet on the links of the chain. It is lifted up to the 'open' position when the anchor chain is run out. When heaving the chain in, the pawl is 'closed' or dropped in the after side of the riding chock. The pawl bounces over the incoming chain. However, if an emergency occurs, such as the wildcat jumping out of gear, the pawl will catch on a link of the anchor chain and hold the chain and keep it from running out."

Not only is *Carandy*, a 1965 Alberg 30, a great racer/cruiser, but once in port her sidedecks can be used as a buffet table. It's doubtful that her former owners, Peter and Leslie Terry, who sailed *Carandy* out of Sound Boat Works in Parry Sound, Ontario, listed this as one of the boat's attributes when selling her this past spring, but every good old boat has hidden virtues. It's up to us to discover what they are. Courtesy Leslie Terry.

A chain stopper, I believe, should be the generic, just as rode is generic for the line that connects the boat to the anchor, which can be rope, chain, or a combination. For the recreational sailor, the definition of chain stopper is broader than just a devil's claw. It should include anything that stops the chain, including a hook and rope, a riding pawl, a chain lock (typically a pin through the chain), or any other mechanism that serves this purpose.

Better Boards

You know what a pain hatchboards are, always in the way and slow to put in and take out? Well, I set out to solve the problem. First, I made new boards out of StarBoard, but they were too heavy. I lightened them using my CNC mill, then made a bracket to store them next to the companionway. But the problem still wasn't solved: I still hated pulling them in and out, so I started thinking about creating some sort of hinge mechanism I could use to make life easier while in port. I finally hit on the idea of using large hinges with keyhole slots. I pull the boards out of the grooves and drop them onto the hinges. A simple hand pull on the inside, and a swivel latch, hold them together. I can also open the top door only for air and some privacy. Notice the slide-latch on the port side; this keeps both or only the bottom board from falling out in the event of a knockdown. The cutaway in the bottom right corner was necessary to clear the mainsheet block. (The hatchboards are gasketed, but the gasket is above the cutout.)

My boat is an Etap 26 I bought 14 years ago in the Chesapeake Bay area (this may be the only Etap 26 in the U.S., as the manufacturer sold this one at the Annapolis boat show in 1984 and then left the market). I soon discovered a major design flaw that affected the raising of the retractable bulb keel. After pulling her

continued on page 54

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Send your letters to bob@goodoldboat.com. If we can't run your letter in this space, we'll try and get it into *The Dogwatch*. Speaking of which, are you getting *The Dogwatch* in your email inbox? It's free and the content is original. If you're missing it, visit goodoldboat.com to sign up.

C&C Redline 41 Mk I

A Canadian Classic with a Racing Pedigree

BY ANDY CROSS

As I walked down the dock at the Ludington Yacht Club, racers milled about, flags snapped in the breeze, and halyards clanged against masts in a chaotic tempo. Out on Lake Michigan, the late summer wind was churning the typically blue waters white, and I was eager to get out racing on the 1968 C&C-designed Redline 41 Mk I *Condor*. It was a moment I had been waiting for since I first stepped aboard the boat decades ago.

Co-owned by David and Kris Bluhm, and Stephen and Jennifer Bluhm, *Condor* is one of the first racer/cruisers designed by the now legendary Canadian team of George Cuthbertson and George Cassian. With its distinctive black hull and red boot stripe, it's a boat I've watched sail around Pentwater, Michigan, since I was a kid.

I have fond memories of being invited aboard *Condor* at a yacht club party for Chicago-Mackinac Race finishers. I was in awe. It was the largest boat my young sea legs had ever been on, and nearly every summer since I've admired it tugging at its mooring and sailing on Pentwater Lake and Lake Michigan.

In the summer of 2020, I found myself dockside at a yacht club event, once again fawning over *Condor*'s shiny black hull while chatting with owners Dave and Kris Bluhm. They invited me aboard for a tour and a tip of Mount Gay, and before I knew it, we were making plans to sail later in the summer.

History and Design

In 1965, Canadian yachtsman Perry Connolly commissioned Cuthbertson and Cassian to design a custom 40-foot racer that was to be "the meanest, hungriest 40-footer afloat." The result was a boat named *Red Jacket*. Built by Ontario's Bruckmann Manufacturing, it's believed to be the first sailboat engineered with a balsa-cored fiberglass hull.

Launched in May 1966, *Red Jacket* won 11 of 13 races that she started that summer on Lake Ontario. Following her success, *Red Jacket* headed south and in 1967 almost won the famed SORC (Southern Ocean Racing Circuit). She returned in 1968 to win the SORC overall, competing against more than 85 of the hottest racing boats of the day and becoming the first Canadian and first non-American boat to win the regatta.

The Redline 41 was born riding the wake of *Red Jacket*'s success—and along with it, C&C Yachts. Bruckmann Manufacturing built at least four Redline 41 Mk Is in 1967 and '68. The next iteration came quickly thereafter in the Redline 41 Mk II, also designed by C&C and built by Bruckmann. The Mk II prototype was *Bagatelle*, built as one of three Canadian contenders for the 1969 Canada's Cup. *Bagatelle*'s modifications included a slightly more swept and deeper keel, slightly enlarged rudder, and the addition of a "bustle" just forward

The Redline 41's raked bow, relatively flat sheer, and low freeboard typify the C&C designs that not only sail fast, they look fast, at right.

***Condor* powers just off the wind. Whether racing or cruising, the boat's turn of speed and power is evident, opposite page.**

Condor's refit included a new steering pedestal and rebuilt, refinished cockpit seats, at right.

Condor's owners installed a 4-cylinder, 43-horsepower Vetus diesel engine in 1986 before leaving to cruise the East Coast and Bahamas. Access to the prop shaft and stern gland requires reaching over the engine, at bottom right.

of the rudder. Thirty-five hulls were built until 1972 when sales slowed, and the model was discontinued.

Despite reports that Lindsay Plastics then purchased the molds and started producing the Newport 41 in Harbor City, California, under the name of Capital Yachts, recently discovered correspondence between George Cuthbertson and a yacht club commodore reveals that the Newport 41 was a similar but "separate and distinct" design that was "a ton lighter" with a "considerably shallower hull."

C&C's original Mk I design was envisioned as a racer/cruiser that could excel at both, and every subsequent version fits this brief. *Condor*'s first owner, Hill Blackett, a well-known and successful racer from the Chicago Yacht Club, was said to be sailing with his two sons past Florida towards the West Indies when they made the snap decision to compete in the SORC. It turned out to be a wise move, as *Condor* went on to capture the SORC title in 1972. Her win even garnered attention from the likes of *Sports Illustrated* and *The New York Times*.

The boat returned to Lake Michigan where she won several Chicago-to-Mackinac races in the 1970s and early '80s. In 1983, Bill Bluhm bought *Condor* and moved her to Pentwater, Michigan. Along with his sons Dave and Steve, Bill successfully raced the boat throughout Lake Michigan until 1988 when he and his wife headed out on an extended cruise. They traveled east through the Great Lakes to the Erie Canal, then down the Intracoastal Waterway, and on to the Bahamas. After a season of cruising, *Condor* was trucked back to Pentwater where she continued racing and daysailing and still resides today.

A Born Racer

My first sail on that blustery late summer day began as we pushed away from the dock and *Condor* steadily nosed forward against the protests of the wind and waves. When Ludington's iconic North Breakwater Lighthouse came into view, so did frothing whitecaps.

Fortunately, all hands aboard weren't shy about sailing Lake Michigan in such a state, and Dave rightly called for one reef in the main. With the northwesterly topping 20 knots and frequently gusting higher, we also took a couple turns on the furling genoa. The racecourse was set as a large, one-lap triangle with a beat, a reach, and a run.

Tacking back and forth in the pre-start sequence, I could feel the power in *Condor*'s double-spreader rig transfer to the hull as she punched through the raucous sea. After a lively start and a bit of close action with a few other competitors at the westerly end of the line, we were off like a shot, trimmed tight and sailing upwind.

The C&C Redline 41 quickly showed what this venerable

***Condor*'s functional cockpit, typical of the era, is designed for safety and quick, efficient sail trimming.**

design was built to do: sail fast. We brushed off a couple boats that fell to leeward and then passed underneath another comparably rated boat. Even with a partially furled headsail, *Condor* was close-winded and relatively dry—at least for those in the cockpit. As bowman farthest forward on the rail, I was getting a proper dousing. *Condor* took the seas in stride, not bucking or pounding in the waves.

We tucked in a couple smooth tacks, and with the upwind leg coming to an end, we cracked off and headed for the reaching mark. The crew rolled out the rest of the genoa, trimmed for speed, and *Condor* stayed hot on the heels of her closest, and only, remaining competitor. Most boats come into their own on a reach in fresh breeze, and the 41 is no exception. Throwing a wake and bounding across the waves, we made quick work of the second leg.

Jibing smoothly at the next mark, we seemed to come out of the maneuver without losing any speed. From there we headed low to a deep broad reach and run. Tempting as it was to fly the chute, there was no need given the wind strength, our position in the fleet, and the distance to the finish. Accordingly, I kicked back, dried out in the sun, chatted with my foredeck mates, and reveled in the smooth ride across the line. I thought, "Wow, what a feeling it would have been to cross the finish line on this boat in one of those SORC or Chi-Mac wins." To be sure, her timeless pedigree was alive and well.

As a point of reference, *Condor*'s PHRF number is 105 seconds per mile, the same as the early-'70s, S&S-designed Tartan 41. But just to illustrate how much design has evolved, the J/35, introduced in 1983, rates just 72.

A subsequent sail in champagne conditions of 12-17 knots on a bluebird day gave me a chance to spend more time at the helm and in a cruising perspective. With older cruising sails bent on, *Condor* still showed a good turn of speed and sailed at about 40 degrees off the apparent wind close-hauled. Her helm was light yet responsive, with just the right touch of weather helm. The performance-oriented sailor in me appreciated that I could quickly and easily adjust the traveler from the helm if she started to round up too much.

And as we engaged in a friendly duel with a newer, similar-sized performance cruiser inside Lake Pentwater, I got a feel for how simple it was to actually sail the 41-footer. I was also impressed with how we performed against the other boat; here we were, a 52-year-old racer/cruiser favorably trading tacks and jibes with a considerably more modern design.

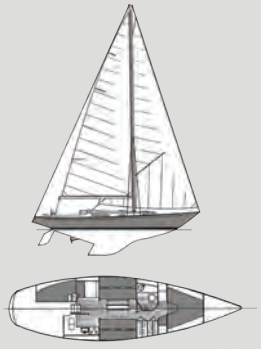
Rebuilding a Classic

While I didn't find a history of blisters in the Redline Mk I or II, normal problems with wet and rotten balsa core in the decks are likely for vessels of this vintage. Due diligence should also be given to the boats' spade rudders. Like the decks, these balsa-cored rudders probably need some attending to in the way of general maintenance, rebuilding, or even replacement.

Like many of the Mk I's counterparts, from the C&C Mk II to the various Newport models, *Condor* needed work in many of the aforementioned areas and more. Thankfully, she got it, and her rehabilitation process offers a blueprint for those looking to buy and restore one of these C&C classics.

In May 2012, brothers Dave and Steve took over *Condor*'s ownership from their dad, Bill, and immediately put the boat inside dry storage at Snug Harbor Marina in Pentwater. The goal was to put her into racing, cruising, and daysailing shape for the future. The bones that C&C and Bruckmann had given *Condor* back in the late 1960s were still good, she just needed some modern love to keep going.

An open-ended spa treatment commenced by stripping *Condor* down to her bones—just the hull, deck, and engine remained. After removing all deck hardware, Dave and crew jumped into fiberglass work by reconstructing large portions of the rotted core in the cabintop and deck. They dropped the rudder and peeled off the fiberglass skin, hogged out all the bad balsa core,



LINE DRAWINGS BY ROB MAZZA

C&C Redline 41 Mk I

LOA	41'5"
LWL	30'0"
Beam	11'2"
Draft	6'4"
Displacement	19,475 lb
Ballast	9,500 lb
Displ./LWL	322
Ballast/Displ.	49%
Sail area (100%)	776 sq ft
SA/Displ.	17.12

rebuilt it with closed-cell foam, and put the top skin back on.

The brothers treated *Condor* to all new AC and DC electrical systems, along with a suite of new Raymarine instruments and a NavPod at the helm. They upgraded interior and exterior lighting systems to LED, rebuilt all seacocks, and installed new plumbing systems, along with a new water heater and a fully reconstructed head. They upgraded tankage to include 18 gallons of diesel under the cockpit, 25 gallons of water in a tank under the port settee, and an 18-gallon polyethylene holding tank on the port side under the V-berth. The small tank capacities indicate the owners' racing priorities.

They reconstructed the main bulkhead and cabin sole and built and installed new cabinetry, along the way rehabbing or replacing every hatch and portlight. New cushions and upholstery iced the cake, and *Condor* shows in a condition that would have been similar to, or even better than, when she left the factory in 1968.

The steering systems on these boats are wire and chain with an aluminum quadrant, so solidly built, Dave says, that "you could steer an aircraft carrier with it." That said, the brothers installed a new steering pedestal. As work on the cockpit continued, they rebuilt all the cockpit seating and, as one would expect, freshened the exterior brightwork. They rebuilt all winches, converting the

***Condor*'s tidy and efficient nav station includes the electrical panel and space for electronics, at right.**

The snug, seaworthy galley is tucked next to the companionway with a two-burner stove, single-basin sink, and icebox, at bottom right.

Comments From an Owner

Last year we purchased *Minnie*, a 1969 Redline 41 Mk II. I've enjoyed her responsiveness at the helm and overall speed. Her traditional rig is straightforward and simple to sail. We are currently updating *Minnie*, and even though most systems are original they are functional. We are replacing batteries, halyards, sheets, seacocks, drains, wiring, hoses, etc. The hull is ½-inch solid fiberglass, with some additional coring added above the waterline towards the bow. Large frames support the 9,000-pound keel; bolts and washers are stainless steel and look perfect. The only issue we've found is rotted wood from a leaky seacock under the head sink and leaky mast boot. Her large wooden hatches have surprisingly not leaked. The hull-to-deck joint is solid from what I can tell. There is a wood rubrail. *Minnie* has been repowered with a 4JH5E Yanmar. What we like most about *Minnie* is her solid construction, low freeboard, and classic lines. She has a large cockpit with comfortable seating, huge ice box converted to refrigerator, and a Lake Michigan PHRF rating of 108. Our plans are to daysail, occasionally race, and family cruise.

—**Frank and Lisa Cobb**, Muskegon, Michigan

The main cabin includes traditional pilot berths port and starboard and a centerline table that opens up for dining, at left.

***Condor*'s glossy interior brightwork was reconditioned with several coats of varnish, and the white paint throughout was refreshed. Note the absence of a headliner, which exposes the deck hardware fasteners for easy servicing, at bottom left.**

primaries to self-tailing. They repainted the double-spreader, keel-stepped mast and replaced all the lifelines.

No restoration of this proportion could go without attention to the hull and topsides. *Condor* got new topside gelcoat gleaming with black Awlgrip and an epoxy barrier coat and bottom paint below the waterline. More than four years after coming out of the water, a much improved *Condor* splashed in July 2016.

A Boat for All

While the lineage of the C&C Redline 41 decidedly skews towards the performance end of the spectrum, its original racer/cruiser brief means it can be a boat for all purposes. If you're able to find any of these models on the market today, yes, you'll likely be getting a project that breeds many other projects (just ask Dave). But you'll also be getting a fast cruiser that knows its way around a racecourse and can be outfitted for coastal or offshore voyaging.

Want to set it up as a daysailer that is quick to get out of its slip or off its mooring, hoist the sails, and enjoy an afternoon on the water with friends or family? Yep. Have aspirations for distance or round-the-buoy racing with a full crew or shorthanded? Go for it. Looking for a platform to turn into a bluewater cruiser that can happily tick off the miles at sea or swing comfortably at anchor in an idyllic bay? Let your dreams be your guide.

After all, dream boats don't have to be shiny and new to be fast, fun, and safe. And while they'll undoubtedly take work, oftentimes it's boats like the C&C Redline 41 that are worth the most. Not monetarily, perhaps, but in appreciation by a family who has owned it for decades; by those of us who admire it sailing in the same place every summer; or by a kid who steps aboard and then years down the line achieves sailing dreams of his own.

Andy Cross is exploring the western Pacific coastline, from Alaska to Panama, with his family aboard Yahtzee, *their 1984 Grand Soleil 39. He is the editor of* 48° North *magazine and former managing editor at* Blue Water Sailing *magazine.*

C&C Redline 41 Mk I

. . . and Two More Transitional Racer/Cruisers

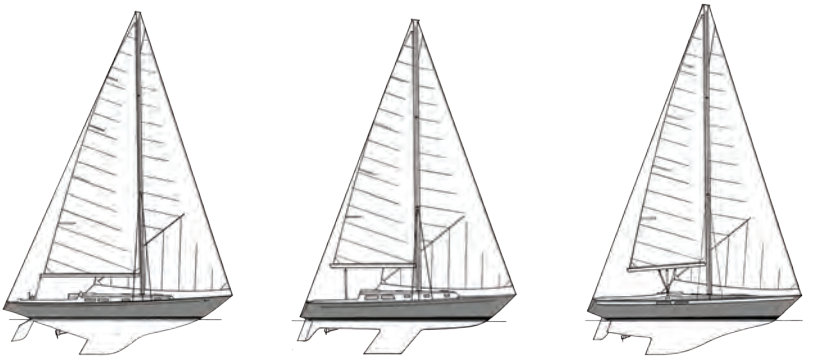
STORY AND ILLUSTRATIONS BY ROB MAZZA

The Redline 41 *Condor*'s win at the 1972 Southern Ocean Racing Conference (SORC) was no mean feat for a Great Lakes boat originally designed to the CCA rule, which the new IOR rule had superseded just two years earlier. As noted in Andy Cross' review, *Condor*'s victory emulated that of her progenitor, *Red Jacket*, who won the event in 1968 and prompted the launch of C&C Yachts in 1969. Interestingly, *Red Jacket* also competed in the 1972 SORC under new ownership, finishing 7th in class and 31st overall. In fact, six of the 10 boats in *Condor*'s class were C&C designs, and C&C designs won three of the five divisions, as well as *Condor* winning overall.

In choosing boats to compare to the Redline 41, it is logical to look at those that finished 2nd and 3rd in her division in the 1972 SORC, namely the Cal 39 and the Ericson 39. Both are 1970 designs and reflect the early influence of the IOR rule introduced that year. This is most noticeable in the striking diamond-shaped planform of the Ericson with pronounced pinched ends. In the Cal, it is visible in the flat bottom profile, a design feature pioneered by Dick Carter, one of the IOR's authors.

All three sport separate keels and rudders, firmly established at this time, although the Redline is the only one of the three with an all-movable, cantilevered, spade rudder. The Cal incorporates a small leading-edge skeg that was becoming popular at the time, and the Ericson has an elongated skeg that flows from the keel, with a partially balanced rudder. Perhaps Bruce King felt that the rating advantage in manipulating the aft girth stations outweighed the obvious increase in wetted surface created by this configuration. Or perhaps he was sacrificing maneuverability for a hoped-for improvement in directional stability.

All three boats have masthead rigs with in-plane double spreaders and double lower



	Redline 41 Mk I	Cal 39	Ericson 39
LOA	41'5"	38'8"	39'0"
LWL	30'0"	31'3"	30'0"
Beam	11'2"	11'8"	11'4"
Draftt	6'4"	6'0"	5'11"
Displ.	19,475	14,600	19,000
Ballast	9,500	6,600	9,500
LOA/LWL	1.38	1.24	1.30
Beam/LWL	.37	.37	.38
Displ./LWL	322	213.6	314.2
Bal./Displ.	49%	45%	50%
Sail Area (100%)	776	738	737
SA/Displ.	17.12	19.73	16.53
Capsize No.	1.66	1.91	1.70
Comfort Ratio	36.2	25.56	35.41
Year Introduced	1967	1970	1970
Designer	Cuthbertson & Cassian	William Lapworth	Bruce King
Builder	Bruckmann Mfg.	Jensen Marine	Ericson Yachts

shrouds. However, the Ericson and the Cal hint at the coming transition to larger headsails and smaller, higher-aspect-ratio ribbon mainsails.

This transition between CCA and IOR is also reflected somewhat in the amount of fore and aft overhang, as well as an increase in freeboard. The length overall/length waterline ratio indicates that the Redline has the largest overhangs at 1.38, and the Ericson less at 1.3. The Cal is much more truncated at 1.24. The increase in freeboard, which influences girth measurements, is shown most prominently in the Ericson's flush deck configuration.

Apart from this, the similarity in the numbers between the Redline 41 and the 3rd-place Ericson 39 are quite remarkable. Both are 30 feet on the waterline, both are about 19,000 pounds displacement with 9,500 pounds of ballast, and both have similar sail areas, although the Redline has tad more. All of this results in similar displacement/length waterline ratios of very conservative 322 and 314 respectively, and sail area/displacement ratios of 17.1 and 16.5. The Cal 39, however, is a completely different kettle of fish, being over a foot longer on the waterline and about 5,000 pounds lighter, with about the same sail area as the other two boats. This yields a much more competitive displacement/length waterline ratio of 214 and a sail area/displacement ratio of a remarkable 19.7. With these numbers, she should be a downwind and light-air flyer, which certainly was the reputation of the early Cals, starting with the 40.

Beams are also consistent between the three boats, only varying from 11 feet 2 inches to 11 feet 8 inches, with beam/length waterline ratios at about .37, indicating relatively narrow boats. This is reflected in the capsize numbers, all under the threshold of 2, with the lighter displacement of the Cal pushing hers to 1.9 compared to about 1.7 for the others. Comfort numbers also follow the range in displacements, with the Redline and Ericson almost equal at about 35 compared to the lighter-displacement Cal at a lively 25.

The year 1972 would be the high-water mark for C&C designs at the SORC. In 1973, Doug Peterson would launch his One Tonner *Gambare* (also influenced by Dick Carter), and all these later CCA and transitional IOR designs by production builders would fall victim to newer, often custom designs that were better at exploiting the proclivities of the new rule.

It is gratifying to see people devoting the time, money, and energy to upgrade classics like *Condor* to preserve them for future generations, and her current owners are to be commended for preserving this legendary piece of sailing history. The Redline, Ericson, and Cal each embody a personality tied to a remarkable period in yacht design when more and more people from all walks of life embraced offshore racing, be it on bays, lakes, or oceans. This was a period of great democratization of the sport, when a family like the Blacketts could come down from the Lakes on their winter cruise on *Condor* and win the SORC overall.

Good Old Boat *Technical Editor Rob Mazza is a mechanical engineer and naval architect. He began his career in the 1960s as a yacht designer with C&C Yachts and Mark Ellis Design in Canada, and later Hunter Marine in the U.S. He also worked in sales and marketing of structural cores and bonding compounds with ATC Chemicals in Ontario, and Baltek in New Jersey.*

Anatomy of a Legend

Arguably Canada's most influential racing boat, Red Jacket *broke all the molds.*

BY ROB MAZZA

The name *Red Jacket* invokes instant pride and recognition among knowledgeable Canadian sailors. She not only beat all U.S. competitors in the prestigious Southern Ocean Racing Conference (SORC) in Florida in 1968, but in doing so she launched the international reputation of Canadian designers and builders, prompting the founding of C&C Yachts. The Canadian company would dominate the North American sailboat industry for the next 20 years with production facilities in three countries.

Through the generosity of Peter Milligan, her late owner, this Canadian sailing legend will soon reside at the Marine Museum of the Great Lakes at Kingston.

What were the keys to *Red Jacket*'s success? What made her unique, and what made her a superstar? The answers to these questions lie in three areas: design, construction, and the people involved in her creation and campaigning.

The Design

Red Jacket was designed in 1965 for Canadian contractor Perry Connolly by the emerging yacht design firm of Cuthbertson & Cassian Ltd. of Port Credit, Ontario.

Racing under owner Paul Phelan, *Red Jacket* shows her winning form, at top right. Credit: Bryan Gooderham.

The brains behind the creation of *Red Jacket* (L to R), George Cassian, George Cuthbertson, and Perry Connolly, at right. Credit Mark Bruckmann.

***Red Jacket* with her mixed Canadian and American crew racing to Jamaica after the 1967 Southern Ocean Racing Conference.** Credit George Cuthbertson.

The legend goes that between the second and third periods of a Toronto Maple Leafs hockey game, Connolly asked his good friend, George Cuthbertson, to design the "meanest, hungriest 40-footer afloat."

Cuthbertson and his associate George Cassian took that instruction to heart. *Red Jacket*'s underwater profile used a separate keel and an all-movable spade rudder, reducing her wetted surface, increasing the efficiency of her "foils," and improving maneuverability and control. This was in sharp contrast to the full keels with attached rudders that had persisted in offshore yacht design for too many years. This split configuration is now the norm, but in 1966 when she was launched, it was definitely avant-garde.

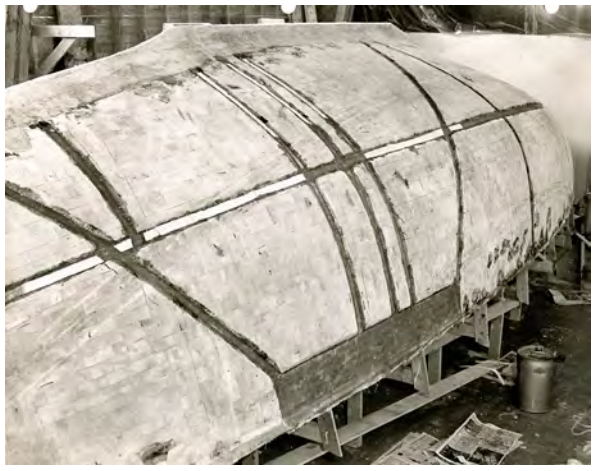
Above the waterline, the designers focused on weight reduction and improved efficiency. They particularly targeted weight reduction in the ends of the hull to reduce the pitching moment for smoother sailing in waves. They reduced the traditional longer overhangs by using a reverse transom aft and an aluminum "hair pin" bowsprit forward. They improved rig efficiency by reducing drag with the use of shrouds that crossed internally to the other side of the mast.

Engine weight was cut by installing a rotary Wankel engine, which ultimately proved unreliable in a marine environment. The interior was stark, with no accommodations forward of the mast to allow for better sail storage and to further reduce the weight in the ends of the boat.

The Construction

After all the weight-shaving in *Red Jacket*'s design, the choice of construction proved to be the ultimate attempt to keep her as light as possible. In 1966, wood, steel, and aluminum were the popular materials for racing yacht construction. Early fiberglass was being used in smaller, higher-volume production boats but seldom in competitive custom one-off race yachts. *Red Jacket* turned that practice on its head by employing an engineered composite hull construction using a lightweight, end-grain balsa core sandwiched between two load-bearing engineered fiberglass skins. This was the first time this had been done in North America, and it reduced weight with a substantial increase in stiffness and no loss in strength.

The technique was so new in racing yacht construction that *Red Jacket*'s builder, Erich Bruckmann, had never built a boat like this before, but he would soon become the master of the method and build some of the finest boats in the world in the C&C Yachts Custom division. And while it was unique at the time, sandwich-cored construction soon became the norm in all performance composite structures, from aircraft to wind turbine blades.



Balsa core applied to the inside skin on a hull plug. Note the areas of core removed to allow installation of solid fiberglass "strapping," a technique eliminated in all subsequent cored construction at C&C. Credit Mark Bruckmann.

***Red Jacket* at her launch in May 1966 showing her separate keel and all-movable rudder, both radical for their time.** Credit Mark Bruckmann.

The People

The people involved in *Red Jacket*—her owner, designers, builder, and crew—had been working together on a number of other projects for many years before her creation. This was a classic example of the 10,000-hour theory of creativity. *Red Jacket* was innovative and revolutionary for her day, but she did not come out of thin air.

Cuthbertson and Connolly had known each other since their teens sailing in Toronto. When Connolly returned to sailing in the early 1960s, he bought an imported steel CN-35 yawl from Cuthbertson and Cassian and raced her extensively and successfully. In 1964, Cuthbertson and Cassian designed, and Bruckmann built, the strip-plank, 42-foot *Thermopylae* for local sailing rival Gordon Fisher. *Thermopylae* so dominated racing on Lake Ontario that Connolly asked Cuthbertson to pull out the stops and design the next generation of offshore racer specifically to beat her. He chose the name *Red Jacket* to underline the rivalry between the two boats; Fisher had named *Thermopylae* after a famous clipper ship, and Connolly followed suit with *Red Jacket*.

(Fisher would become a watch captain on *Red Jacket* in the 1968 SORC, and Fisher and Connolly would become two of the three syndicate members behind the creation of the C&C- designed, Bruckmann-built *Manitou* to win the 1969 Canada's Cup; they shared helmsmen duties during the series. Cuthbertson and Connolly remained lifelong friends. They died within a week of each other.)

After *Red Jacket*'s launch in May 1966, she too dominated racing on Lake Ontario, winning 11 of her 13 races that season. That success prompted Connolly to follow the advice of American Jim McHugh, owner of the not-yet-finished Cuthbertson-designed and Bruckmann-built *Inferno II*, to combine their crews and enter *Red Jacket* in the 1967 SORC, a series of five offshore races in Florida considered the World Series of yacht racing.

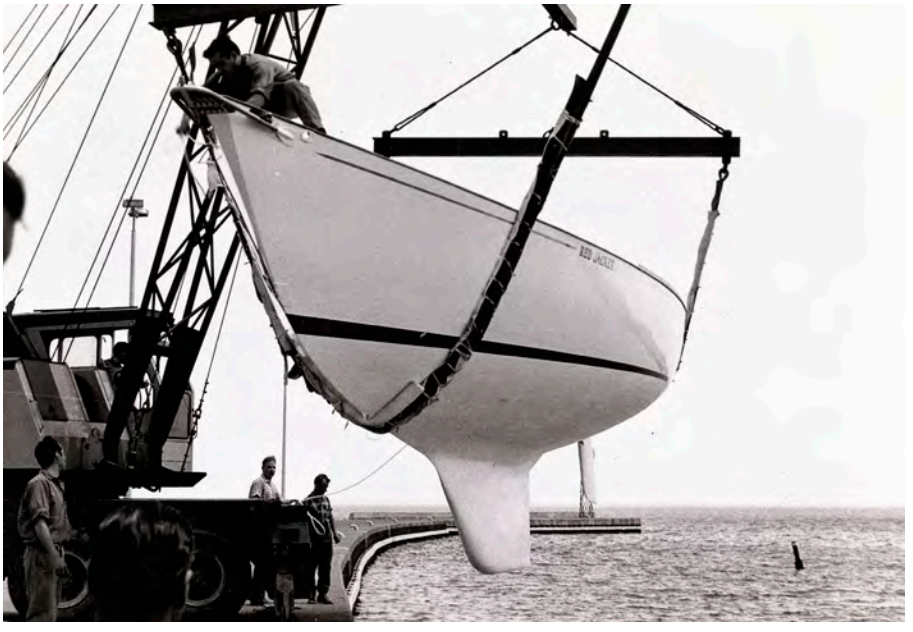
She lost the overall prize by one bad race, the all-important, high-scoring Miami-to-Nassau Race, and dropped from first to sixth in her class. She came so close to winning that Connolly decided to return the following year. Her all-Canadian crew in the 1968 SORC was made up of others who had been involved in this process, notably Gordon Fisher.

Red Jacket had built on all the lessons learned from her predecessors and took it to the next level. These are people who had worked together in close collaboration for many years perfecting the ultimate ocean racer. With *Red Jacket*, their time had come.

C&C Yachts

Red Jacket's overall win at the 1968 SORC led directly to the public stock offering that resulted in the creation of C&C Yachts in 1969, and that, too, is the stuff of sailing legend. The design firm of Cuthbertson & Cassian joined with the three Ontario builders producing their designs in fiberglass–Bruckmann Manufacturing, Hinterhoeller Yachts, and Belleville Marine–to create a combined design, manufacturing, and marketing entity.

Racing wins continued with other Cuthbertson & Cassian-designed, Bruckmann-built custom race boats, notably *Manitou* winning the Canada's Cup in 1969, and the continued success in the SORC, where C&C boats won overall (see "C&C Redline Mk I, pg. 8) and three



***Red Jacket* at her launch ceremony in May 1966. The aluminum "hair pin" bowsprit helped save weight forward.** Credit Mark Bruckmann.

***Red Jacket* continuing her winning ways in the 2011 LYRA Regatta at Port Credit Yacht Club with her longtime sailing master Bryan Gooderham at the helm. Bryan has helmed and cared for *Red Jacket* for over 25 years under the ownership of Paul Phelan and Peter Milligan, at right.**

George Cassian, George Cuthbertson, Perry Connolly's daughter Shelagh, with champagne, and Erich Bruckmann at *Red Jacket*'s launching in May 1966, at bottom right. Credit Brion Jorgenson.

of the five divisions in 1972. Cuthbertson would put down his drawing pencil, handing design responsibilities to Rob Ball, and become president of C&C in 1973. Connolly would later manage the Rhode Island subsidiary of C&C and eventually Boston Whaler and Hinterhoeller Yachts, while Bruckmann continued to produce masterpieces in yacht construction throughout his long career.

It is now 55 years since *Red Jacket*'s launching, and sadly, very few of the people who created her are still with us. Peter Milligan was her most recent owner, the last of a number of individuals who cared for and revered this remarkable piece of Canadian sailing history, while at the same time continuing her winning ways on home waters. He always said he felt more like *Red Jacket*'s custodian than her owner, so he stipulated in his will that she should be donated to the Marine Museum of the Great Lakes at Kingston upon his death, which came far too early.

Milligan chose the marine museum as her final home largely because Cuthbertson had already donated his entire drawing collection up to 1973—including the *Red Jacket* drawings—to the museum. Also, Tim Jackett of Fairport Marine in 2012 donated all the C&C drawings from 1974 to 1996, when the C&C assets were purchased by Fairport Marine in Ohio (see "Drawing on History," July/August 2021). The marine museum is also the home of the Canadian Sailing Hall of Fame in which George Cuthbertson was an early inductee, and it will be initiating the Register of Historic Canadian Sailing Craft. *Red Jacket*, of course, will be the first entry.

The plan is that *Red Jacket,* in her new home in Kingston, will continue to sail, allowing as many sailors as possible to try their hand at the wheel and trimming the sheets of this remarkable piece of Canadian sailing history.

(A version of this story first appeared in *Thousand Islands Life* magazine in April 2021.)

Good Old Boat *Technical Editor Rob Mazza's bio can be found on page 15.*

Captain Spontaneous

Wherein loose lips end up sailing ships, that is, a venerable fishing schooner.

BY D.B. DAVIES

Decades into my successful marriage, I know that compromise is requisite to happiness. Which explains why, that summer, my beloved Grampian 30, *Affinity*, sat quietly alone at her mooring for two solid weeks while Jacqueline and I vacationed in Newfoundland, the rock on Canada's eastern extremity she had her heart set on visiting.

After arriving in St. John's, I quickly came to appreciate the easy informality of everything and every place we went. If I wanted fries instead of mashed, that was no problem. If I'd lost my ticket to the museum, that was OK—it was enough to explain that'd I'd paid and lost my ticket. If I didn't make it in time for the scheduled whale watching trip, then I could take the next one. There seemed to be a cultural divide between this province and the rest of Canada; Newfoundland seemed free of silly rules and constraints. People were friendly and simply glad we'd come "from away" to visit.

After lunch one day, Jacqueline said she had a coupon to take a trip on the schooner *Scademia* (Jacqueline is a planner and had coupons for nearly every activity on this trip). I was eager to see the harbor and the schooner, but when we arrived, I couldn't hide my disappointment. *Scademia* was about 100 feet long and perhaps 18 feet abeam with two tall masts. She sat tethered to the dock between two much larger vessels. A man was working on the foredeck of *Scademia*, within earshot of where we stood.

"I think I'll pass on the schooner trip," I said.

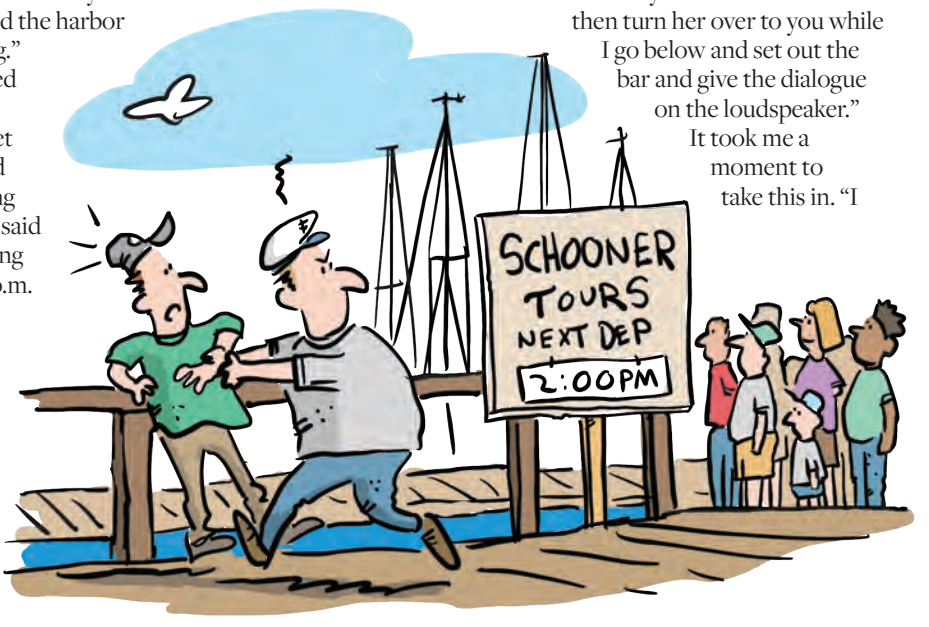
"Why? I have a coupon."

"It's not really a schooner anymore, it's just a tourist barge. The aft boom has been removed to create a tent to keep the tourists out of the rain. They built a cabin around the forward mast for a gift shop or something. There are benches for people to sit on. There's an observation deck on top of the gift shop. The sails look like they haven't been raised in years." My eyes traveled up to the crow's nest. "Certainly the royals, top gallants, and yankee haven't felt any wind in a long time. None of this would be on a fishing schooner. This is a tour boat. I imagine all they do is motor around the harbor or something."

I suggested a place on George Street for lunch and we left, noting the sign that said the next sailing was at 2:00 p.m.

At lunch, Jacqueline reminded me that she had a coupon for the schooner and that she'd like to use it. I repeated my objection but conceded that I didn't have a better plan for our afternoon, except for the brewery tour. We agreed to return to the dock, see what was happening, and then decide on either the schooner or the brewery.

Back at the dock, I was surprised to see a crowd waiting to ascend the gangplank. I was working on my best pitch for sampling a beverage at the brewery when I noticed the man who'd been working on the schooner's deck earlier striding along the dock. He doffed his hat and smiled as he passed the tourists, then dropped the smile and replaced it with a scowl; he was making a beeline for us. I nodded as he approached, and he took me firmly by the shoulder and led me away from the crowd.



"Earlier, you were making noises like you know something about sailing a vessel."

"I have a sailboat on Lake Ontario," I offered in my defense.

"You know your red greens and fore from aft?"

"Yes."

The man leaned in closer and spoke in a whisper. "Then I'd be needing a favor to ask. There's a music festival up north and all my crew is gone to it, except for Peter there on deck. I make a piddlin' on ticket sales, especially with people like you keeping coupons. It's the bar and souvenirs that keeps me afloat...so I'll be asking this favor."

"I don't understand," I stammered.

The man's voice went even lower, "Would you be takin' the helm for the cruise? I'll clear her away from the dock and then turn her over to you while I go below and set out the bar and give the dialogue on the loudspeaker."

It took me a moment to take this in. "I

ILLUSTRATIONS BY TOM PAYNE

don't...I've never sailed a ship this size."

"You was talking pretty big to that lovely young lady with you afore the lunch."

I glanced back at Jacqueline and straightened my posture. "I suppose a ship's a ship...but I've no interest in motoring about. Once we clear the harbor, I'd want some sails up."

The captain paused. "I'll talk to Peter, the young lad. He can put up the lowers, but that's all. There's a brisk breeze out there today and I don't want a load of tourists too sick for drink and souvenirs."

We stared at each other before I finally said, "If it'll help you out, I'll do it; but keep an eye out. If I get in trouble, you'll have to take over."

"There's a lad. It'll be a great day."

With that he put a big smile on his face and strode over to the gangplank to welcome his guests on board. I returned to Jacqueline.

"What was that all about?" she asked.

"Nothing really," and I took her hand to join the embarking throng.

When we were all aboard, I heard the twin diesels fire up. Peter scurried around the deck making preparations to cast off. A few people from the small ticket office down the dock came out and lifted the heavy lines off massive iron mooring cleats embedded in cement, and Peter coiled them aboard. The captain put her in gear and expertly nudged her back and forth between the two huge vessels lurking fore and aft until *Scademia* was clear. He motioned for me to come take the wooden wheel. Jacqueline looked puzzled and somewhat apprehensive.

"The harbor gap is only 60 feet wide, so take her up the middle if there's no other traffic," said the captain. "Follow the red greens and you'll be fine. Here's your throttle. If it's not too breezy out there and Peter hoists sails, just draw the levers back here to an idle, but leave her in gear. Off your starboard side you'll see Cape Spear. Point your bow for the tip of the point."

With that, he took his captain's hat from his head, placed it on mine, then disappeared down a companionway. Suddenly I was at the helm of a fishing schooner in the middle of St. John's Harbor. I was both thrilled and terrified.

I pushed the twin levers forward and the ship lurched. I corrected and she responded obligingly. Heading for the gap, I saw the first green marker and steered to leave it to starboard. People milled all over the decks before me, some pointing up to Signal Hill and some looking out through the gap to the Atlantic beyond the lighthouse and the surging white caps that awaited. Huge hills and cliffs soared hundreds of feet in the air all around, shielding us from wind and wave. Moving slowly through the calm waters, one couldn't help but think that if man had set out to build a perfect harbor, he couldn't have done better than nature did with this one.

Under sail, once I got her in her groove, I could feel her doing her happy dance.

The speakers on deck exploded: "Welcome aboard the schooner *Scademia* and enjoy your trip back to the time when fishermen took vessels such as this out to the Grand Banks summer and winter through all weather to fill the holds with cod for a hungry nation. As we motor toward the harbor mouth and the great Atlantic Ocean, look up the steep cliff on your left side and you'll see Signal Hill, the site where

the first wireless message was received from Europe..."

I heard the words, but I couldn't pay attention; I was too focused on praying that there would be no vessels coming into the harbor through the narrow gap we were quickly approaching. To my great relief, it happened that only myself, *Scademia*, and a few hundred tourists slipped through and out into the Atlantic that day.

Out of protected waters, I felt a southwest wind tug at my clothes and try to lift my hat from my head. The seas before us started to build to 2-foot waves. As I helmed with one hand on the huge wooden spoke and secured my captain's hat with the other, I noticed several people in the crowd looking toward me. I offered a broad smile in reply, which they seemed to take as reassurance.

I pushed the throttles forward and *Scademia* responded, holding a steady course out into open water. To my right I could clearly see Cape Spear in a hanging gray mist. Several people came from below with cups in their hands and Schooner *Scademia* T-shirts on their backs. The ship was handling well. I was gaining confidence. It was time to kick it up a notch. I spotted Peter in the crowd and beckoned him over.

"I'll swing her around to the wind. Can you put some canvas up?"

"Looks like a great day for it! I'll raise the two lowers." I was surprised and encouraged by his enthusiasm, and also confused.

"How can you raise the stern lower without a boom?"

"I'll secure a block to the stern rail and run a sheet. Give me a nod when you want them up and hold her steady to the wind."

With that he was off and soon appeared at the mast with a few of the sturdier-looking passengers who all held fast to a halyard. I brought her head to wind and nodded. The huge rings around the mast flew skyward taking the canvas with them. The sail flapped about in the wind and I gave the throttles a nudge forward to hold her to course. With the sail up and the thick halyard cleated, Peter and his hearty crew moved to the forward mast and quickly hoisted that canvas. Once secure, Peter nodded, and I eased her to port and in just a few seconds the canvas snapped, the sails filled, the deck heeled, and we were off romping close-hauled through the waves heading straight for the point of Cape Spear.

In one sense, there really was no difference between *Scademia* and my 30-foot Grampian. Under sail, once I got her in her groove, I could feel her doing her happy dance. When she drifted to windward, just a slight nudge of the wheel brought her back. The tourists milled about the heeled deck and leaned on the rails, the sails were taut as Peter eased the sheets, the waves swooshed beneath the lee rail, and I stood feet astride. I caught Jacqueline's eye in the crowd, smiling the broadest smile and looking like a television fashion model with the wind whipping her long, black hair. I felt a tug at my sleeve and looked down to see a young lad. His mother smiled.

"He wanted to come up and meet the captain," she yelled into the wind.

"Welcome aboard, son. Are you enjoying the sail?"

"Yes sir...she's really moving fast, isn't she?"

"She'll do," I replied. "Would you like to take the helm for a short spell?"

"Could I?"

I moved to the side but kept one hand firmly on the wooden spoke. "Just step in here and take her with both hands."

I held on tight to keep the boat on course while the young fellow moved in beside me, grasping the wheel and smiling into his mother's camera. And with a click, I was immortalized as an ocean-going captain, not of a tourist barge, but of a true fishing schooner, *Scademia*.

We galloped along toward Cape Spear...more cups in hands, more T-shirts...a happy ship she was, and then Peter approached.

"Would you like the staysail up? It'll help balance her. She's going good."

"Sure," I said. "Do you need me to bring her head to wind?"

"No, just ease her up a bit to take the power out. I've got some hearty crew who'll have it up in no time."

With the staysail up she did smooth out and weather helm eased. Now she was skimming along more on a beam reach rather than close-hauled, and Peter had adjusted the sheets with the skill of an experienced sail trimmer. Throughout, the loudspeakers barked sporadically about the wooden ships and iron men of the Atlantic provinces, about John Cabot first discovering St. John's Harbor in 1497, about sailors finding the Grand Banks and the cod so thick you could jump overboard and walk across them without sinking. Then I heard, "And to your right is Cape Spear, the most eastern point of land in Canada...and now we'll be coming about and heading back to St. John's Harbor."

Coming about? "Peter!"

Peter emerged out of the mass of bodies. I didn't need to ask—he could see the question in my eyes and laughed.

"The staysail is self-tacking and I've good men on sheets for the other sails and they know what to do. Hold her steady for another five minutes while I get everything ready, then yell, 'Helm's alee' and swing her around. It'll be fine."

A few moments later, the speakers boomed again. "Ladies and gentlemen, we'll be coming about in just a minute, so find something to hold on to and secure your drinks. Ready when you are, Captain."

I took a deep breath, felt the eyes of the crowd upon me, looked up to the sky, and savored the wind in my face and the firmness of the wheel in my hands. "Helm's alee!"

With that I spun the wheel, spoke after spoke slapping my hand. *Scademia* lurched and for the briefest moment, with my heart in my throat, she paused with the waves splitting to either side of her hull, then slowly eased through irons onto the port tack. The headsail slid across over everyone's head, the big boom came across the deck with the sails flapping only momentarily. Peter scurried to move the block and sheet on the stern rail over to the starboard side before the wind filled the sail.

I looked to the bow, and I'd gone too far around.

With the wind now astern and the open sails, we were bobbing out into the Atlantic and perhaps Europe. But just a gentle pull on the wheel and she righted herself again. Peter moved from one line to another and sheeted the sails in until I had her dancing along again, steering a bit high of the harbor mouth off in the distance. The sails were filled with powerful gusts, the sun shone, and we were on our way. I was captain of all I surveyed.

Approaching the gap, I turned to windward, and Peter dropped and secured the sails. I motored half-throttle into the gap. Alcohol and the near certainty of surviving the voyage infused the crowd, and their singing was more boisterous than it had been heading out. Even so, my mind was on one singular thought; "Red, right, returning. Red, right, returning."

Once inside the harbor, I swung south and motored past *Scademia*'s mooring spot. I couldn't believe how small the space was, those huge tankers towering over on either end. I swung the bow around and headed back. There was no one at the dock to catch the bow line that Peter was preparing to toss. I motored just past the empty space and slipped the levers into neutral. All I could do is try to parallel park like a car on a busy street. My hand went to the levers ready to pull back into reverse when I felt a hand on my shoulder and the captain's hat lifted from my head.

"I'll take her now, Skipper," came the captain's voice, and I breathed a heavy sigh.

"All yours," I said as I left the wheel and walked into the singing mass of humanity to find Jacqueline.

Within minutes *Scademia* was nestled into her mooring spot. People had appeared from nowhere to catch and secure lines, the gangplank was dropped, and the chattering mob wobbled off the boat to steady themselves on dry land once again. Jacqueline slipped her arm through mine saying, "Hey sailor...that was fun, wasn't it?"

I looked around and couldn't see Peter or the captain, and so Jacqueline and I walked down the gangplank together and stood for a moment looking back at *Scademia*. Peter appeared on deck. I waved him ashore and he came to greet us.

I shook his hand and said, "Is the captain available? I'd like to buy you both a beer."

Peter looked back to the boat. "Would love to, but we've got to clean up for the dinner cruise. Apparently, it rained at the music festival and everyone is on their way back, so we'll have a full crew tonight."

"I understand," I said. "Tell the captain she's a fine ship and it was a pleasure to be aboard. I appreciate the opportunity."

Jacqueline took my arm and we started away down the dock. "Well, Skipper, you've had a rough voyage. I think you'll need a beer at the brewery tour and then a short nap before supper."

I looked down into those beautiful, deep brown eyes, that smiling face, and thought to myself, Davies, sometimes... in spite of yourself...you do make the right decision.

D.B. Davies is a sailor, writer, and frequent contributor to Good Old Boat. *He sails* Affinity, *his 1974 Grampian 30, around Lake Ontario. After extensively researching the men and sailing schooners of Canada's Maritime provinces, he wrote a dramatic screenplay about the famous* Bluenose *and her skipper, Angus Walters. You can find out more at thebluenosemovie.com.*

A Sailor, Relatively

The world's most famous physicist was a devoted, if unconventional, yachtsman.

BY JOHN VIGOR

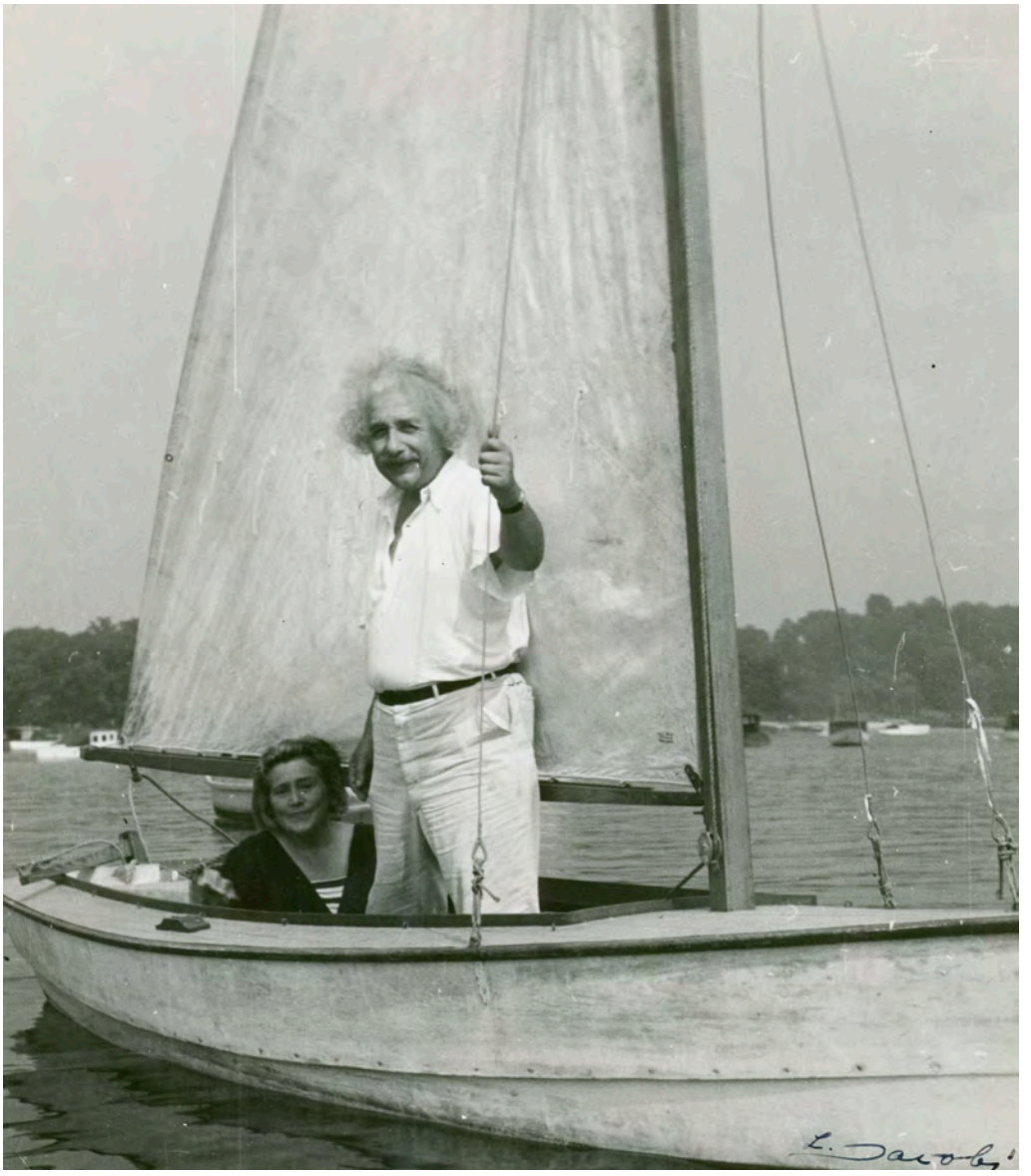
What name would you give an amateur sailor who capsized, hit rocks, and ignored bad weather? Who nearly collided with other boats, refused to wear a life jacket although he couldn't swim, frightened passengers with his recklessness, and neglected his vessel's upkeep?

The name would be Albert Einstein. Yes, *that* Albert Einstein.

Sailing was a passion for the lovable, spaniel-eyed genius with the wild white hair that floated in the wind. He learned to sail on the Zurichsee (Lake Zurich) in Switzerland in 1896 when he was an 18-year-old student. And he continued sailing until old age forced him to give it up on the East Coast of the United States more than 50 years later, at the conclusion of World War II, long after he had become the world's most famous physicist.

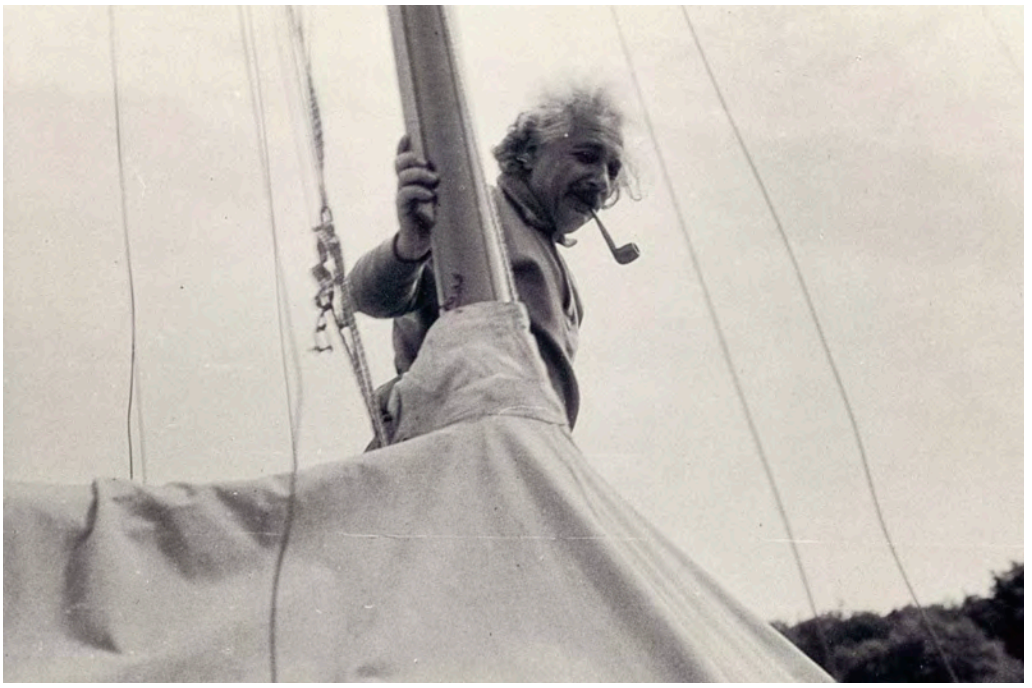
Einstein sailed as he lived his life—absentmindedly. He was a dreamy kind of sailor, a man who was bemused and delighted by sailing. His was a true passion, undiluted by caution and unburdened by technical knowledge. Einstein was an instinctive sailor. A sailor, it is safe to say, the Coast Guard would have hated to see coming.

His mast fell down regularly. He often had to be towed home. He almost managed to drown himself and had to be rescued by a motorboat. He wouldn't carry an outboard motor himself, though. He despised machines. He'd rather drown, he declared, than permit a motor on one of his beloved sailboats.



Einstein and his dear friend, Margarette "Grete" Lebach, sailing in 1937, probably on Saranac Lake, New York. Credit: L. Jacobi. Photo courtesy Leo Baeck Institute, New York.

The sailboat in question, one of many he owned or borrowed, was a battered 17-foot daysailer called *Tinef*—meaning worthless, or



Einstein loved sailing, though his approach was more whimsical than most. Photo courtesy Leo Baeck Institute, New York.

of no intrinsic value. He sailed her extensively in New England, though it is difficult to classify, in conventional terms, the type of sailing he did.

He never strayed too far from shore. He certainly didn't race. His friend Dr. Gustav Bucky, who sailed with him often, said: "The natural counterplay of wind and water delighted him most."

One might conclude, then, that Einstein was a cruising yachtsman. Of sorts. And relatively speaking, of course. He wasn't a conventional gunkholer.

When Einstein settled in Princeton, New Jersey, in 1933, he had long been the most famous scientist alive. In 1905, while working as a probationary technical expert (third class) at the Swiss patent office in Bern, he wrote five scientific papers in his spare time. Among them was his first on special relativity. It was a dissertation of 9,000 words, entirely devoid of footnotes or references. It was an extraordinary document from an extraordinary man.

Einstein was recognized as the most brilliant physicist the world had seen in three centuries, perhaps of all time. His great strength was his ability to make intuitive leaps of the mind and then find the scientific facts to fit them. His theory upset classical concepts of physics and laid down a blueprint for the way the physical world was built. And, paradoxically, although the vast majority of people would never understand it, it excited their interest and fascination to the extent that he was mobbed when he appeared in public.

His famous equation, $E=mc^2$, in which energy equals mass times the speed of light squared, became a household phrase the world over.

It is impossible not to speculate on how much of the theory of relativity may have come to Einstein while he was sailing. From the very beginning, he carried a notebook with him on the water. When he was 18, he often sailed on the Zurichsee with Fraulein Markwalder, the daughter of his landlady. It was a lasting friendship, for he was still writing to her 50 years and two marriages afterwards. She remembered that when the breeze died and the sails drooped, out would come the notebook and he would be scribbling away. "But as soon as there was a breath of wind, he was immediately ready to start sailing again," she said.

Naturally, Einstein would have been as aware as any other yachtsman of the effect of the kinetic energy stored by a moving boat. That formula is described simply as: mass, times the square of its speed, divided by two.

In practical terms, it's an early form of relativity. It means that hitting the jetty (or another boat) at 2 knots is relatively less damaging than hitting it at 4 knots or 8 knots. If the damage at 2 knots equals $200, then the damage at 4 knots will be $800 and at 8 knots it will be $3,200. (Of course, these fast-escalating figures will neither surprise nor shock latter-day sailors long rendered numb by the prices of everything to do with yachting.)

Soon after he settled in Princeton with a lifetime appointment to the Institute for Advanced Study, Einstein, who was as much of a recluse as a Nobel Prize winner can ever hope to be, taught his secretary-housekeeper, Helen Dukas, how to deal with members of the public who wanted a simple explanation of relativity.

"Tell them," he advised her, "that an hour sitting with a pretty girl on a park bench passes like a minute, but a minute sitting on a hot stove seems like an hour."

Despite his grasp of some of the universe's most profound complexities, Einstein worshipped simplicity and harmony. He loved fields and forests, lakes and mountains, the earth, the sky, and the sea. And when he was sailing, he found simplicity, harmony, and, undoubtedly, inspiration in the rhythms of the wind and the waves.

He also always found his way back home from the sea

or the lake, which is more than can be said of his attempts at navigation on land. In his book *Einstein in America*, biographer Jamie Sayen relates the story of a Princeton undergraduate during Einstein's first year there:

"Twice I heard from two different girls who lived in Princeton about his [Einstein's] sense of direction. Each said that Einstein had approached her on a side street several blocks off Nassau Street and asked for directions to Nassau Hall. In each case Einstein explained that the only reason he wanted to get to Nassau Hall was that he knew his way home from there."

But perhaps the difference between his navigational skills on land and on the water is not so paradoxical after all. As he pointed out so elegantly, nothing is absolute, not even navigation. For instance, during the summer of 1934 spent in Watch Hill, Rhode Island, Einstein on more than one occasion ran aground while sailing with his friend Gustav Bucky. The man who understood better than any other in the world the physical forces that caused the tides never managed to master them. Stuck on the bottom, "While Bucky fidgeted, the schoolboy at the tiller would laugh and say: 'Don't look so tragic, Bucky. They'll wait for me at home—my wife is used to this,' " Sayen writes.

The following summer he sailed from Old Lyme, Connecticut. He seemed to enjoy the sense of control sailing gave him. He never mastered any other kind of machinery. He never learned to drive a car, for instance. "It is too complicated," his wife, Elsa, explained to a visitor. He was well over 50 before he learned to handle a camera. He used a typewriter with great difficulty and mostly wrote in longhand.

In 1939, he passed the summer at a remote spot on Long Island, sailing daily. According to Sayen, Einstein "loved it when the sea was calm and quiet, and he could sit in *Tinef* thinking or listening to the gentle waves endlessly lapping against the side of the boat."

But he was just as happy when it was rough. His friend Eva Kayser described one time when she sailed on Long Island Sound with Einstein: "It was a rough sea; I'd rather have bitten off my tongue than to say, 'Look, this is a little bit rough, let's turn around.' He was sailing away, bending down under the boom, and I said, 'I bet this is one of the few things under which you bend.' He laughed and said 'Yes.' Finally, he said, 'Well, maybe we'd better turn back,' and enthusiastically I said, 'Yes!' "

On another occasion during the summer of 1944 when he was 65 years old, Einstein was sailing on Saranac Lake, high in the Adirondacks, with three companions in choppy conditions. When he hit a rock, the boat quickly filled with water and capsized. Einstein was trapped beneath the water under the sail and his leg had become tangled in a rope. Without knowing how to swim, he managed to free his leg and claw his way to the surface, where he was rescued. Had he panicked he undoubtedly would have drowned.

Ronald W. Clark, in his book *Einstein: the Life and Times*, comments on two sailing traits Einstein displayed regularly. One was his indifference to danger or death—reflected in such fearlessness of rough weather "that more than once he had to be towed in after his mast had fallen down."

Einstein in 1946, sailing with friends on Deep Creek Lake in Maryland. Photo courtesy Leo Baeck Institute, New York.

Another was his perverse delight in doing the unexpected. His friend Leon Watters was once out sailing with him "and while we were engaged in an interesting conversation I suddenly cried out 'Achtung!' for we were almost upon another boat. He veered away with excellent control and when I remarked what a close call we had had, he started to laugh and sailed directly toward one boat after another, much to my horror; but he always veered off in time and then laughed like a naughty boy."

Clark also relates that on another occasion, Watters pointed out that they had sailed close to a group of projecting rocks. Einstein replied by skimming the boat across a barely submerged shelf.

"In his boat, as in physics, he sailed close to the wind," Clark comments.

Unexpectedly, it was sailing that had given him most concern for his health. When he was 49 and still living in Berlin, he suddenly collapsed one day and had to consult a doctor. He was normally skeptical of physicians, but this one impressed him. Dr. Janos Pletsch diagnosed inflammation of the walls of the heart. Einstein confessed that he often rowed home his heavy yacht when there wasn't a breath of air to ruffle the waters of the Havelsee, a lake only a few miles from the center of Berlin.

Pletsch put Einstein on a salt-free diet and packed him off to a small seaside resort on the Baltic coast north of Hamburg. Einstein recovered there, but not as rapidly as expected. Finally, Pletsch discovered that Einstein the addict was still secretly sailing and ordered him to put a stop to it.

That didn't last long, though. On his 50th birthday, his friends presented him with a new sailboat called *Tümmler* (German for porpoise), which

In Search of Einstein's Boat—David Allen

In 2011, a sophomore at State University of New York's Maritime College in the Bronx jumped into his car and drove 300 miles north to the Adirondacks to join a landscaping crew charged with sprucing up the grounds of The Knollwood Club. The club maybe held a secret, and getting past the locked gate by conventional means to investigate that secret had already failed.

The Knollwood Club was created in the late 19th century on the banks of Lower Saranac Lake to serve as vacation haven for Jewish people, then "restricted" from many hotels and country clubs. In the late 1930s and into the 1940s, The Knollwood Club was a summer retreat of Princeton Professor Albert Einstein—cabin number 6.

Now with the access he needed, the student peeked into the windows of the shed behind cabin 6—empty. He explored the wooded area nearby, he searched under the porch. Nothing. He was looking for *Tinef*—or possibly the remains of *Tinef*—Einstein's boat for many years.

The sleuthing was part of a semester-long school project to research the provenance of an artifact and deliver a publishable paper on the findings. The prospect of learning more about this artifact had just dimmed, and the student returned to Maritime College empty-handed.

But the story wasn't over. On the final day of classes in the fall of 2014, another student who was working on the "Einstein boat" project received a cryptic message from Rob Furnette, a boat-builder and river guide with a shop in Tupper Lake, New York.

Einstein's boat? Credit: Rob Furnette.

"I have the boat you are looking for. Here is a photo." The photo showed a boat on a trailer, parked in the weeds alongside a dirt road.

Could it be?

Earlier that year, Furnette had been contacted by an old friend who told him, "I have Albert Einstein's old sailboat. I bought it from a long-time tenant at Knollwood. It was old when I acquired it, and if you don't come get it in two weeks, well... let's just say I'm going to turn it into kindling. My chainsaw should be back from the shop by then." Furnette says he quickly bought a trailer and went and picked up the boat.

Though Furnette was helpful and cooperative with the student researchers, they were unable to conclude anything definitive about the boat's provenance. The design is common, but particular elements, like the bollard and the coaming shape and rake, don't match known photos of *Tinef*.

Could Furnette's boat be a boat Einstein sailed on Lower Saranac Lake? Sure, but nothing confirms that, or that it's a boat he owned. Other than the number 3 on a moldering sail, there were no markings anywhere on the hull.

More recently, students have uncovered evidence that *Tinef* was on Princeton's Lake Carnegie in the late 1950s, right around the time of Einstein's death, and acquired by the captain of Princeton's sailing team. After he graduated, he moved to the Seattle area and took little *Tinef* with him.

And so, the sleuthing continues. This fall semester, a new group of Maritime College students will begin tracking down *that* part of the story.

Professor David Allen has been teaching at SUNY Maritime College for almost 20 years. In that time, his students have tracked the whereabouts of several notable small craft, including lifeboats from the Andrea Doria. *In addition to the Einstein boat, students are still trying to find "the Woodstock boat," an aluminum skiff visible in 1969 photos floating in a small lake a few hundred yards east of the stage. And, a few students are on the trail of the 14-foot ship's boat from the* HMS Resolute *(of the Presidential Desk).*

Einstein and a friend sitting on the cabintop of Einstein's beloved sailboat *Tümmler*. The image was taken in early 1929 by the boat's builder, Adolf Harms, probably shortly after she was launched. Photo courtesy Leo Baeck Institute, New York.

he kept on the Havelsee. He loved her dearly.

"He sails the boat with the skill and fearlessness of a child... The joy with this hobby can be seen in his face, it echoes in his words and in his happy smile," wrote his son-in-law, Rudolf Kayser, in his 1930 Einstein biography under the pseudonym Anton Reiser. That joy was dimmed, though, when his property was confiscated as part of the national socialists' seizure of power in 1933, and he lost *Tümmler* forever, in spite of trying to convince a friend to spirit the boat to a Netherlands boatyard for safety. *Tümmler* was "perhaps the one thing it hurt him to leave behind when the time came to shake the dust of Germany off his feet," said Pletsch.

With the spread of fascism in Europe, Einstein became the world's best-known refugee. He was an instinctive pacifist and a committed Zionist who eventually and reluctantly concluded that force, and even the sacrifice of human life, was necessary to defend the ultimate ethical values on which all human existence is based. During World War II, he worked for the U.S. Navy as a research consultant in the field of conventional explosives. But he continued to indulge his passion for sailing at Saranac Lake and on Princeton's Carnegie Lake.

He was at Saranac Lake on August 6, 1945, when he heard the radio announcement of the bombing of Hiroshima. He was devastated. Here, in the most tragic manner possible, was demonstrated the proof that $E=mc^2$. That formula forecast the release of formidable quantities of energy if the atom were ever split. Now the nucleus of the uranium atom had indeed been split, and the resulting energy had been used to kill thousands of human beings.

"Almost overnight," says Clark, "Einstein became the conscience of the world." And as such, he wrote, spoke, and broadcast throughout the 10 years of life that remained to him. He became an internationally respected spokesman for ethical humanism and a symbol of the scientist as the world's conscience. There was no time for sailing now. And besides, he was getting frail. His wife, Elsa, had died in 1936, and nearly 20 years later he was to follow her. In April 1955, Einstein, the gentle, lovable genius who had forever changed mankind's perspective of the universe, began another voyage, into the unknown. And a grieving world wished him fair winds and safe landfalls.

John Vigor is a former managing editor of Sea *magazine and author of 10 books on boating subjects, ranging from a children's adventure novel through several reference books to a travel-adventure memoir,* Small Boat to Freedom. *He has contributed numerous stories to* Cruising World, Sail, Practical Boat Owner, Yachting World, Good Old Boat, South African Yachting, 48° North, Latitude 38, *and others. As a newspaper journalist, he worked on three continents and wrote a daily humor column for large metro dailies for nearly 20 years. He lives in Bellingham, Washington.*

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Line Laundering

Here's how to give your old ropes a new life.

BY DREW FRYE

Every sailor has gazed longingly upon the rack of shiny new ropes at the local chandlery, admiring the smooth finishes and imagining how they might improve balky tackles aboard. Thus mesmerized, we buy coils of beautiful line, reeve them with care...and within a few seasons they become stiff and hard, the result of minor UV damage, lost spinning lubricants, and lime deposits that result from repeated soaking and evaporation of seawater. Seldom-used tails grow mildew, algae, and even lichen.

At this point, some folks toss the old rope in the dumpster and buy new (a local rigger told me that he has customers who would sooner replace a line because it was dirty than because it was broken). Others attempt to restore the look and feel of old rope in the washing machine, only to destroy either the washing machine or the rope. Being both an engineer and a cheapskate, I've learned how to keep rope looking fresh and stretch its working life to the very limit. Following are some hard-earned tips.

Presoak

The key is to soak rope in a bucket with water and detergent before washing. Ropes are thick, and it takes time for water and detergents to soak through, then more time for chemistry to do its magic, loosening dirt. Use hot water and the full detergent dose you intend to use in the wash cycle. Agitate the soaking rope once in a while, over the course of several hours. Also, the long presoak removes heavy soils that may otherwise reduce the porosity of the pillowcase you will want

A long soak can make a big difference. This shows two parts of the same rope, but the lower portion was only lightly agitated, at right.

Splices that are not lock-stitched or seized before going into a washing machine commonly fall apart due to the back-and-forth motion during the wash cycle, below.

A seized splice is protected from coming undone when washing, at bottom right.

to use if washing in a machine, limiting its effectiveness (more on this below).

Easy on the Infrastructure

Don't break the washing machine! This lesson did not come easily; I've broken and repaired the machine more than once. These days, I usually skip the machine altogether, preferring to wash ropes in a bucket using hand agitation. The only time I use a machine is when I find a rope in the skip that is in terrible shape.

That said, a washing machine is an effective tool for cleaning and conditioning rope, but only if done the right way. First, in conventional-style machines, ropes can wrap around the central agitator. A New England Ropes tech told me they can bind this agitator and twist the transmission right out. Second, rope fibers are very strong, and in any type of washing machine, stray fibers that separate from the rope during washing can damage pumps and seals.

The solution? Preparation and pillowcases. Before shoving the rope into the pillowcase (don't coil it), tie a sock over attached shackles and thimbles. Also, whip all rope ends; an end that is simply melted or cut with a hot knife can easily separate. Once your rope is prepped and safely stuffed, close the pillowcase with a zip-tie.

Hernias: They're Not Just for Humans

When new, marine double-braid covers are loosely woven to allow easy splicing. This is because splicing requires that the rope cover be opened with a fid, extracted, tucked back in, and often stretched over a second cover. But this loose cover that enables splicing can open as a result of the rope getting milked back and forth by the steady rocking induced by the washing

Lines Need Lube—DF

So, you've presoaked and washed, and your rope looks great. But it just doesn't have the same feel it did when it came from the store. When it runs through blocks under load, it squeaks inside, suggesting fiber-on-fiber wear. Tackles are less efficient, and friction is higher.

The problem is that the spinning lubes are gone. Before a rope is braided, the fibers and strings are coated with lubricants, both to ease the spinning process and to reduce the rope's internal friction and wear in use. Over time, these are rinsed away by the rain and washed away by detergents. Fabric softener is often suggested as a restorative measure, but this is an imperfect solution. Fabric softeners slow the drying of ropes and allow them to gain more weight when wet. Wet ropes drag sails down and are prone to mildew. Also, any benefit gained from a fabric softener is soon lost; it isn't intended to be durable, only to last through a wearing or two.

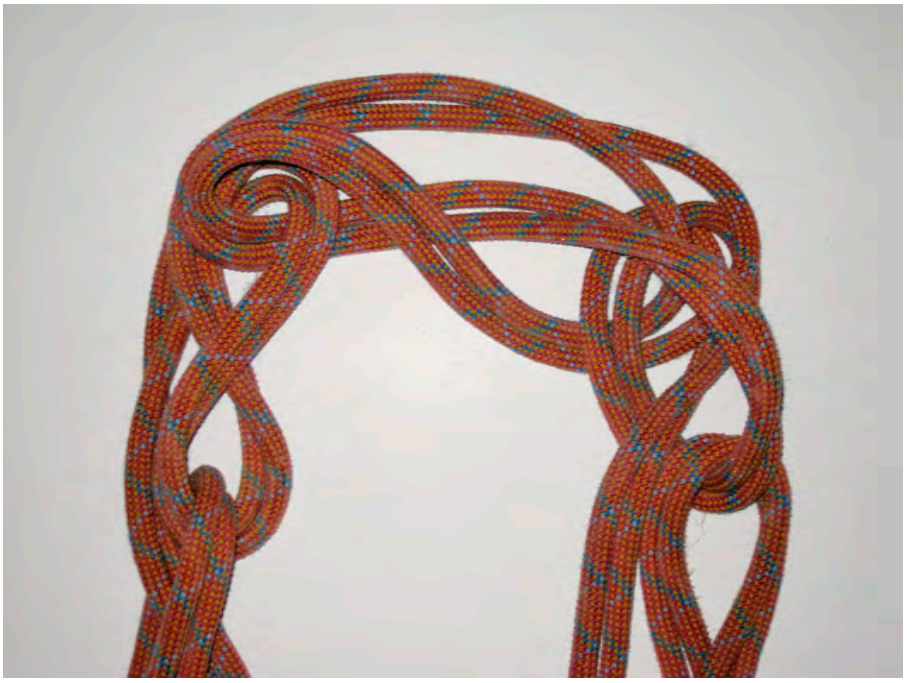
Ice climbers have a better method. Their lives depend on nylon rope, and if those ropes become wet and frozen, they become useless sticks that can't be knotted or coiled. Their solution is to treat rope with a durable water repellant such as that used on Gore-Tex raingear, soaked deep into the core. Although treated rope will not fully repel water, the rope's ability to absorb water is dramatically reduced. Conveniently, water repellant is a viable replacement for spinning lube, providing internal lubrication, improving handling, eliminating squeaking, and restoring performance efficiency through blocks.

I like Nikwax Polar Proof wash-in water repellant. It's marketed for fleece garments, so ignore the instructions on the bottle when using on ropes and do it as I have for decades:

1. Wash the rope as I've described. Lime and dirt must be removed from the rope interior before using Nikwax.
2. Allow the rope to dry completely. The treatment will only absorb deeply into the core if the rope is dry.
3. In a 5-gallon bucket, mix 6 ounces into 4 gallons of warm water and then add the rope. The rope can be daisy chained or just stuffed into the bucket; do not coil it.
4. Agitate a few times.
5. After 15 minutes, flip the rope over and agitate a few more times. Repeat every 15 minutes, soaking the rope for a total of 45 minutes.
6. Remove the rope, allowing it to drip into the bucket.
7. Allow to air-dry on the dock without rinsing.
8. Add an additional 3-4 ounces to the dregs in the bucket, top off the water, and add the next rope. Keep recycling the dregs in this way until all of the ropes are treated. (Do a few fleece hats and windbreakers while you're at it. It's cheap.)

Furler lines can be treated right on the drum using spray-on repellants, such as Nikwax TX.Direct Spray-On. This is a valuable fall practice for winter sailors and frostbiters. I typically leave the tail untreated, for better grip.

The ropes will have a slight slick feel at first, just like new ropes from the store, and like those ropes, that feel will go away within a few uses. This treatment will last several years, by which time a wash and re-treat will certainly be due.



Hernias in new docklines. Drew ruined over 100 feet of rope in minutes by washing this new dockline unprotected (outside of a pillowcase) in a washing machine, at right.

Climbing rope has a tighter cover and is not prone to herniating, at bottom right.

machine agitator. Once open, the core can poke out.

As a prelude to a bleach-testing program I once conducted for *Practical Sailor*, I washed sections of new rope to remove spinning lubricants and to create a universal level of simulated pre-wear. Whether I put the rope into the machine coiled or daisy chained, all of the samples were ruined within 15 minutes on the gentle cycle, herniated every 6 to 12 inches.

My solution is simple: Never machine-wash a rope until after two seasons have passed. If you must wash a rope when still new, use a bucket and agitate gently by hand.

Woolite and Other Myths

The reasoning behind the oft-repeated advice to use a gentle detergent when washing rope is to reduce the removal of spinning lubes from the rope. That's it, no other reason. And by the time it's advised to wash a rope, most of that lubrication is long gone (see sidebar for how to replace it). It should be obvious that no ordinary laundry detergent could harm rope; rope is made from the same fibers used in clothing that we don't hesitate to wash with a regular detergent. The same is true of hot water—go for it! Nylon and polyester can easily withstand normal laundry temperatures (a heated dryer is another story).

Chlorine Bleach

Don't do it. Every time you bleach a rope, even using recommended dilutions, you weaken it by two to five percent. The older the rope, the greater the damage. Of course, higher concentrations and extended soak periods cause even more damage. Besides, a long, hot presoak and proper washing is plenty; bleach can't improve the result much.

OxiClean

OxiClean is based on the same chemistry (percarbonate) as professional sail-cleaning formulas. When used at the recommended dosage, OxiClean is safe on rope, upholstery, and sails, including

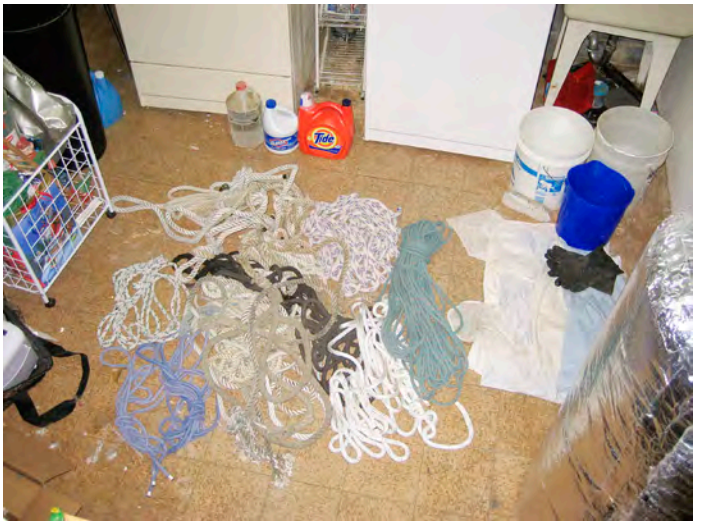
laminates. It will remove stains without weakening rope. It requires a four- to six-hour soak time, and it's not as effective a stain remover as bleach, but rest assured it often does a good job of weakening stains such that a few days in the sun after washing finishes the job. Be patient, your rope will thank you.

Let Sleeping Rust Lie

Acid is the usual go-to for rust and other metal stains, but nylon will literally melt in strong acid solutions and may be critically, invisibly damaged by weaker acid solutions. If a rust stain didn't come out in the laundry, leave it alone.

This is how to make your lines look their best. After a good presoak, a full gentle-cycle washing in hot water—or hand washing in a bucket as I do—should return the rope to acceptable condition. The heavy dirt is gone, the lime crystals chelated and washed away, and any staining greatly reduced.

To make them last practically forever, keep them lubricated and protected from chafe (see sidebars). It works, I know; except for critical roles such as jacklines, tethers, and standing rigging, I acquire nearly all of my rope from the dumpster (it helps to stay near a very high-priced marina!) and then recondition it to near-new.



One day's work of line-washing testing is strewn about Drew's laundry room floor.

Drew drops lines, safely protected in pillowcases, into the washing machine.

Good Old Boat *Technical Editor Drew Frye draws on his training as a chemical engineer and pastimes of climbing and sailing to solve boat problems. He cruises Chesapeake Bay and the mid-Atlantic coast in his Corsair F-24 trimaran*, Fast and Furry-ous, *using its shoal draft to venture into less-explored waters. He is most recently author of* Rigging Modern Anchors *(2018, Seaworthy Publications).*

Chafe Protection—DF

The leading cause of death among ropes is chafe. First, remove any rough edges and avoid running a loaded line across an edge wherever possible. Second, add chafe gear where it is needed; either sewn leather (nautical) or tubular webbing (efficient).

Of course, chafe gear doesn't fit everywhere, and it doesn't work for a line that runs through blocks or fairleads. A cheap and versatile solution is a line coating like Yale Maxijacket, Flexabar Rope Dip, or Spinlock RP25. How on earth could a coating that looks like latex varnish make any real difference? Well, it does! I'm not sure how they function exactly, but part of the mechanism seems to be retaining worn fibers and filling the space between them so that they continue to protect the remaining rope. Ordinary paint and varnish don't work. I've tried them.

Yale Maxijacket and Flexabar Rope Dip reduce wear on splices and mooring lines by 5 to 10 times. They are stiff but incredibly durable on docklines and splices. Stick with clear; the colors can rub off on decks. Spinlock RP25 was formulated to reduce core-cover slippage of high-modulus ropes in jammers, but it also reduces overall wear by several times without overly stiffening the line. I like it on chafe-prone sections of furler lines.

Keep both of these away from winches; they handle poorly. In fact, only treat the sections where chafe has been a problem. Best results are obtained on used ropes (because the spinning lubes are depleted near the surface), though the results on new rope are acceptable. If you intend to treat a rope with water repellant, coat the required sections first.

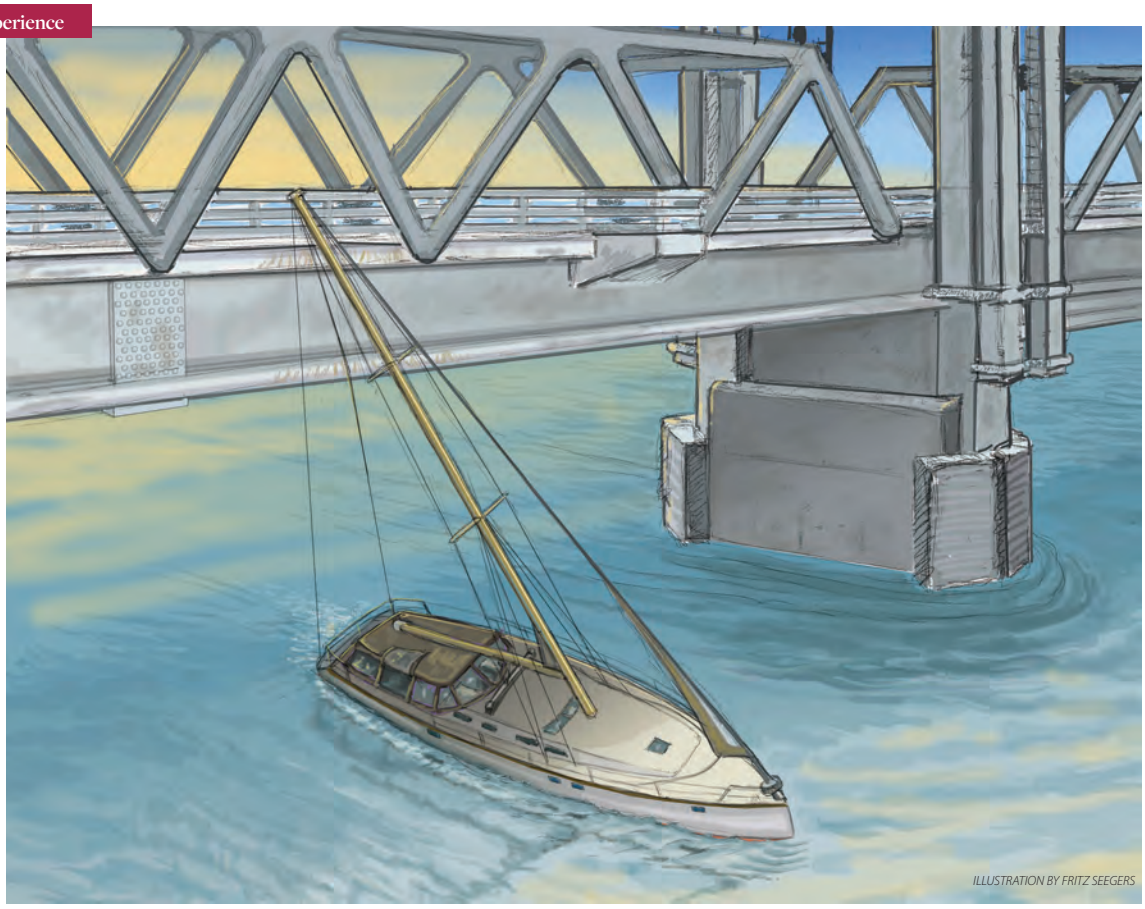


ILLUSTRATION BY FRITZ SEEGERS

A BRIDGE TOO CLOSE

A series of misjudgments leads to a nearly catastrophic bridge encounter.

BY HAL WELLS

My wife, Terri, and I, aboard our 2006 Beneteau 423, departed our home port of Clear Lake, Texas, to start the adventure of our lifetime, navigating The Great Loop. Now, three years into our voyage, and after a year-long detour up the St. Lawrence River and gunkholing down coastal Nova Scotia and Maine, we were continuing south again, to pick up the Hudson River route inland, the path to the Erie Canal and the Great Lakes.

After a brief stay in Portsmouth, New Hampshire, and neighboring Kittery, Maine, we were heading just 15 nautical miles down the coast to Newburyport, Massachusetts, a quaint town just inside the mouth of the Merrimack River.

Planning this short passage, we consulted the coastal pilot charts and learned it was best to enter the Merrimack River Inlet on a rising tide, and definitely not when the ebb is flowing against an easterly gale. Having never been into Newburyport, we decided to take the prudent course, and thus planned our departure from Kittery by working backwards from our optimal destination arrival time. After looking at the weather and calculating our forecast time en route, we planned to leave Kittery at 0900 hours the next day.

We were up at 0800 hours. We'd spent the night on the Piscataqua River, end-tied to a single-dock, 25-boat marina. Looming over us, about only two boat lengths in front of our bow, was Memorial Bridge, a lift bridge just upriver of our location. We were aimed as though poised to drive right under the bridge, though even if we had intended to do so—we were, instead, headed downriver, toward the Atlantic Ocean—this wasn't possible, as our 57-foot mast was about 20 feet taller than the clearance the bridge afforded in its current configuration.

But this part of the Piscataqua River is still tidal, and the flood tide was creating a current of about 2 knots, pushing our boat from astern, towards the bridge. Were our docklines to suddenly part, I imagined the current would drive our Beneteau right into the bridge, bow first.

Docklines secured us bow and stern on the starboard side. Terri and I discussed how best to extricate our boat from the dock safely, given the particular, difficult circumstances. We boiled it down to four options:

1. We could wait for the tide to turn. This was Terri's preference, but would delay

our departure by at least two hours.

2. We could turn our boat around at the dock, so that the bow pointed downriver, away from the bridge and into the current. This would mean we could depart the dock in forward gear and not have to back up and turn around. The best, easiest, and safest way of doing this was to simply leave the bow line secured, let loose the stern line, and allow the boat to be swept around by the current. We could do this because our dock lines were plenty long and there was no other boat in front of us on the dock; we had plenty of room. I argued against this approach out of concern that we might scuff the gelcoat during this operation—and I really did not think it was necessary.
3. We could wait for the dockmaster or another boater to appear on the scene and help us get off the dock.
4. We could put the boat in reverse, release the dock lines simultaneously, and apply power to back far enough away from the bridge until it was safe to shift into forward and complete a U-turn.

We went around in circles debating these options. I got impatient and finally decided we would safely and easily execute the fourth option, overriding Terri's concerns. (I've found that, generally, this is not a good idea. I was about to learn it again.)

All of our bow, stern, and spring lines are three-strand, ⅝-inch diameter, and 50 feet long. We removed the spring lines and doubled the bow and stern lines back to the boat, leaving them just looped around the dock cleats, so we could let go from the boat, Terri at the bow, me at the stern.

The plan, which we discussed carefully before departing, was for each of us to let go the bow and stern lines at the same time by slacking off each line and throwing the loop off the dock cleat. Then, we'd allow the current to ease the boat away from the dock while I backed us up using our 55-horsepower Volvo-Penta diesel, which has always been reliable and responsive. Before we untied anything, I warmed up the engine and powered astern, just to make sure the engine and prop could counter the current; they did so easily.

At 0900, we were ready to go. I put the engine into reverse gear at near idle speed to reduce the tension on the stern line and gave the command to cast off. Terri quickly and easily cast off the bow line as planned. I did not.

Rather than leave the cockpit to release the stern line from the side deck, I tried to do so through an open side panel of our cockpit enclosure. But the enclosure made this difficult, and I realized the current was pushing the stern away from the dock faster than I could create enough slack to toss off the line looped around the dock cleat.

After two or three frantic failed attempts, I just let the running end of the line go (the standing end of the line was attached to the boat's stern cleat). Just as the bitter end of the line slipped through my fingers, I realized in horror that I'd made a terrible error in judgment. The line ran freely around the dock cleat, and suddenly, 45 feet of dockline was in the water, trailing from the stern cleat.

This meant that I would not be able to power astern, for fear of wrapping the line round the prop. I needed two hands to wrestle the stern line aboard, but I was also trying to hold onto the wheel and tend the throttle. The stern continued to swing out, gaining momentum, the boat turning parallel to the bridge.

I glanced forward and saw Terri calmly coiling up the bow line to stow it, unaware of my situation. I yelled for her to drop the line and rush back to help me. She instantly realized what was happening and hurried aft, hauling the stern line aboard in record time.

I immediately went full power in reverse. I had the helm hard over to starboard, but we had no steerage and were barely making sternway. By now, we were essentially broadside to the bridge, sweeping rapidly down on it, and I was out of options. I throttled back and put the engine into neutral. Going ahead would have spun the stern into the bridge even faster, and we could not go back fast enough to do any good.

We were going to be swept under the bridge and lose our boat, our home, maybe our lives.

Then, we were swept broadside down onto the fixed part of the bridge, a hundred feet or so north of the lifting section. We struck it between all vertical supports and abutments. Our boat has twin backstays, and the port backstay ground against the lower girder, about 20 feet below the masthead.

As the backstay met a fixed object, the mast vibrated, the boat shuddered, and we heeled over to starboard. I was surprised—and maybe the relative springiness of the stay served to dampen forces—at how gently we went over. It was not like getting slammed unexpectedly by a 50-knot gust on the beam, but more like filling the main in a 10-knot breeze.

Nevertheless, the motion clearly felt inexorable and unstoppable; we were going to be swept under the bridge and lose our boat, our home, maybe our lives. And in this time, I also thought that if we and our boat survived being swept under the bridge and emerged damaged but still afloat on the other side, then we were headed for a marina full of boats that we would surely be swept into, the consequences of my errors spreading beyond ourselves.

All these thoughts flashed through my brain while time stood still, and I froze. Within a few seconds, we heeled to at least 20 degrees or so. Neither of us had said a word or made an exclamation. I had a firm grip on the wheel and binnacle and was about to yell to Terri to hold on tight, after I saw her on the starboard sidedeck that was rolling into the water.

And then, we got lucky. Even though we hit stern-first, the force of the current on the rudder continued to swing the bow around as we heeled, pivoting slowly about the backstay where it contacted

the bridge girder. As we were being swept over and under, the bow slowly started to point back downriver, away from the bridge. As we pivoted, the force of the current on the rudder and keel reduced slightly and the heel also eased.

We hung there in a sort of equilibrium for a couple of seconds when I was jolted into action by a burst of enthusiastic verbal encouragement from Terri (something along the lines of "Gun it!"). I gunned the engine in forward, the helm was already hard to starboard, and we powered ahead to starboard and turned out from under the bridge. The backstay scraped along the girder as we shot forward, but I heard nothing over the roar of the engine. We were suddenly upright and moving away from the bridge.

Although it seemed much longer at the time, I don't think more than 90 seconds had passed since I'd given the order to cast off.

I looked back at the bridge as we pulled away, wondering if anyone had witnessed any of it. I noticed paint scraped off the edge of the lower bridge girder over a 2- to 3-foot area where we'd hit. Terri and I exchanged meaningful looks before she went forward, completed coiling and stowing the bow line, and pulled in the fenders on her way back to the cockpit. I sat in the cockpit, watching our new course down the river, willing my heart rate to drop back below 150 beats per minute.

I punched on the autohelm, took a final glance back at the bridge, coiled and stowed the stern line, and began reflecting on the chain of events that had nearly led to disaster. When Terri returned to the cockpit, she spoke in a measured tone. "We are not going to talk about this now, but we are going to talk about this later." Then, she went below and put the kettle on.

We continued down the Piscataqua River. "Later" came in about 10 minutes, when Terri emerged from the companionway with two cups of coffee. We had a good long hug before we talked. First, we congratulated each other on not panicking and on taking our one chance at salvation when it appeared. Over the next hour or so, we reconstructed the entire event, from beginning to end, to determine the various decisions and actions and to consider what we should have done differently.

Although the fault and sequence of poor decisions that led to the near disaster clearly rested with me, Terri graciously never once mentioned that fact, accused me of being a complete idiot, or threatened to jump ship. She helped me to focus on the root-cause analysis of the event and to summarize the lessons learned.

At the mouth of the Piscataqua, we turned south into the Bigelow Bight and motor-sailed in light winds down the coast to Newburyport, without any further excitement. We got over the bar in a very light easterly breeze and a favorable tidal current, and then turned up the Merrimack River and picked up a mooring ball in town just after 12:30.

After a 37-year career as a project engineer and manager in the offshore oil industry, Hal Wells, along with his wife, Terri, commenced a "sabbatical of indeterminate length" (aka SaIL) in mid-2012. They chartered in Greece, Turkey, and the Pacific Northwest before buying their 2006 Beneteau 423 c'est le bon *in late 2011. She now lives in Anacortes, Washington, from which they are exploring the Pacific Northwest. Hal recently completed a transatlantic delivering a Discovery 55 as watch leader and has earned ASA certification as a sailing instructor for levels 101, 103, and 104.*

The Takeaway—HW

Five years later, I still occasionally revisit this day, usually in the wee hours of the morning, waking in a cold sweat. We have made many mistakes during our years of sailing together, although this was undoubtedly the worst, by a fair margin. On the other hand, we have never repeated this particular mistake, so it was a lesson well learned.

We did a lot right, in terms of how we communicated after the near-miss and even how we planned and communicated before we cast off that day. Of course, despite good communication, my lack of respect for joint decision-making was a root-cause problem. This whole episode might have ended much worse, but it is still very sobering to let a stupid lack of understanding or consideration on my part to bring us so close to utter disaster. It is embarrassing to write about this incident, but it is also cathartic.

So, what else should we have done differently?

When the stern started moving away from the dock faster than I could throw the line off, I could have simply put a wrap on the boat's cleat and stopped the whole process (in other words, when you find yourself in a hole, the first thing to do is stop digging). This is the stupid mistake, after things started to unfold, that haunts me the worst in my nightmares; all I had to do was stop, throw a bight around the cleat or the immediately adjacent winch, and we would have simply hung there until Terri could come aft and help.

We were right to plan our trip in consideration of when we needed to arrive at our destination, but when we realized there were safety considerations related to when we departed, we should have stopped and reconsidered what was driving us. We had time on our side. That is, we could afford to have waited two hours to depart—when a slack tide would have made leaving much safer—and still have had time to get to Newburyport with a favorable tide.

I clearly took on more than I could handle, managing the helm, engine controls, and releasing the dock line from an awkward location. If I'd rehearsed this a bit and considered it more carefully, it may have been obvious. In retrospect, we should have planned for Terri to release the bow line, then come back to release the stern line, from the side deck, while I drove the boat.

A simple thing we could have done to decrease our margin of error, but that we never considered that morning, would have been to walk the boat back a boat length. There was nobody tied behind us, so we had the room.

I should not have been so quick to reject the boat-flipping idea over fear of scraping the gelcoat. We have enough fenders on board to have mitigated this risk.

Finally, we could have gone looking for someone to help us depart.

Quarter Master

A little sewing, some clever woodwork, and voilà, a better quarter berth.

BY JOHN CHURCHILL

Nurdle, my 1979 Bristol 35.5, has a quarter berth, a common feature on boats of this size and vintage. Also common is how the forward end of the quarter berth doubles as a seat for the adjacent nav station, and how the space provides accessible storage for gear that has no other home aboard—in my case, luggage, dinghy and oars, awning, life raft, spinnaker, and even storm sails.

It's a clever and efficient design, but it has two drawbacks: no backrest for the navigator, and as a quasi-garage, a lot of wear and tear on the quarter berth cushion by all that gear—which, incidentally, often crowds the nav station seat.

I recently reupholstered all the interior cushions aboard, and as part of this effort, I rethought the quarter berth space. I sought a solution that would not only give me a backrest but would optimize the storage space and retain the ability to use the quarter berth for sleeping.

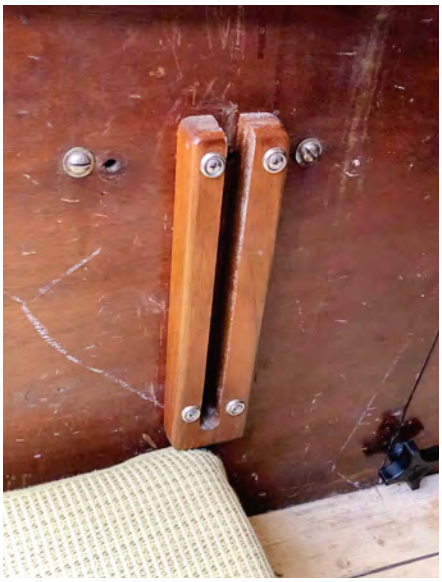
I started by removing the newly upholstered quarter berth bunk cushion and stowing it in the V-berth, where it now lives unless someone's going to sleep in the quarter berth. Next, using leftover fabric and foam, a zipper, and other supplies from Sailrite, I made a new seat-sized cushion for the forward end of the quarter berth; this would be my nav station seat cushion. (Sailrite's online instructional videos were very helpful.)

Now I had a portion of the quarter berth dedicated to storage, and a smaller portion dedicated to a seat. All I needed was a removable separator between the spaces, one that would also serve as a backrest.

Using mahogany lumber, I created slotted pieces that I attached (with screws) to the inboard and outboard sides of the quarter berth, above the aft end of my seat cushion. I cut the slots so that a ½-inch-thick panel of varnished mahogany plywood drops right in. I stiffened the plywood panel by adding a wood trim strip along the top.

Finally, it was time to make it comfortable. I cut thin plywood to match the size of a foam rectangle and then wrapped fabric over the foam and stapled it to the plywood. I secured this cushion to the back of the mahogany plywood panel using screws. The bottom of the panel is high enough to clear the full bunk cushion when used together.

I can now use the quarter berth area for storage more securely, I have made sitting at the chart table more comfortable, and I can easily reconfigure the quarter berth back to the ideal sea berth it has always been. The sole downside is storing the full-sized quarter berth cushion, although this has been only a minor inconvenience.



The new seat provides a comfortable backrest for the navigator, at top.

John installed this slot on the inboard side of the berth; coupled with a similar arrangement on the outboard side, the two slots allow the backrest panel to slide into place, above.

John Churchill grew up a boat-crazy kid in Indiana. He built a raft at age 6, sailed Snipes as a teenager, and worked his way toward saltwater and bigger boats. He has sailed a Cape Dory 26 singlehanded to Bermuda and back, and a Bristol Channel Cutter transatlantic with his father. Now in Florida, John sails Nurdle, *a Bristol 35.5 (and former repo) that he's rehabbing for extended post-retirement cruising.*

Visit our YouTube channel for more on this project.

An Encore for *Entr'acte*

Completing their boat's much-needed refit was almost like building her twice.

BY ED ZACKO

How many people can say that they built the same boat twice? My wife, Ellen, and I can safely raise our well-worked hands to answer that question in the affirmative. Our 1977 Nor'Sea 27, *Entr'acte*, recently underwent a massive refit to bring her up to snuff after serving as our home afloat for 14 years and taking us safely and comfortably across the Atlantic and Pacific and then some.

In "Testing Their Metal," (May/June 2021), I told the story of how this refit began, when one stuck seacock led us down the path of removing all of the metal on board *Entr'acte* and replacing much of it. Where that story stops, this one begins. It was time to turn our attention to other problem areas that we knew were lurking. While we knew some of these jobs would be easier than others, not surprisingly, there were surprises.

Ellen celebrates seeing her boat floating again.

Pumps and Pilots

When we built *Entr'acte,* we installed three identical Whale Gusher 10 manual bilge pumps. The primary, mounted in the engine room, is operated from the cockpit. The secondary, also in the engine room, can be operated from the galley. The third, mounted in the head, we used to pump the holding tank. In case of catastrophic flooding, with a little effort and a lot of motivation, the head pump can be redirected to pump the bilge; thus, all three pumps can be used simultaneously to save the ship.

Having three identical pumps means storing only one set of spare parts and allows us to cannibalize pumps if the need arises. Our manual pumps saw regular use and maintenance and for years never gave us trouble.

Then, a surveyor flagged us for not having an automatic, electric pump. No argument would dissuade him. We installed one. It was useful and convenient, but it also broke down so often that we made it a practice to replace it at every haulout. Meanwhile, we used the manual pumps less and less often. Our maintenance schedule devolved into periodic pumping to ensure they still worked, and a good flush with fresh water before any layup. This was a mistake.

> It was time to turn our attention to other problem areas that we knew were lurking.

Despite the freshwater rinse, there remained enough salt residue trapped in the pumps' damp interior to solidify over time, corroding the epoxy coating, and clogging both the inlet and outlet.

It didn't have to be this way. Diaphragm pumps are

This coffee-colored pile of rust accumulated inside the spare auto pilot, which, though waterproof, is not condensation- or moisture-proof. The drive shaft had rusted fast to the motor case, but once cleaned, Ed snapped the shaft free with pliers, and the unit is as good as new, at top.

Use it or lose it! This is what happened to the insides of *Entr'acte*'s Whale Gusher pumps when Ed and Ellen stopped using them regularly and relied on only a freshwater rinse before layup to keep them shipshape, above.

simple. One screw is all it takes to remove the diaphragm for cleaning and inspection. But as we increasingly relied on faulty electric pumps, we allowed our previously dependable manual pumps to wait for an emergency they'd have been unprepared to address.

A simple cleaning was not enough to restore these pumps. Rather than replace them, we gave them a good media blasting followed by a fresh coating of epoxy, inside and out, which gave them a new lease on life.

Going forward, we would do what we should have done: exercise the pumps regularly, and periodically remove the diaphragm, wash out the interior with soap and water, and let it dry thoroughly. And, if the boat's staying on the hard for a while, we'll store the pump with the diaphragm out and reinstall it before launch.

Another surprise came with our electronic autopilot. For the most part, our regimen of stowing electronics in plastic bags along with a packet of silica gel worked well. (What did not work was to coat the metal connections with dielectric grease before storage and then clean it off with electrical contact cleaner when we returned. This almost cost us an expensive SSB radio. The cleaner we used did not dissolve the grease—but it did dissolve plastic!)

Besides our primary Aries wind vane gear, we carried two electronic autopilots for extreme light-air or no-wind use. Neither saw much action. Years ago, one had failed, and this refit was finally the time to disassemble the offending unit.

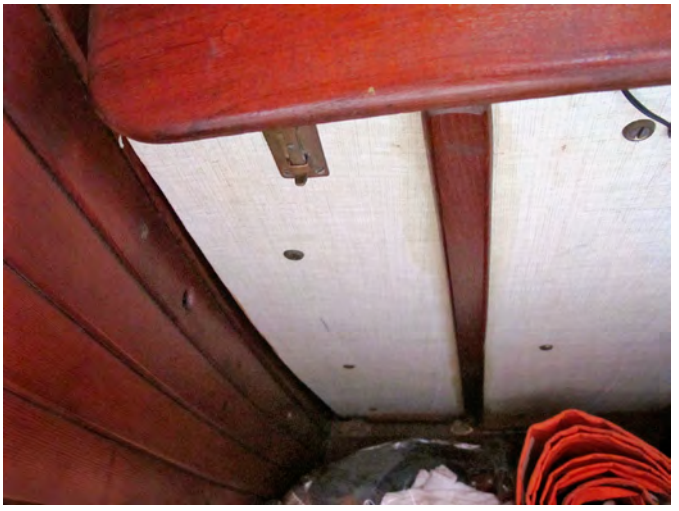
It was bad. The accumulated rust looked like ground coffee. I cleaned everything up, but the motor refused to turn. I grabbed the drive gear with a pair a pair of pliers and twisted. I heard a snap and the gear then spun freely. I applied the power and the motor hummed like new.

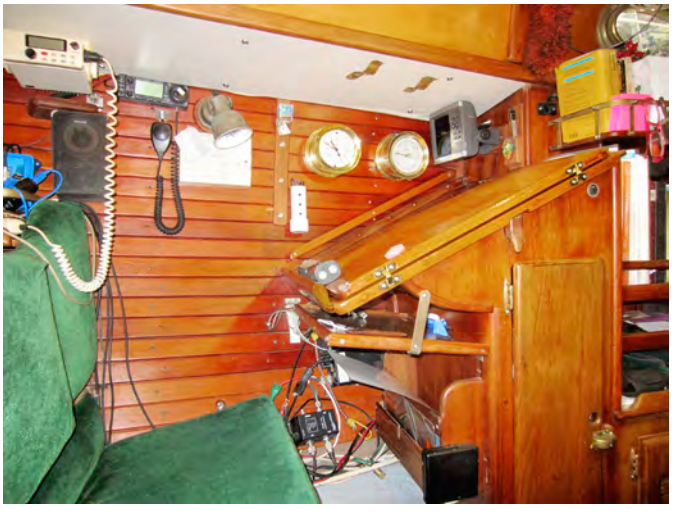
This corrosion happened inside a waterproof autopilot housing. It might well be *waterproof*, but it is not moisture- and condensation-proof. In this case, a long layup in the tropics had provided enough humidity, moisture, and mechanical dormancy to fuse the autopilot motor's drive shaft to the motor housing. The boat had been opened and aired out daily, but it did not prevent this corrosion. We should have had a schedule whereby moving parts like these got moved.

This mess resulted from a tiny leak that was allowed to fester for months inside the completely closed up cabin for months in the tropics, above.

Don't Look Up

By far the hardest job was the wood overhead in the cabin. This had been a sore spot for years, ever since—again—a long tropical layup had resulted in an ugly surprise. We'd been confident in our usual layup regime to forego hiring





Among the many refit projects was recovering the shopworn overhead panels beneath the sidedecks, above. The new panels looked great initially, above right. But, as the wrinkles on the new panel over the nav station shows, the "new-and-improved" Weldwood contact adhesive didn't last a month, let alone the 30 years that the first version did, at right. As a result, this part of the refit will need to be redone eventually.

someone to look after *Entr'acte* while we were gone. We returned six months later to an absolute horror!

Although we'd entirely covered the boat, wind and rain had allowed a very small (and in normal conditions, insignificant) breach in the bedding of a deck electrical fitting. Water found a path below in a very fine wire. During the months our boat sat completely closed up through hurricane season, the air below grew stale while the leaking water accumulated in the wooden overhead of the main cabin, with no cause to evaporate.

Our joyous return to *Entr'acte* ended when we opened the companionway and were hit by an unbelievable stench of rot and mold. The overhead adjacent to the mast was one massive area of blackened rot. We looked, sat down, and cried. I chiseled away the rot, exposing 14-by-8 inches of ugly bare fiberglass right above the dinette.

There was no mill within 500 miles of us, so we knew we'd have to cobble together an interim fix until we had time and materials for a proper repair. We commissioned a wood carver in Tonga to create an insert that exactly fit the hole. For 10 years, we had looked up at a beautiful, if oddly located, carving of whales, rather than our ugly mistake. Now, back home, it was time to make it right.

The first hurdle was matching the look and grain of the 30-year-old Alaskan cedar. Photos and samples came and went. We finally discovered the perfect match, Port Orford cedar, in a furniture builder's supply shop in Washington state. The wood was available in thin, pre-milled strips that we could easily finish to exact dimensions on-site.

I had passed countless night watches during the prior decade like a prisoner planning a breakout, staring at that ceiling and brainstorming exactly how I was going to pull this off. Like Tim Robbins' character in *The Shawshank Redemption*, I nurtured my plan.

The overhead was an integral part of the deck layup. Constructed of single strips of ⅜-inch-thick and 2⅜-inch-wide cedar, it was completely bonded to the underside of the fiberglass deck as the final laminate of the deck construction. The strips were chamfered on both sides to give a strip-plank effect. For structural and aesthetic continuity, the factory relied on a variation of tongue-and-groove construction. The groove was cut along the entire length of both sides of each strip, into which was set a ⅛-inch full-length spline to function as a tongue to tie all the strips together. We set out to do the same.

The first step was to excise what remained of any strips associated with the already-removed rotted wood, as well as any adjoining strips that showed signs of rot. In the end, we got rid of nine full-length strips from the overhead. Using a vibrating multitool, we slid the blade between a plank and the fiberglass cabintop, removing the strips while leaving remaining good wood

Looking for Trouble—EZ

When our boats are new, there are few problems. As they age, we tend to not poke, shake, and tap so hard, perhaps because we are afraid of what we will find. Don't fall into this trap. The more regular and complete the maintenance, the better off you will be. Most of our problems were well-hidden and unexpected. You really have to take that extra step, and over the years dig systematically into places that you would rather not go.

Don't be afraid to look for trouble and don't be afraid to find it. If you find it early on, the cure will be much easier.

undamaged. We salvaged pieces that we could sand down to bare wood and use to test different finishes until we were able to achieve a uniformity.

One problem loomed. The trim of our main and fore hatches is a complex assembly of bent, plugged, and well-bedded teak. The ends of the overhead strips terminate under this hatch trim, and we were loath to disassemble something so beautiful and solid for the sake of a few small ends of wood. Again, the multitool saved the day, allowing me to precisely excise the old wood and provide a nice clean space in which to insert the new.

We cut each of the nine replacement strips to a precise length, so that a slight bend of the strip would allow the ends to slide under the hatch trim and fit perfectly flush to the

A Tongan wood carver, whose name Ed and Ellen regrettably don't recall, created a beautiful panel to perfectly fit the gap in the overhead, below. Now that the overhead is repaired, the artwork is hanging in Ed and Ellen's home.

To repair the overhead, Ed and Ellen used this groove-and-spline technique, which allowed for easy assembly that tied all of the strips together to form one unified panel, at bottom left.

(top to bottom) **Repairing the overhead caused a massive mess, took a lot of time, and demanded extensive resources. Ed and Ellen had to wait till they could move off the boat to do this repair as part of *Entr'acte*'s full refit.**

Ed carefully uses a chisel to coax a strip of the overhead out.

Ed installed each strip one-by-one, adding thickened epoxy, then the spline, and then the next strip. They only did three a day. "If something went terribly wrong, we would only have to remove three strips to correct it," Ed says. "Fortunately, nothing went wrong."

cabintop, leaving a little room for expansion.

The tongue-and-groove construction presented a challenge for fitting the full-length new strips in with the old, specifically, how to fit the final king plank and spline, which would tie it all together. I feared we might paint our way into a corner with no way out.

We dry-fitted the strips one by one and discovered that by starting in the center of the overhead and working outward, the final strip ran directly across the 4-inch opening from the port side dorade box to terminate under the fore hatch trim. This final strip would have to be cut into two pieces to maintain the opening, which would also provide an ideal entry point to slide in these final two pieces and their splines.

Using the dorade opening as an entry point, a small forward piece would easily slide from the opening into its proper place and fit under the fore hatch trim. The longer aft piece would be the king plank and slide from the opening all the way aft to fit under the aft trim. The splines would easily slide into place along the full length of the final strips. A teak doughnut with bug screen would trim out the dorade opening as before.

Convinced that everything looked and behaved exactly as we wanted, it was all carefully disassembled, numbered, marked for reassembly, and set aside.

Ellen next set to work on the most horrible of jobs. Using vast quantities of paint remover and numerous scrapers, she methodically stripped away every last trace of varnish from the old wood still in place. Working for hours above her head was messy, dirty, tedious, and exhausting.

The final installation, spread out over three days, went smoothly. After coating each strip with thickened epoxy and setting it into place, we fitted the spline and bent in the next strip. To prevent any possible disaster, we set a limit of only three strips per day.

To support the strips from below until the epoxy cured, we wedged round cardboard shipping tubes against ⅛-inch plywood. When we exhausted our tube supply, cymbal stands from my drum kit saved the day.

We knew from the beginning that we would have to apply some type of stain to the entire overhead to achieve a uniform finish, but we wanted the wood to look as natural as possible. Ellen randomly mixed lengths of old and new wood and began experimenting with various stain and varnish combinations. We received valuable advice from friends who dabbled at furniture restoration. When something looked promising, we attached the results to the overhead with double-faced tape to see how it looked, only to throw it away and try again. Days turned into weeks until, eventually, we had something that really looked like it would work. We finished up a large area of test material, taped it into place, and lived with it for a week under varying lighting conditions, just to be certain.

Even so, applying the new finish was stressful, because once the stain was on, there was no turning back. We would either like it or paint the entire overhead white. The experimental stage complete, Ellen began applying the stain with total confidence, using a small working amount while leaving the "mother" can in the cockpit, where I was busy with other tasks. It looked great. For three minutes. Then I heard panic.

"Give me more stain, quick!"

"What's wrong?"

"Give me more stain now, there's no time to talk!"

Quite possibly the most unique use of cymbal stands ever. Ed, the drummer, used them from his drum set to help hold the strips in place until the epoxy cured.

Sticking to It—EZ

TotalBoat THIXO thickened epoxy was a pleasure to work with, especially when it came to restoring the boat's wooden overhead. Thixo proved extremely easy to control. Applied directly from standard caulking tubes, it mixes automatically as it leaves the tube so there is little waste. It was far less messy than continually measuring and mixing separate batches of resin, hardener, and filler for thickening. The best aspect was that it did not begin to cure until after it left the caulking tube. This eliminated the pressure to work fast before our glue pot went off.

With her new Coppercoat bottom, *Entr'acte* is ready to be relaunched, at left.

With the stain dried and several coats of varnish later, the new strips blended perfectly with the old, at bottom left.

Coppercoat, Carefully—EZ

We have been extremely happy with Coppercoat, but even for committed DIYers like us, its application is demanding. It must be mixed, thinned, and applied precisely—in exacting conditions of temperature, dust, and humidity—to achieve the proper coating. Since its application, I have had to perform three small repairs, and these relatively simple jobs were enough to convince me that to attempt an entire boat is not for the first timer. There are so many pitfalls which can result in at best a needless waste of materials and money, and at worst a lousy job that will have to be removed. As we watched the boatyard experts, we were amazed at the details we would most certainly have overlooked, which would have resulted in a less than optimum job. If you're thinking about this for your boat's bottom, we'd recommend turning this job over to the professionals at a yard that has done this several times with complete success.

From topsides, I heard cans banging and a flurry of brushes, rags, and invective as she worked furiously.

She emerged in the cockpit a few minutes later and collapsed.

"I don't know what happened. The stain wasn't soaking into the wood uniformly like it did in the tests. At one point, there were 20 different colors down there. I don't know whether I fixed or destroyed everything. We'll know more after the stain dries. It was horrible."

Neither of us slept well that night, but the next morning, the overhead looked great. Six coats of varnish later, the job was finally done, and our Tongan whales were relegated to a place of honor in our living room.

The Last Lap

For the final phase of our refit, we trailered *Entr'acte* to California for a new bottom job, followed by a shakedown cruise on San Francisco Bay. At Napa Valley Marina, we had 10 years of old bottom paint removed and a new Coppercoat treatment applied. It didn't take much convincing to relegate this job to someone who knew this complex, precise procedure well and had applied it many times. This would be only the second time ever that we paid anyone to work on our boat.

While the pros worked on the hull, we kept busy. Three weeks later, the mast and boom were stripped and repainted, and the lifelines were completely renewed.

By the end, all of *Entr'acte*'s, metal had been removed and either restored or replaced. We'd stripped and refinished all the interior cabinetry and restored vinyl-covered trim panels. We'd installed a new Shipmate stove, restored her windlass, and re-piped her water system. Her hull and topsides were cleaned and buffed to gleaming perfection, and her bottom shined like a new penny. *Entr'acte* was ready to launch.

After admiring and complimenting her, someone at a marina BBQ asked me, "Do you ever think about building another boat?"

I considered the question, then realized something. "We just did!"

Good Old Boat *Contributing Editor Ed Zacko and his wife, Ellen, built their Nor'Sea 27,* Entr'acte, *from a bare hull and since 1980 have made four transatlantic crossings and one transpacific crossing. They also keep up a busy concert schedule; Ed, the drummer, and Ellen, the violinist, met in the orchestra pit of a Broadway musical. They recently completed their latest project, a children's book,* The Adventures of Mike the Moose: The Boys Find the World. *Most recently they can be found sailing between the Bahamas and New England.*

Don't be a Drip

Nobody likes a leaky hatch. Here's how to re-bed one.

BY FIONA MCGLYNN

My husband, Robin, and I met fellow cruiser Adva Reshef in a boatyard, and we became fast friends making repairs to our respective vintage Dufours. When she was troubleshooting a leaky hatch on *Waterhoen*, a Dufour 31 owned by another sailor, we lent a hand, having been down this road ourselves a few times.

Most owners of good old boats will likely have to do the same at some point. Hatches, perhaps because of their relatively large surface area and their designed purpose to open, seem to be one of the worst offenders when it comes to sources for below-decks water leaks. Fortunately, re-bedding a hatch is a fairly quick and easy job if you know how to go about it.

First, make sure it's necessary. Leaks can be deceiving, and the water you see dripping from under the hatch may have entered elsewhere and traveled along the underside of the cabintop or above a headliner, only to reveal itself at the hatch. After you confirm that the hatch is the source, check to be sure the leak is occurring where the hatch frame meets the deck, and not the seal between the opening part of the hatch and the frame.

Once you're convinced it's time to re-bed a hatch, first select a bedding compound. Consider the materials you're bedding (plastic, metal, or fiberglass) and what adhesive or sealant properties are needed and desired. Choose carefully. Of course, you're going to want the sealant to prevent water intrusion, but if you're bedding a hatch with an adhesive sealant as determined as 5200, for example, trying to remove that hatch frame later may well be destructive, if not impossible. Butyl rubber, polysulfide, silicone, or even a mixture of compounds are typical solutions, but when in doubt, a good source is Don Casey's indispensable chart of sealants from his book *This Old Boat* (For quick reference, it's printed on page 52 of the May/June 2021 issue.)

Adva works to carefully remove the hatch by gently using a hammer to tap the pry bar between the frame and the deck. Care must be taken at this stage to avoid bending the frame, at right.

Removing the old Sikaflex is the most time-consuming part of the whole process, at bottom right.

For this project, we used Sikaflex 291, a polyurethane sealant that, like most polyurethanes, is also a formidable adhesive. It comes in white, bonds tenaciously to gelcoat and metal, and is paintable.

Following are the steps we take to re-bed a leaky hatch:

1. Remove the screws securing the frame to the deck. Hatch screws are often difficult to budge. If corrosion stops you in your tracks, see the sidebar "How to Remove a Rusty Screw."
2. Use a pry bar between the deck and the hatch frame and gently pry. If you can't wedge the pry bar under the hatch, gently tap the right-angled side of the pry bar with a hammer to drive it in. To avoid bending a hatch frame, don't apply too much prying pressure at any one place. Rather, slowly work your way around the hatch to break the frame free from any old sealant. If the hatch frame is particularly difficult to unseat from the deck, and if clearances allow, close and secure the hatch to the frame before applying additional pressure. Closing and securing the hatch will give the frame a bit of added rigidity.
3. Once the hatch frame is removed, the fun begins. Scrape away all sealant using whatever tool is most effective. We've found chisels and paint scrapers usually do the trick.
4. Use acetone to thoroughly clean all deck and frame

(top to bottom) **Apply a generous amount of Sikaflex (or your chosen sealant) to ensure no gaps in coverage.**

As the fasteners are gradually tightened, extra sealant oozes out between the frame and the deck.

Wipe up the excess sealant after tightening the hatch frame down.

surfaces that will come in contact with the bedding compound.

5. Fill the screw holes in the deck with new bedding compound, and then run a line of bedding compound around the area where you'll seat the hatch frame to the deck. Don't be shy with the bedding compound. When done correctly, it should squish evenly out the sides when you screw down the hatch frame. If you use too little bedding compound, you'll risk leaving a small gap through which water will eventually find a way.
6. Replace one screw, tightening it only about halfway. Replace a second screw, as close to opposite as possible from the screw you started with, also tightening only about halfway. Continue until all the screws are in, alternating between screws placed far apart from each other. The point is to tighten the fixture against the deck evenly. Next, begin tightening the screws, nearly all of the way, in the same kind of sequence. Finally, bear down on each to completely tighten.
7. Clean up excess bedding compound that squeezed out.

Good Old Boat *Contributing Editor Fiona McGlynn cruised from Canada to Australia on a 35-foot boat with her husband, Robin Urquhart. Fiona lives north of 59 degrees and runs WaterborneMag.com, a site dedicated to millennial sailing culture.*

How to Remove a Rusty Screw—FM

- Use a wire brush to remove any rust so that you can clearly see the screw slot.
- Apply a penetrating oil like PB Blaster to chemically break down the rust bond. Wait 15-30 minutes for the penetrating oil to work its magic.
- Seat the screwdriver in the slot and tap the butt of the handle with a hammer to break up any remaining rust.
- Clamp your crescent wrench onto the screwdriver's square shaft and lean directly over it, putting all your weight downward onto the screwdriver, and then separately turn the screwdriver with the wrench in your other hand. (While most large screwdrivers are square-shafted, you may be able to use a Vise-Grips for this job if your driver has a round shaft.) With any luck, the screw should come loose.

The procedure makes for a nifty bit of boat yoga, but it has never failed us. An alternative is to try heating the screw with a torch (but be sure to remove any penetrating oil before trying this). The heat will cause the screw to expand and, in theory, break the rust bonds.

Robin demonstrates the wrench-leverage technique for removing a rusty screw.

Window Treatments

Properly maintaining dodger and enclosure windows is a lot trickier than it looks.

BY DREW FRYE

Perhaps the most fragile and vexing part of any boat's exterior is the clear vinyl material commonly used in dodger and cockpit enclosure windows. The view through them is not always clear. They are annoying tattletales, recording every unintended brush with a tool or chafe with a line. They yield utterly to sunlight, yellowing and stiffening over time. They bleed plasticizers, turning sticky and attracting dirt. Even cleaning them can cause damage. And unlike a streak of mildew in the cockpit or an upholstery stain, we can't just look away, not when we're trying to look through.

After spending $1,500 for new canvas, I set out to learn about the vinyl windows sewn into it.

For a story I researched and wrote for *Practical Sailor* magazine, I kept 50 vinyl window test panels in my side yard for five years. I faithfully applied polishes every quarter and cleaners every month. I used many brands of protectants, two brands of coated and uncoated vinyl window material, and I included untreated panels as controls for my experiment. Although the changes after five years were limited, I learned a lot.

The first thing I learned is that not all vinyl windows are the same. Some manufacturers of vinyl window products, like O'Sea and Strataglass, add a polyurethane coating to reduce surface abrasion and to seal the vinyl from oxygen and humidity. The thinking is that this coating is protection against the common vinyl window afflictions.

Unfortunately, although the coating adds minor scuff resistance, I've found that anything sharp or slightly gritty will cut through this surface coating like it's butter. Even light rubbing against fabric straps and polished stainless tubing will take a toll over time. Any window near traffic areas, exposed to flapping sheets, or that is rolled up for ventilation or storage, will accumulate microscratches, scuffs, and a few deeper scratches. Even cleaning a window that was not first hosed off or using a cloth that is anything less than pristine is asking for damage. It's nearly inevitable.

My conclusion is that while these coatings can't hurt, they also can't add the level of protection many hope for. Environmental aging happens and visibility slowly degrades. You polish it, but the scratches remain, and it's not as easy to see through. One day, you realize the vinyl isn't as supple as it once was. More time passes and you decide it's downright brittle. Finally comes the day you notice that a crack has begun at one edge and is working its way across.

Is there anything that can be done to turn back the clock, to get a few more years of acceptable service, or even just to slow the damage?

Shown on test panels in Drew's yard, a restored panel fogs in damp weather; a new panel stays clear in damp weather; a polished panel becomes nearly opaque in heavy humidity.

The skylight panels in Drew's dodger are still clear after 21 years, longevity he attributes to keeping them protected with a close-fitting cover as often as possible, at far left.

Drew's backyard vinyl window experiment lasted five years. Here, he treats some of the panels, at left.

Cover it Up

The only thing that dramatically and effectively delays vinyl window deterioration is a cover, such as one made from Sunbrella. I saw it firsthand on my last boat. In 22 years, I replaced the dodger windows three times. But the dodger also featured overhead skylights made from the same material, and I nearly always kept these panels covered.

Those skylights were still pristine the day I sold the boat. The covers protected the vinyl window material from UV damage as well as bird bombs and atmospheric contaminants, thus reducing the need for cleaning, which itself is damaging (more on this later). All that said, it's worth noting that the wrong cover, one that rubs or flaps against the vinyl it's protecting, will cause damage. In my case, the covers were close-fitting to the point of creating a little gap between the Sunbrella and the skylights. Perfect.

Wax On, Wax Off?

UV is the big vinyl window killer. While protectants on the market tout their ability to shield vinyl windows from UV damage, my experiments yielded no clear evidence that protectants measurably reduce that

Isinglass: What's in a Name?—Contributed by Sailrite

You've probably heard the term isinglass referring to clear window material, such as that used on dodgers and cockpit enclosures. But what is it exactly? Is it a brand? Is it a substance?

Isinglass is a form of mica, which are any of various opaque or transparent minerals made from watery silicates of aluminum or potassium. Mica is mined all over the world, and these minerals are crystallized into shapes that can be cut into very thin, transparent sheets. Throughout the 19th and early 20th centuries, this mineral and fabrication was used in the early production of clear window material found in carriages, automobiles, and street lanterns.

But what about the fish bladders? Yes, there's that too, adding to the confusion. Isinglass is indeed also the semitransparent gelatin found in the air bladders of fish, particularly sturgeon, hake, and cod. This isinglass is harvested and processed for a variety of uses. It was used throughout the 19th and 20th centuries in the manufacture of glue and cement. It's still used today as a clarifying agent in jellies, wine, and beer. The isinglass prepared from fish bladders has never had anything to do with transparent window material, just a shared name.

So, in terms of the windows we see in our boat's dodgers and cockpit enclosures, isinglass is an outdated, somewhat generic holdover term for clear window material. Modern, clear windows that can be rolled up are made from durable, high-quality, synthetic vinyl materials.

There are four high-quality brands of flexible vinyl window material that Sailrite sells. Each of these is press-polished, which is a manufacturing method of taking two layers of material and pressing them together between highly polished chrome plates. This process produces one thicker polished sheet of the most optically and consistently clear window vinyl. We consider the following four brands to be the best in the industry, and each will hold up to years of use while retaining exceptional optical clarity and durability.

Strataglass: This press-polished window material has a VueShield™ protective, scratch-resistant coating. Available in 30-, 40- and 60-gauge thicknesses; the 40-gauge comes in clear and light smoke. Cold crack rating of -10°F.

O'Sea: This polyvinyl chloride, press-polished window material is chemically resistant to suntan lotion, insect repellent, and jet fuel vapor. It has a slightly bluish tint. Available in 30- and 40-gauge thicknesses in clear only. Cold crack rating of -30°F.

Regalite: A standard polyvinyl chloride marine-grade window material in a flexible, press-polished sheet without the superior chemical resistance that O'Sea has. Available in 20-, 30- and 40-gauge thicknesses in clear only. Cold crack rating of -30°F.

Crystal Clear: This press-polished window material is made using the same materials and manufacturing as Strataglass, but it does not have the VueShield protective coating. Available in 20-, 30- and 40-gauge thicknesses, 40-gauge comes in clear and light smoke. Cold crack rating of -10°F.

Of course, chemistry is chemistry and all vinyl window material—regardless of brand—contains plasticizers that will break down over time and cause your windows to turn hazy and brittle. How long that process takes hinges on how well protected and cared for the windows are. For extending the life of vinyl windows, we recommend using protective products like 303 UV Aerospace Protectant or IMAR.

Drew applies Star brite View Guard to his dodger's panels. Note the cover pulled back.

damage. Sunscreen on your body only lasts for a few hours, so why would we expect the UV properties of wax to last more than a few days, or a week at most? (The wax may remain in place longer, but the UV screening capability is expended in a few days.) Waxing will reduce the obviousness of minor scuffs for a few weeks, but frequent polishing may cause even more and deeper scratches.

However, there are some positives to using a vinyl window protectant:

- Vinyl windows polished with a protectant are more likely to stay clean. This is helpful, because cleaning vinyl windows can damage them, so less cleaning is better.
- Cream protective polishes temporarily mask microscratches. That said, it's a catch-22, since most of the microscratches come from the cleaning process.
- In general, protectants reduce internal fogging of non-coated vinyl in wet conditions. Cream protectants in particular reduce internal fogging that results from high humidity and dew in windows that have been restored by buffing with compound (see the "Buff and Fluff" sidebar). But this is only required because the microscratches created by the restoration process provide water vapor a path inside.
- Polishing prevents the build-up of sticky plasticizer film.

Yet, these positives must be weighed against what protectants can't do, and the risks that even applying a protectant present:

- Every time you touch or rub a vinyl window—even to polish with a protectant—scratching will result from the polishing process itself. To mitigate, I always hose windows off first, and I use freshly laundered cloths, but no process is perfect.
- Protectants cannot delay yellowing or stiffening.
- Protectants will not do anything to restore suppleness. While the vinyl may feel more flexible after polishing with a cream protectant, that's just because the surface is smoother; flex testing at temperatures from 74°F to 0°F showed no change.
- If you choose to clean your windows with a product, those made by IMAR, 404, Plexus, Star brite, and Armada work well. Avoid furniture products because they leave a residue that builds up. Star brite View Guard is my favorite window cleaner, because it improves water sheeting and visibility.

My overall conclusion, though, is that benign neglect is best. Clean as needed with dishwashing liquid or a protective

Buff and Fluff—DF

Buffing can help or hinder. Doing a good job buffing vinyl windows requires considerable effort and patience, and it is quite possible to make things worse. I recommend not trying to buff out a window unless it's so bad the only alternative is replacement.

If you do choose to buff, pay attention to detail. Start with selecting a quality buffing compound. I have been happy with Armada 210+, Sudbury Isin Zoap Polish, EisenShine Stripper (part 2 of the EisenShine Clear Vinyl Restoration Kit), Star brite Step 1, and Novis Step 2. EisenShine was the fastest product, and Isin Zoap was by far the best buy.

Also, I recommend experimenting on an old piece of vinyl first. Ask the canvas shop for a junk dodger from the waste bin to practice on. Get vigorous and see what happens. My first efforts were not impressive.

The tools:

- A plentiful supply of clean cotton or microfiber cloths;
- Lots of towels for padding the work surface;
- Clean wool buffing bonnets, which you will clean frequently (scrub with soap and water) as work progresses. This is a far more delicate process than compounding gel coat, so first and foremost, scrub the buffing bonnets to remove grit, old compound, and wax;
- Two-inch masking tape to protect adjoining canvas;
- Water in a spray bottle;
- Buffer. Low-speed rotary is preferred. A drill is fine.

The procedure:

Do not work in cold weather (below 50°F). You'll risk cracking the vinyl, especially if it's older.

Clean the windows with soap and water before you begin; the worst of all possible outcomes is to ruin them with a bit of unseen sand or rust.

Take the dodger or cockpit enclosure panel off the boat and lay it on a flat work area that has been well padded with clean towels. You will be buffing both sides.

Mask dark-colored canvas. While none of the products will damage the fabric, they will leave a ground-in white residue that is challenging to remove. This may not be noticeable with white or off-white canvas or Sunbrella, but the precaution is vital for darker colors. Masking tape is sufficient if you're careful around the edges.

Choose your weapon, machine or hand polishing. Either is practical, but there are some differences. If the goal is deep cleaning and grime removal with little need for scratch removal, hand polishing works very well on areas up to about 10 square feet. You'll be working hard on both sides and your arms will feel it. For larger areas, or if you want to remove large areas of fine scratches and scuffs, a buffer can save a lot of physical wear and tear and give better results. I used rotary and orbital buffers and much preferred a low-speed rotary buffer; a hand drill is perfectly adequate for the typical dodger. While some use up to 1,000 rpm, I liked 500 rpm best; the bonnet throws less compound, over-heating is eliminated, and it's simply more compatible with delicate material. Vinyl is very heat sensitive, and at about 140°F the surface softens and smears, resulting in a marbled surface.

Do nothing without your spray bottle. *Never let the work area go dry*; if it does, you will melt the vinyl, making things far worse. Use only light pressure tapering to very light, keep moving, and work only as much area as you can keep wet. Moistening the area before it dries can greatly reduce wasteful additions of compound, burning, and over-compounding. Do not try to get everything perfect on the first go. Instead, give the surface a light overall compounding and buff, examine for areas that could use a little more work, and concentrate some effort on them. Then finish with a light overall buffing, wash off any remaining compound, and dry. While deep scratches will be impossible to remove without risking damage to the vinyl, scuffs and very light abrasion—the sort resulting from sloppy storage or a flapping cover—can be removed with extended buffing using light pressure and patience.

Some compounds are better at this than others; Novus Step 2 and Armada 210 Plus worked well, while EisenShine Stripper and Sudbury Isin Zoap Polish were significantly more effective at removing fine scratches. The risk, however, is that a more aggressive compound will increase the panel porosity, potentially increasing fogging and weathering. Yellowing in the surface grime (plasticizer goop) will come right off but yellowing deep in the vinyl will not. I like the less aggressive grits for cleaning and the more aggressive grits when faced with scuffs and fine scratches. The Novus kit came with two grits (1 and 2), and while I played with the coarse grit, it was too much for soft vinyl (the manufacturer does not recommend it for soft vinyl).

One thing to keep in mind about buffing: it will leave your vinyl window more prone to internal fogging in the morning dew. With my test panels, often visibility was reduced to near zero, and it sometimes took hours for the windows to clear. Being a morning person, this was not acceptable to me, and so for this reason alone, I would never buff a window until it was ready for the dumpster.

That said, this fogging can be mitigated with regular use of a sealing protectant that contains wax.

Drew does some test buffing on a sheet of clear vinyl.

cleaner, but otherwise adopt a hands-off strategy to your windows and keep them covered whenever possible.

Restoration

Is it possible to bring a window back from the dead, after visibility has degraded, by using a magic restoration system? I've tried them all, carefully following provided instructions. Though I've concluded there are no miracles to erase a misspent youth, there is a path forward. I've learned the following about vinyl window restoration products:

- They cannot restore flexibility. Although the vinyl feels more flexible, it is a false impression caused by a smoother surface feel. No product that I tested achieved measurable results restoring or changing flexibility.
- They cannot reduce brittleness. Vinyl windows become less supple with age, and with temperature decreases. (Don't even touch your vinyl windows when the thermometer drops below 50°F; you will risk cracking the vinyl.)
- They cannot buff out significant scratches. If you can feel a scratch with a fingernail, leave it alone; it's hopeless. Scratches in hard plastic windows (polycarbonate and acrylic) can be compounded out, but scratches in soft vinyl cannot.
- They cannot remove or reduce yellowing due to UV damage. The damage is deep inside.

All these "can'ts" aside, these products do provide some benefit:

- They can remove sticky plasticizer residue and the imbedded dirt it attracts.
- They can reduce surface yellowing associated with the dirt.
- They can buff out minor scuffs that you can see but not feel.
- They can provide a semi-durable coating to reseal the surface (porosity accelerates all the problems associated with vinyl windows).

The bottom line is that there is no magic cure for aged, deteriorated vinyl windows, but with a little attention and strategy, you can probably stretch a bit more life out of your windows. They'll never look as good as they did new, but hopefully you'll be able to see where you're going.

Good Old Boat *Technical Editor Drew Frye's bio can be found on page 33.*

Cracking Wise-DF

Eventually a vinyl window will crack, either because of extreme age or extreme cold. The right repair is new vinyl, but in the meantime, a quick fix is needed, something fast, easy, and good enough to get you to the end of the sail or the season. If the repair can last a few seasons, all the better.

After a surprisingly good result using some off-the-shelf tape to repair a crack in one of my vinyl windows, I wondered if the right tape might last years. As part of my *Practical Sailor* vinyl window research in my yard, I added this experiment.

I tried several quality tapes and some special-made repair products. I glued patches on using West System G-Flex epoxy and Locktite Vinyl Repair glue. For each repair sample, I compared visibility and flexibility. I pulled each in a test rig to determine both creep resistance (at several temperatures) and ultimate strength. Then I left each sample in the sun for a year before remeasuring using the same methods.

I gave clarity less weight than durability, because most cracks happen down low where reflection off the deck increases UV exposure. Patches in the bottom few inches or corners just aren't very noticeable in most cases.

Glued patches held the promise of durability, but ease of use and results were disappointing. Epoxies simply would not bond, peeling with the slightest flexing. Vinyl glues were better, but there was still the problem of applying the patch. Even if clamping is not required, the patch has to lie flat, and if the window is already cracking, removing it to get it flat may ruin it.

In the field, the best I could do was mask all around the test area, bring one side together with masking tape, and hold the patch with my fingers or tape until the glue grabbed. Glued patches always contained bubbles, gave poor visibility, and created a hard spot, encouraging new cracks. The glued patches were also poor in the sun, yellowing and cracking after a year. So glue didn't work well.

Tapes, on the other hand, were easy to apply, relatively inconspicuous, and nearly as strong as the vinyl if carefully applied from both sides. If the result is imperfect or does not last long enough, it's easy to do it over—peel off the tape, clean the surface with mineral spirits followed by soap and water rinse, and try again.

In my opinion, having measured the performance of many products and approaches, the real winner was 3M Book Tape, a product designed for long-term restoration of damaged books. Surprisingly, it outperformed products made just for vinyl windows. This tape did not creep in the heat, handled UV for years, and was nearly as strong as the vinyl (38 pounds/inch). Appearance depends on controlled bubble- and wrinkle-free installation, but that is a matter of patience. I expect repairs with this tape to last two to three years.

Building a Better Bungee

If you're tired of bogus bungees, try this custom-built alternative.

BY DREW FRYE

The average bungee has a one- to two-year life expectancy when enduring stressors such as UV and chafe that are part and parcel of life aboard. The rubber cord is soon exposed, and failure follows. Discount cord can fail in six months, better cords may last a few seasons. And when they do snap, it is often without warning. In their final months, strength is greatly diminished. Using bungees alone to secure anything important can be risky.

For the past five years, I've been using much-improved webbing-covered bungees made by Davis Instruments and sold under the brand name Shockles. I use them to tension rigging and to secure a kayak on deck that is subject to green water on every windy sail. I've used them to control dockline slack, and they've withstood back-and-forth rocking through thousands of cycles.

They are sun-proof, chafe-proof, and fitted with versatile stainless carabiners or shackles rather than cheesy hooks. Even when the rubber core eventually breaks down and fails, the intact webbing cover remains and can hold thousands of pounds, depending on the size and level of normal weathering the webbing was subject to.

Sizing Compatibility Chart	
Shock cord diameter	Double-braid rope diameter
¼-inch	⅝-inch
5⁄16-inch	¾-inch
⅜-inch	1-inch

These "better bungees" are a little pricy, but I can get over that for gear that lasts. However, prefabricated construction comes with inherent limitations. The first is the fixed length. Second, elasticity is sometimes more than I need or want. Finally, the particular end fittings may not be the best for the respective application.

My DIY instincts sought a solution to these shortcomings. I made my own durable bungee cord to overcome them.

The only real skill a sailor needs to follow my lead is knowing how to sew an eye splice in rope. It's a valuable skill apart from making a better bungee cord, so it would benefit everyone to learn. I wrote a *Good Old Boat* article on the subject for the May/June 2018 issue ("Sewn Eye Splices: Make Strong Connections with a Needle and Thread"). There's also a how-to video on the *Good Old Boat* YouTube channel (go to youtube.com/goodoldboat and search "sewn eye splice.") Once you have this skill down, making your own better bungee should take about 15 minutes.

Here's how to do it.

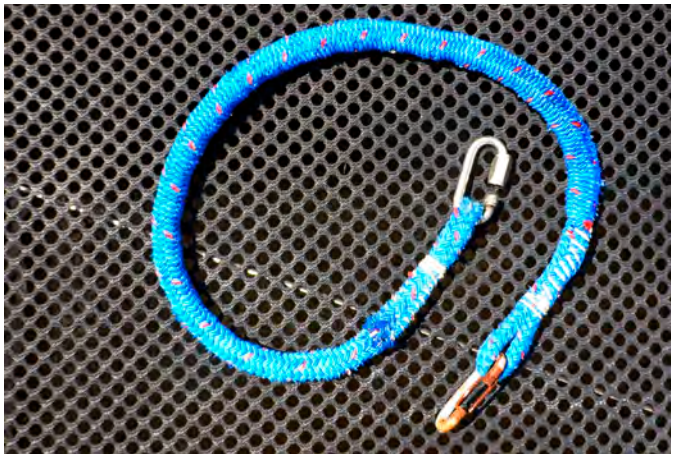
After determining the desired length of your finished custom bungee, assemble the parts you'll need: a length of high-quality shock cord from a chandlery or name-brand cordage company that is at least as long as the bungee you're making (I purchase a spool of this cord for projects like this), and a length of double-braid line with a salvageable cover; a retired dock line can work, but a halyard that was protected inside the mast is better. This length of line should be the maximum length you want your new bungee to stretch, plus 6 inches (in fact, limiting this maximum stretch range is a good way to ensure a longer lifespan for your bungee cord). The double-braid rope should be compatible in size with the shock cord; see the sizing compatibility chart (to use more than one shock cord inside a single cover, size up the rope accordingly so the cover diameter is large enough).

Using a mandrel to keep one end of the cover open, seal the edges of the double-braid so that it doesn't fray, at top.

Always cut a shock cord with a hot knife; seizing doesn't work, above.

Stretch the shock cord between the two points to be connected, subtract 3 inches for the end eyes, mark, cut, and heat seal both ends (a hot knife is by far the best way to cut and seal shock cord).

Pull the cover off the double-braid line. Seal one end



(top to bottom) **Sew the last 3 inches of the cover into an eye, using round turns on both sides and a row of stitches down the center to hold the end of the shock cord in place.**

Push the cover toward the completed first eye until just the end of the shock cord sticks out; then you will allow 1½ inches of the cover to slide back past this cord end to sew the second eye.

The completed better bungee.

The better bungee in service.

with a hot knife. Trim the other end, and then insert a mandrel. Melt the edges of this open end of the cover over the mandrel. This will allow you to insert the shock cord with minimal fraying and will simplify sewing the eye at that end.

Thread the cord into the cover.

At the sealed end of the cover, fold 3 inches over to make an eye. The shock cord does not go around the eye; the end of the cord should stop at the throat of the eye you are about to stitch. The eye only needs to be long enough for a shackle or lashing to fit through. Sew the sealed-end eye splice using #4 whipping twine, sewing down both sides of the cover at the throat of the eye, alongside the cord inside. Then sew two additional rows down the center through the cord, which will hold the end of the cord in place. This centerline stitching should extend for 1-1½ inches.

Now, push the cover over the cord towards the end you just finished, bunching it up until only 3 inches of cover extend past the end of the shock cord inside. Fold the 3-inch length over to form the second eye, locking the cover in place with a needle through the shock cord. Sew the second eye in the same manner as the first.

Finally, add attachment hardware (such as carabiners) to the eyes. If you plan to use captive hardware, such as rings, add them before you sew the eyes.

The resulting custom bungee will possess about 40 percent of the rated strength of the double-braid rope from which you harvested the cover, about 5,000 pounds if using new ⅝-inch rope. The range of stretch will be limited by the cover, appropriately protecting the bungee from over-extension. The cover will also protect the bungee from UV and chafe damage.

The new bungee will be comparatively bulky, but it will also be exactly the length you need with the precise attachment fittings that work best for the job at hand. The first examples of these I made were eight years old when I sold them with the boat, and they were still going strong.

Visit our YouTube channel for the videos supporting this article.

Good Old Boat *Technical Editor Drew Frye's bio can be found on page 33.*

A Webbing Alternative

Hollow-tube webbing is a good substitute for a cover harvested from a length of double-braid rope. Fellow *Good Old Boat* contributor Dave Lochner used hollow-tube webbing in a similar fashion to make a better battery lifting strap. His excellent DIY video is on the *Good Old Boat* YouTube channel. Go to youtube.com/goodoldboat and search "DIY battery lifting strap."

Product Profile

I have a small head. However, to borrow an adage, I always believed that meant that good things were kept inside its small package. Unfortunately, my small head has meant that I've struggled to find sunglasses that stayed in place and that fit in a way that allows me to wear a hat and sunglasses at the same time. My family and I are currently sailing full-time under the beating sun of the Sea of Cortez, and I'm too often left with the impossible choice: hat or sunglasses.

Then, I was given the opportunity to try a pair of Rheos Bahia sunglasses. These sunglasses wrap comfortably around the narrow space between my temples and provide a clear, polarized view of the world. And they fit under my silly sun hat! There are no gaps for dry breezes or distracting light to sneak through. I don't need a tether to keep them in place when looking down or turning my head quickly. The polarized lenses are scratch-resistant and come with a "saltwater guarantee."

A note about polarized lenses: they're a must for a sailor. On watch today, I slid the Rheos sunglasses up and down my nose, to evaluate the difference with and without them. Without them, the water looks the same color everywhere, and at times blends from sea to land to sky. When I slide the lenses back up into place, I can easily discern differing colors over different depths—a major navigational and safety advantage.

I didn't pay for these sample sunglasses, but given that I share this boat with two destructive small humans and one larger clumsy human, I know it's a matter of time before this already beloved pair winds up stepped on, sat upon, or accidentally kicked off the boat entirely—although, since they float, my chances of recovering them if they do wind up in the drink are pretty good. The price point is reasonable, especially compared to sunglasses I've owned in the past, so I'll be buying backups.

I, my narrow head, and my hat are happy.

More information: rheosgear.com

—**Erin Easingwood**, *Good Old Boat* contributor

We present these profiles as a service, as firsthand accounts from fellow boaters. Neither *Good Old Boat* magazine nor the folks who profiled the products on this page were paid for these profiles. Most products were sent to *Good Old Boat* for review consideration by the manufacturers. We profile only a small percentage of the products that marketers contact us about, choosing only those we're interested in, in the hope you're interested too. A few products we pick up on our own, because we want to share.

continued from page 7

out of the water to repair the defect, life happened: I was diagnosed with prostate cancer. Then, tragedy in the life of the contractor I had hired prompted him to leave. Eventually I returned to work, and while removing paint with a "safe" paint stripper, I managed to completely destroy the gelcoat on the sides of the coach roof. It just went on and on. But now, 13 years later, I am finally ready to relaunch. I delivered the retractable keel to the marina this past spring with hopes for a long summer of sailing.

—**Gary H. Lucas**, Hightstown, New Jersey

Great Mag, But…

I have been reading *Good Old Boat* for years and love it. We recently changed our subscription to the digital version to be more environmentally friendly. I have had no trouble downloading and saving the PDF file.

However, your digital version is not user friendly, nor does it comply with most other digital magazine subscriptions, which, for the most part, are easily read. Standard features include single- or two-page view, page-turning and page-magnification. If you have not already, I would suggest looking at other magazines that provide a digital-copy option.

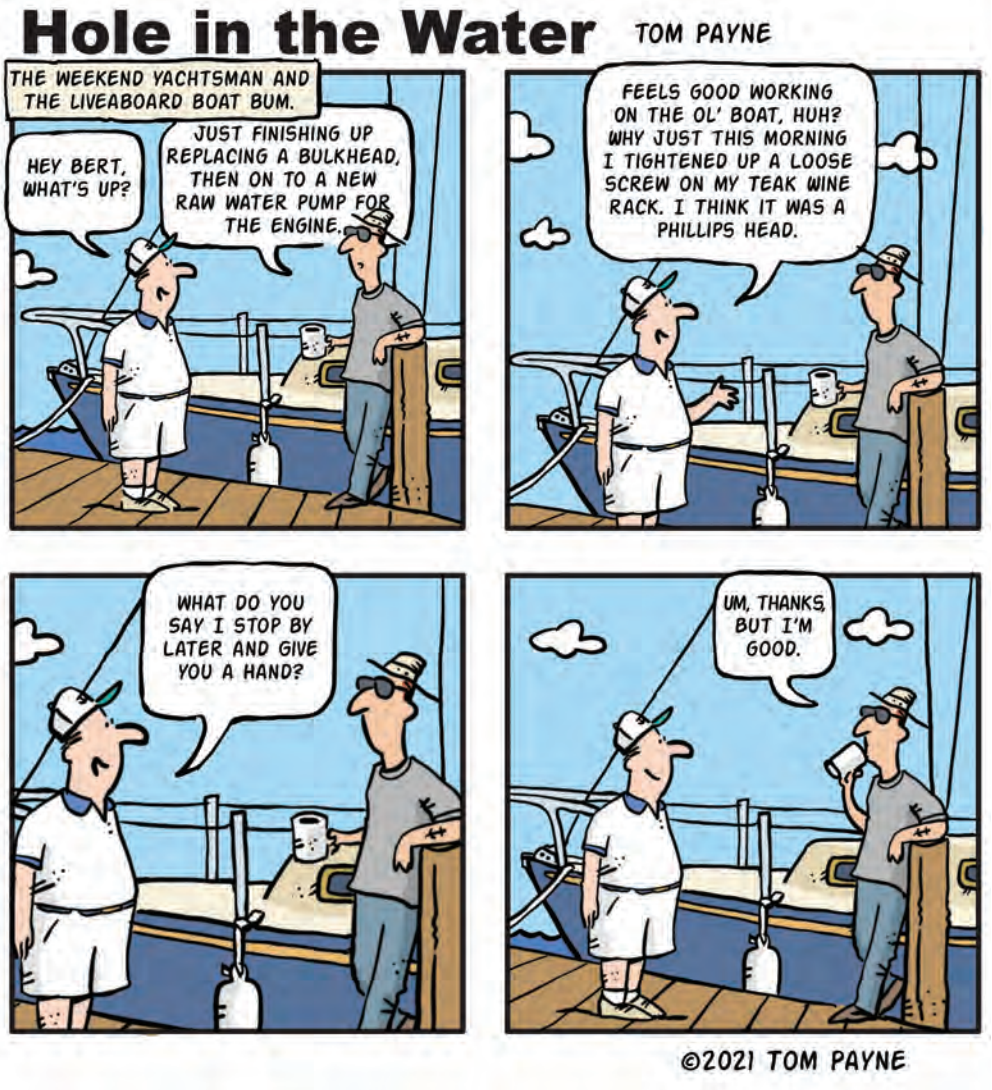
—**Bill West**, Lumby, British Columbia

Former editor Michael Robertson responds:

You're right in that there are other digital magazine formats out there, and we've looked into some of them at a basic level and may eventually change from our PDF format or offer other options.

In the meantime, all of the tools you describe in your email are available in Adobe's free PDF Reader—and I assume that's the tool you're using. Once the application is open, right-click (on a PC) the white band up top where the icons are shown. This will bring up a menu of options for other tools to show or hide. There are a bunch of reading and navigation tools that allow you to view and page through the document just about any way you prefer.

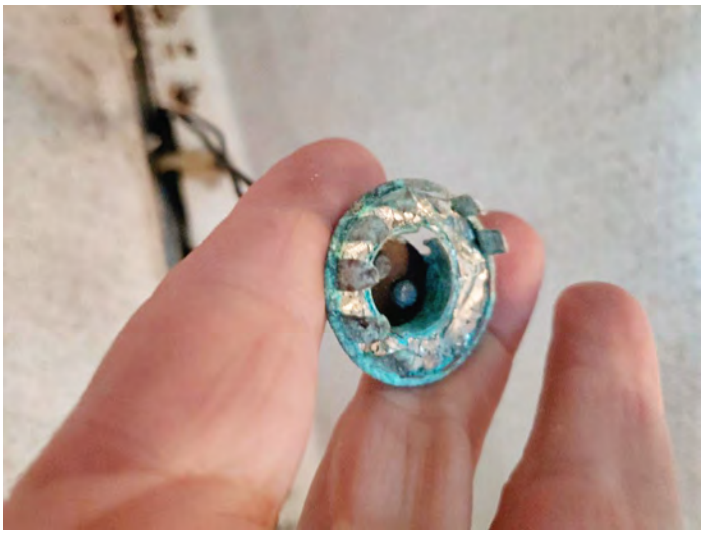
I hope this helps until we are able to offer other solutions.



Another Northill Fan

Thank you for Drew Frye's piece on the Northill anchor ("Holding Power," May/June 2021). One resides in the bilge of my 26-foot 1961 Seafarer Polaris, just in case. This one has been tested. When we were kids, Dad had a local welder make up a four-barrel swimming raft that spent each summer off the shoreline of Lake Huron's Saginaw Bay. When the wind blows from the northeast there, the windward shore is Canada. It's a tough place to anchor anything, much less a heavy raft. Dad preferred chain rode. But as described in another article in *Good Old Boat*, in the wrong conditions the catenary can disappear with a snap and a jerk. Eventually one of the welded-steel mushrooms broke apart. Dad replaced it with a Northill. That's the one in my boat's bilge. Over the years I've waited for somebody to recognize the virtues of this durable and effective device.

Today, besides the Polaris, I also own a 1967 Cal 20. I rarely have to anchor either boat, but having the ground tackle ready to go is an important lesson I learned the hard way many years ago when an outboard failed—well, ran out of gas. (No harm came to the vessel or crew, but my ego was definitely



bruised.) When I went to drop the hook to hold us in place, I discovered that the anchor wasn't shackled to the rode, and as we floundered about (with the mainsail unfurled) the community's most exacting old salt passed by. His gaze conveyed a message I'll not soon forget: "Why do they allow such people on the water?"

I'm in my 54th season of sailing the older boat, so maybe I'm the old salt now. But there's still so much to learn.

—**Chris Campbell**, Traverse City, Michigan

You Light Us Up

When James Hamlin, from Pelham, New York, sent us a picture of the now-defunct nav-light holder aboard his 1977 Nautilus 36 pilothouse sloop wondering where he might get a replacement (Nautilus has long been out of business), we posted his query on our Facebook and Instagram feeds. Eureka! Among the many helpful suggestions, a reader named Mike Manners posted this: "That's a generic brake light socket for 1950s- and 1960s-era automobiles. Uses an 1157 bulb. Any automotive parts store should have one."

Armed with this information, James went to his local NAPA store and, sure enough, they had something. The bulb he already had didn't fit the new socket, but a new LED bulb did. To complete the installation, James also needed to buy an o-ring. His new nav light is updated and using even less energy. Here's to the power, knowledge, and helpfulness of the Good Old Boat *community!*

—Editors

Why Ferrules Rule…Mostly

This past winter, my 30-year-old Atwood water heater bit the dust. So, this spring I installed a new water heater in my 1990 Pacific Seacraft 31. My previous water heater was direct wired; the new water heater comes with a standard 110-volt, three-prong plug (not to be tampered with without risking voiding the warranty). To complete the installation, I needed to wire a 110-volt AC, 15-amp outlet (think: home outlet). Remembering David Lynn's article ("Why Ferrules Rule," March/April 2019), I decided to order the crimping tool and a supply of ferrules. The existing AC wiring was 12-gauge stranded wire, and I installed a fiberglass outlet box. A quick scan of the ferrules I ordered revealed an obvious problem: Being straight, neat ends for stranded wire, their shape precluded their use for wiring an outlet. Even when an outlet is designed with the straight plug-in option, most contractors, for strength, opt to wrap the wire around the screw terminals. And besides, the straight plug-in option is designed for bare wire.

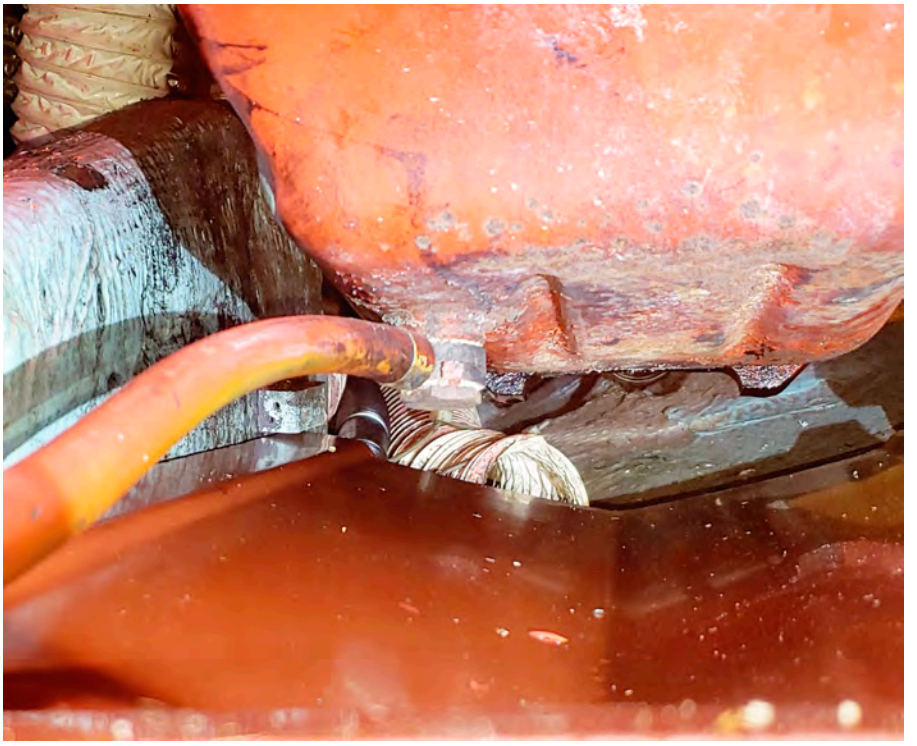
I found a video online where another DIY boater used forked insulated terminals (also ABYC-rated for stranded wire). This type of spade, with a vertical locking tab at the end of the fork, is the only one approved by the ABYC for stranded wire. The tabs at the end of the fork lock the terminal under the screw and prevent the fork from dropping off the screw.

So, I'm wondering if the author might agree this might be better for connections where the terminal does not have a clamping mechanism associated with the screw.

—**Daryl Clark**, Maple Grove, Minnesota

David Lynn responds:

You are absolutely right—ferrules shouldn't be used with a household outlet type of screw terminal. A forked spade terminal or ring terminal is the correct way to go. Ferrules are meant to be used in lieu of stripped stranded wire for the type of screw terminal blocks like these shown in this photo, where the terminal has a clamping mechanism associated with



the screw. The article does use these types of terminals as examples, but it doesn't mention that ferrules aren't suitable for the type of screw terminal used on an outlet. In hindsight, I should have mentioned this.

A (Too) Sticky Situation

After we published the July/August issue of Good Old Boat, *subscribers interested in peeling the shipping labels off their hard copies quickly found that this was a no-go. That is, removing them was virtually impossible without destroying the integrity of the cover. At least one reader, determined to prove the naysayers wrong, embarked on a fact-finding mission that involved industrial solvents and sharp instruments. We're still waiting on the results.*

Anyway, a query made with the printer revealed that, for multiple reasons, they had to source an alternate adhesive. Rest assured we'll get to the bottom of this, and even revive the sleeve vs. no-sleeve debate if need be. We thank you for your patience and—as always—thank you for being aboard Good Old Boat*!*

—Editors

Keepin' It Real

A while back there was an article published in *The Dogwatch* about retrofitting an old Guest anchor light to an LED bulb ("Modernizing a Guest Anchor Light," Feb. 15, 2021). You were kind enough to contact John Churchill, the author, and find the part numbers for the bulb and battery holder. I wanted to let you know that I changed my light over to this arrangement and could not be happier.

It's things like this that really make me appreciate *Good Old Boat*. Keepin' it real!

—**Rich Sutorius**, St. Charles, Missouri

Easy-Peasy Oil Change

In the July/August Mail Buoy, there's a discussion regarding removing old engine oil ("Partial Oil Change," pg. 56). Our 1985 Sabre 38Mk I has an electric pump for the task that was already aboard when I bought the boat. A heavy hose is permanently attached from the pump to the engine drain-plug hole. Another hose is there to be directly placed into a container for the used oil. This has proven to be quick, efficient, and tidy.

—**Dave Nehring**, Sturgeon Bay, Wisconsin

Another Tool in the Toolbox

I learned something new and very useful today reading the May/June issue of *Good Old Boat*. The yawing on the hook article ("Twisting in the Wind") was helpful. Dropping a hammock anchor will be a trick I now use when needed. Another tool in the toolbox!

—**Chris Curtis**, Sandpoint, Idaho

Boats for Sale

C&C Viking 33/34
1982. C&C built by Ontario Yachts, recent sails, engine rebuild (3GM Yanmar), Awlgrip (Aristo Blue). B&G instruments, Autohelm AP. Summer dockage paid. Steel cradle incl, 3-axle trailer avail. Boat in water and in beautiful condition at Miller Marina, Saint Claire Shores, MI. $11,000.
John Juntunen
313-820-2475
jfjuntunen@gmail.com

Acadia Ketch 33
1968. *Manitou*, classic Winthrop Warner design, Beam 9′9″. One of 3 custom-built in Taiwan, sailed only in freshwater. Well maint. Honduras mahogany planking on oak frames. 35hp Westerbeke diesel. Sails incl spinnaker, main, 2 headsails, stays'l, new mizzen. Bayfield, WI. $25,000.
Kathryn Jensen
612-850-2981
kljensen@uslink.net

Atkin Schooner 33
1957. Gaff-rigged. 32′9″x9′8″x4′4″ restored 2012-17, new African mahogany plywood/glass deck. Bald cypress deck beams, white oak frames, 3″ floor timbers, 7x6″ stem, white cedar hood ends, 1⅜″ carvel planking, both garboards and 3 planks above. Set of 5 sails including gollywobbler. Bullet-proof Sabb-2hr, 18hp, new rings and cylinder sleeves '12. 6′ standing headroom, sleeps 3+, July '18 survey. Sale incl hurricane mooring in Colonel Willis Cove, RI. Wishing $60,000, best offer negotiable.
Jim De Reynier
860-305-1582
Jimder40@gmail.com

Ontario 32
1978. Modified C&C design sloop. '10 Yanmar 3YM30 diesel, overhauled '16. 11.5′ beam provides space and headroom of 36- to 38-footer. Bluewater boat that has crossed the Atlantic, sailed the Mediterranean, Black Sea, Caribbean, and West Coast from Alaska to Costa Rica. On the hard in Puerto Penasco, Sea of Cortez, Mexico. Full inventory avail. $19,500.
Aubrey Millard
705-849-3836
svveledaiv@hotmail.com

Grampian Classic 31
1983. New old stock. Has never been launched. Includes new mast, sails, rigging, variable pitch propeller, boxes of new best-quality fittings, and a good Mercedes 4-cylinder diesel. Finish her up and take this beauty on her maiden voyage. Peterborough, ON. $20,000 CAD.
Terry Philpot
705-292-9099
terrymarcmarina@gmail.com
terrymarcmarina.com

Seafarer Meridian 26
1966. Masthead sloop, CCA rule hull, full keel. LOA 26′, beam 7′, draft 3.75′. Fully restored + extensively upgraded. Recently replaced full suit of sails/rigging. 9.9hp Johnson electric start, installed in motor well (inboard style), built-in alum. fuel tank. Original teak interior. Standing headroom main cabin w/berths port and starboard. Large V-berth forward w/concealed head. Motivated seller downsizing to smaller boat. Brooklyn, NY. $24,500.
Steve Morse
718-383-0123
smdfstudio@gmail.com

Pearson 30
1980. Step aboard and get underway! Extensive refit. Hull soda blasted, sanded to fiberglass, epoxy coated. Deck re-cored, fittings re-bedded w/plate reinforcements. Mast + compression post refurbished. Hatches, portholes, windows reseated. Bimini, dodger, add'l misc canvas, includes fitted winter cover. Rocna 15 kg anchor + chain rode. Reworked elec, freshwater, fuel systems. Reliable Yanmar diesel. Electronics: sound system, triple batt charger, plotter, VHF, depth finder. Essex, MD. $17,500.
John Jungclaus
717-309-2782
ljjungclaus@gmail.com

Pearson 28-2
1986. Sloop. 16hp diesel. 15-gal fuel tank, 22-[illegible] 28-gal potab[illegible] tank, 3-[illegible] hot wat[illegible]. Wheel steerin[illegible] col[illegible] [illegible]ed wi[illegible]er, dock box, 2[illegible] hull co[illegible] Very g[illegible]ition. Sandusky, [illegible]BO.
Ken Foss
614-216-3056

SOLD

Quickstep 24
1989. Awlgrip flag blue hull. Raymarine speed, depth and wind instruments. Kept on a lift. New running rigging. 4-stroke Honda. Ready to sail. Motivated seller. Annapolis, MD. $12,600. For more pictures and details see: https://www.yachtworld.com/boats/1989/quickstep-24-3838392/
Charles Thompson
Ctct30805@comcast.net

Downeast 38
1975. Cutter-rigged. Rebuilt inside/out '08. New bottom, rigging replaced. Interior exc cond. Marine survey '09/'19, new zincs, 3.5KW genset. AC blows cold, VHF, AP, full instrumentation, GPS. Many pics avail. Ft. Walton Beach, FL. $89,700.
James DeSimone
850-939-7241
jdesim2015@gmail.com

Pearson 26 Weekender
1976. Great daysailer, exc PHRF racer, heavy-duty gear, spinnaker-rigged. Lots of accessories. Incl LS OB, car trailer, steel cradle. Plymouth, MN. $8,000.
Michael Barnes
763-557-2962
granite55446@gmail.com

Cabo Rico 38
1985. Cutter, refitted '12-'15 standing and running rigging. Garmin electronics at nav station and helm, AIS. Repowered '05, 55hp Westerbeke 267 hrs. Spinnaker, main, genoa and inner stay RF, work sails from cockpit. Winslow raft, EPRIB, HW alarm, engine room auto fire extinguisher. Solar panel, AGM batteries. Canvas, awnings, custom comfort berth pad. Two anchors. Professionally maintained. A go-anywhere boat in great condition. Moored in RI. $105,000.
Mike Cicalese
781-452-7367

Gulf 32
1987. Well-cared-for sailboat, 2 owners. Used on Lake Michigan only. Inside and outside pilot house, diesel, bow thruster, full keel, new genoa. Great all-seasons boat. Onekama, MI. $35,000.
Roy Fedewa
roygulf32@gmail.com
616-902-0479

Products - General

Consignment

Boat Deliveries

Services

Products - Electrical

Tracks

Our fleeting imprint on the water reminds us that now is what matters most.

BY JANIE MENEELY

Paul's wet shoes left a trail on the wooden dock, but it wouldn't last long. Water trails never do.

I can't for the life of me think how he got his shoes wet, but he did, and they made squishy sounds as he walked up the dock and toward the car. We'd had a lovely sail aboard my Tartan 27, *Petrel*, and Bubba, the recalcitrant Atomic 4, had behaved well.

Now with everything on the boat stowed neatly away, Paul and I were going home, no vestige left of our afternoon spree except Paul's wet footprints on the dock. A casual glance would suggest that little *Petrel* hadn't so much as moved all day. Her own tracks were long gone.

I think that's one of the most mysterious aspects of being on the water. We leave no marks. We come, we go, we plow up a mighty wake or leave barely a ripple; no matter, in a few minutes the water shows nothing of our passage. Deep water, anyway, where we aren't stirring up the silt.

By contrast, wagons cut deep ruts in the soil. Out on the Great Plains they say you can still see the path left by the "prairie schooners" that moved west over a century ago. But for all the steamers and sailers that have traveled the seas, not even the barest hint of their voyage remains on the water's surface.

We can make an educated guess as to where John Smith dipped his oars during his voyages of discovery in what was called the New World. But we can't know more than that. As mercurial and moody as water can be—sometimes white-capped and furious, sometimes docile—it keeps its secrets. We look instead to old wharves now abandoned, or to boats rotting in the shallows, and we guess at what may have passed that way once, and when.

According to the gospel, Jesus walked on water and Peter joined him there. Neither of them left tracks, though their strides atop the waves left a strong enough impression in the minds of the witnesses. Sailors still wish for a pair of St. Peter's shoes when the weather gets rough or they're stuck on a boat at anchor and want to get ashore. I wonder if shoes like that would make squishy sloshy sounds on dry land, or leave wet traces on the wooden dock. In any case, chandleries ought to stock them.

We say that time flows like a river, shaping itself around us and weaving together our memories. We can't see the minutes fly by, we only see the gray hairs and wrinkles they leave behind—much like the old wharves and sunken boats at the river's edge. Time and rivers, then, go companionably along, wrapping the earth like so many invisible ribbons. Was there really a yesterday? How do we know? We might have a passel of photos, to be sure, but a photograph is something we glance at; it may suggest a moment in time, but in fact, its only reality exists in the act of someone's looking. It really captures nothing but our attention.

ILLUSTRATION BY FRITZ SEEGERS

I think it's the *now* of being on the water that keeps many of us so passionately tied to the prospect of setting sail—its profound disdain for purpose draws us in.

It may be that the very absence of our footprints keeps us in the present tense when we're afloat. *Now* is all that has been or can ever be. And perhaps that's the ultimate allure of the water.

So, let's go sailing.

Now.

Janie Meneely was born and raised on, in, and around the Chesapeake Bay. She worked for years at Chesapeake Bay Magazine, *putting in the commas and adding her own two bits to the editorial now and then. Happily retired, she has taken to writing songs about Bay history, people, and places. Seawater makes the best ink, she says; Bay winds write the best tunes. janiemeneely.com.*

WHAT OFF-SEASON?

WINTER PROJECTS AHEAD

As sailing season comes to an end, it's time to check your sails and canvaswork to prep for winter projects. Sailrite has dozens of free canvas and sail repair tutorials, full enclosure refits and much more. Whatever your boat's fabrication needs, Sailrite has you covered. We're your DIY authority for all things sailing.

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