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How's Your Sail Trim?

Learn to refine it by chasing good old boats around the buoys

BY MICHAEL ROBERTSON

am not a very skilled sailor. I've sailed thousands of miles in all types of weather, from Glacier Bay to Panama, in several different boats I've owned. I've spent more than 12 years living aboard and I spent the past three years crossing the Pacific Ocean. Yet, when it comes to sail trim and steering, I'm practically a neophyte.

That's not false modesty. I didn't always think I wasn't a good sailor. Gunkholing around Southern California's Channel Islands in my 20s, aboard my Newport 27, I thought I was Master of the Universe. It's only when I got into trouble, and learned there was much I didn't know, that I reassessed.

Several years ago, I watched "The Shape of Speed," an excellent on-the-water video filmed in 1979 and featuring Lowell North and friends; it covers mainsail, headsail, and spinnaker trim. The audio is clear and the supporting video footage is excellent. The onboard presentation is calm and matter-of-fact, and the narrators often use the words "basic" and "simple."

I don't think I understood 50 percent of what Lowell and friends said then, and I probably wouldn't understand much more today.

Out sailing, I'll trim the main using the mainsheet and traveler to position the boom for the respective point of sail. If there is no sail flapping and the shape is pleasing to my eye and the boat is moving, I'll call it good. When in doubt, I let the sail out.

According to "The Shape of Speed," a sailor should move the mainsail's point of maximum draft (measured by a percentage of the chord length) by taking in the outhaul, easing the baby stay, tightening the running backstay, and adjusting the Cunningham so that it is not too slack and not too tight. Then one should sight the top batten from the edge of the boom and use the mainsheet to address too little or too much twist. Then it's best to use the leech telltales for more precise trim. Oh, and "in puffy conditions, the traveler must be tended constantly."

Nope.



I salute the sailing wizards and those striving to learn as much as they can about the nuances of sailing — it's fascinating for many and the learning curve is endless; sailing can be as simple or as complicated as a sailor wants it to be. But I never want an aspiring sailor to be needlessly intimidated by exacting sailing instructors or videos like "The Shape of Speed." Knowledge is good, the more the better, but after the fundamentals are learned, it's good judgment and knowing how and when to reef sails that will get someone safely across a bay or an ocean — if perhaps averaging a few knots slower than Dennis Connor.

I think Robb Lovell's story in this issue about PHRF racing for non-racers (page 26) is important because he starts at the beginning, at a time when he sailed like I do. But then his curiosity was piqued by the folks who spend Wednesday evenings in clusters of good old boats, each frantically getting around buoys as fast as they can — and with smiles on the faces of the crews.

Do these racers also interest you? Are you keen to learn how to squeeze an additional knot, or tenths of a knot, from your boat? Would you enjoy the camaraderie of another sailing community? Then follow Robb's lead out onto the racecourse and make some new friends. I guarantee that, after your first season, you'll be a better sailor than most (and you'll out-sail me every day of the week).



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News from the world wide web



Lackey Sailing

One Man... One Boat at a Time



For boat-project voyeurs

If you get informed and inspired seeing other people work on other people's boats, you'll love the Lackey Sailing website. Tim Lackey is a master shipwright who works

on one or two boats at a time in his Maine workshop and chronicles each day's efforts in words and photos on his site. Check out what he's working on now, or browse hundreds of postings from more than 70 different projects. This is like a free masterclass. lackeysailing.com

For new sailors

Do you know people who are interested in sailing, or maybe have asked you about sailing or about getting started? Sailing can seem dauntingly complicated to a beginner, which is why the American Sailing Association (ASA) has a wealth of outstanding and free resources on its website to help the neophyte. Offerings range from courses to quizzes to instructional videos on the finer points of sailing, such as heaving-to, sail trim, docking, and how to tie knots commonly used on a sailboat. When ready, users can download ASA's incredible Sailing Challenge mobile app and take control of the tiller in one hand, the mainsheet in the other, and set sail on a virtual sea (this app is not free). asa.com/ new-sailor-resources

For boatheads

Whether you're 8 years old or 80, the ubiquitous baseball cap is a fashionable, practical way to add another layer of protection (after sunscreen) to the skin on your face. But when heading out sailing

or heading out to run errands, why wear just any baseball cap when you can wear a *Good Old Boat* baseball cap? These caps are very well made, reasonably priced, washable, and one-size-fits-most. While everyone else and their dog is showing off their



allegiance to a favorite team or sportswear manufacturer, make a bold, attractive statement with a *Good Old Boat* cap. You're a sailor, own it. Go to goodoldboat.com and click Books and Gear.





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Friends Across the Border, Here's to the DIY Gene, and Outboards On Board

Cross-border congeniality

I'm writing regarding the letter in the November issue ("Good Old Trade-Trouble Fallout") from my fellow Canadian George Kuipers. I live on the border and meet up with American sailors all the time. They always want to know what I think of the current political situation in the US. I always reply, "We had a prime minister who asked his dead mother for advice and another who partied with Fidel Castro. Politicians come, politicians go, sometimes it is calm, sometimes there is a storm, but I don't think we could ask for better neighbours." I am renewing my subscription.

-Colin Hulse, Windsor, Ontario

As a Canadian, I understand George Kuipers' frustration with the political situation in the United States and the recent acrimony of the trade negotiations with Canada. But sailors and *Good Old Boat* transcend politics. The sailing community is international. Politics and politicians come and go, but the bond of the sea and the wind and the goodwill that exists between all sailors of all nationalities go on forever. I, too, hope George will reconsider. We're all bigger than politics. And being very Canadian, I want to apologize for Justin Beiber. Just don't send him back.

-Don Davies, Toronto, Ontario

I am a Canadian subscriber and will continue to be. Notwithstanding the current political situation in the United States (which disappoints many of us here in Canada), *Good Old Boat* is the best example in the boating community of the long-term relationship between our two countries. Keep up the good work.

-Barry R. McKee, Burlington, Ontario

Editor's response

Colin, Don, Barry, and all the writers of the letters not published here, thank you for the kind sentiments. As we mentioned in the November issue of *The Dogwatch*, in response to the letter from George, US subscriber and 1976 Pearson 10M sailor William W. Stiles sent us a check for a one-year subscription "for someone in Canada who appreciates a great sailing magazine." Well, we did our due diligence and found a worthy recipient. Peter Cash, a 72-year-old

We're awarding John Rose the prize for submitting a photo of one of the more unusual aids to navigation we've seen in a while. "It's a floating tree farm marking Blind Bay off Shaw Island in the Salish Sea." he wrote. Shaw is one of Washington state's San Juan Islands, and the boat in the background is John's Hinckley Pilot 35, *Dorothy Rose*.



retired Canadian living on a fixed income, relies on one of his three sailing sons to pass on copies of *Good Old Boat*, but the son lives more than an hour away, and his busy schedule makes it hard for them to get together. Peter has owned and sailed a number of boats over the years and adds, "I met my wife on the steps of the yacht club after racing against her in an overnighter. She won in a Viking 33, I tanked in a C&C 27 Mk I." Peter now sails a 19-foot Mariner and a few classic glass-and-wood 14-foot dinghies. Pictured are his wife, Jennifer, and his son's Vivacity 20, *Eventide*.

-Michael Robertson, editor

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"I spent 6 months living aboard *Cassandra*, my 1979 O'Day 25, during a once-in-a-lifetime voyage from New York to the Bahamas and back," wrote Brian McBurney when he sent us this photo looking aft from aboard *Cassandra* as she started down the Virginia portion of the Dismal Swamp Canal. "I met many interesting people along the way who made a very long solo cruise possible."



More on inboard outboards

James Baldwin's articles about repowering a good old sailboat with an outboard motor ("Mounting the Outboard Inboard," parts 1 and 2 in the

September 2018 and November 2018 issues) sparked a thought. While several mid-sized production sailboats were offered in both inboard- and outboard-powered versions, only two that sold in large numbers featured a notched transom for the outboard version: the Ericson 27 and the Cal 29/Cal 2-29. In both cases, the inboard versions sold in much higher numbers than the outboard versions. Many of these inboard versions can be found for sale, often with tired or non-functioning engines. The value of these boats is that the early Ericsons, and all the Cals, used the same deck/ cockpit mold for both the inboard and outboard models. This means that converting to an outboard-powered boat is as simple as cutting out the transom, as was done at the factory. This requires cutting only the hull skin, as the reinforcements, engineered into the builders' original design specs, are already in place.

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-Ed McKeever, Osprey, Florida

All this talk about mounting outboards inboard is all well and good except that it's really not a good idea. No part of an outboard's gas fuel system is rated for belowdecks use. That little red gas tank should be exposed to the atmosphere, strapped down somewhere close by, either on deck or in the cockpit.

-David Neil Seroy, New York, New York



James Baldwin responds

Thanks for the letter, David. My experience tells me that a portable gas tank is just as safe in a vented locker isolated from the boat's interior as it would be sitting on deck. The prop shaft slot in the hull and its sliding cover boards are not airtight, and there is no way for leaking gas or concentrated fumes to get below. Many cruising boats have propane tanks in vented lockers below deck level. This is safe and accepted, yet much less safe than my installation because the propane installation includes a connected gas line that runs through the boat's interior.

-James Baldwin, Good Old Boat contributor

What about electric outboards?

I would like to see an article/review of electric outboards in *Good Old Boat*. How appropriate are they as replacements for gas outboards on old sailboats?

-Dan Denning, Indianapolis, Indiana

Editor's response

We have nothing on the schedule or in the submissions inbox about electric outboards. Are they appropriate replacements for the internal combustion outboard? I can't answer your question definitively, but I can share an observation and personal experience.

I have nothing but the greatest respect for the writing and sailing accomplishments of Webb Chiles. He's currently on his sixth solo circumnavigation, this time aboard Gannet, a 2,000-pound ultra-light-displacement Moore 24. When he left San Diego in 2014, Chiles was using a Torgeedo Travel 1003 electric outboard to drive the Moore 24 into and out of ports. He's now crossed a few oceans and, as far as we know, he is still using it. So, there is that. For five years, I used the same model outboard to drive our Portland Pudgy dinghy. When it worked, I couldn't have been happier, I loved the Torgeedo. It was light, it was quiet, it didn't cover me in grease when I handled it, and there was no smelly gasoline to store aboard. But it was unreliable; nearly every component - shaft, motor, tiller, battery, solar panel - failed over time. Torqeedo honored its warranty (and then some), but that was little consolation when I was sailing in Alaska and had to ship my outboard to Illinois for repair, yet again. I'm a big, eager fan of the coming era of the electric outboard, but I'm sorry to report that my 5-year test was not a net-positive experience. -Michael Robertson, editor



A toast to the self-reliance gene

I just received my new copy of Good Old Boat, along with my new Cruising World (that one will wait!). I normally read aft to forward (don't ask), but today I started with the editor's column ("How Sailors Buck the Service Economy," November 2018) and Michael Robertson nailed it. I have not changed the oil in my car in 20 years, yet I pulled the motor and changed the transmission last winter on my Pearson 35 (and I would never let anyone else touch it, her). I had the pleasure of meeting Michael briefly in Annapolis. Keep up the good work.

-Craig Nielsen, 1972 Pearson 35, Peapod, Middletown, Connecticut

Editor Michael Robertson's November column struck a harmonic chord. Whenever a friend has told me they were a guest on a boating trip, I wondered why I felt that they were missing the essence of being a mariner. Answer: the boat owner has the gene! The guest was just getting a boat ride. The self-sufficiency arts are satisfying and rewarding. I just wish they left more time for sailing!

-Walter Heins, Golden Eagle, Ketchikan, Alaska

Understanding glycols

Drew Frey mentions that one needs good ventilation when heating up his preservative mixture ("A User-Friendly Cockpit Grating," November 2018), as the propylene glycol vapors are "slightly toxic." That might come as a shock to all the people using e-cigarettes, as the medium for vaping solutions is propylene glycol, and is what forms those huge white clouds of mist that vaping creates. Of course, he might have meant ethylene glycol, not propylene glycol, in which case the vapors are indeed toxic.

-Steve Christensen, Ph.D., Dow Chemical (retired), Inver Grove Heights, Minnesota

Drew Frye responds

Thank you, Steve, you're correct. I intended to write ethylene glycol, because the formulation is more effective that way. The warning is then appropriate, because ethylene glycol vapors are toxic.

Why the change to propylene glycol? I was persuaded by a constant stream of sailors conditioned to use only propylene glycol around boats because they have heard the mantra that ethylene glycol is always bad. I felt I was wrong to encourage the use of ethylene glycol, so I relented. Ethylene glycol is toxic to mammals, but not to fish or marine life, so it's no more harmful to the marine environment than propylene glycol. The only cautionary differences are the ventilation requirement when heating ethylene glycol and the obvious need to keep children and pets away from your workspace.

I should have stood my ground and left the formula based on ethylene glycol. I encourage readers to make that substitution. In fact, the only commercial equivalent, Boracol, is based on ethylene glycol. Hallberg-Rassy has always recommended Boracol for maintaining teak decks.

I'll add that sailors' fear of ethylene glycol is a pet peeve of mine. Every winterizing website says something about using either biodegradable propylene glycol or marine-safe propylene glycol instead of ethylene glycol, even though there is absolutely no difference to the environment, to fish, or regarding biodegradability. I have called and challenged state environmental protection sites about this and they respond that they are simply quoting someone else. The EPA and US Department of Wildlife have determined that toxicity to mammals is the only difference between the two chemicals. Still, the myth persists.

Ethylene glycol remains the choice for vehicles because it is a more effective antifreeze and is more compatible with gaskets and soft parts (propylene glycol is hard on neoprene, rubber, and many gasket materials). Paints have mostly been converted to propylene glycol because of customer concerns about indoor air and because occasionally someone decides to drink paint (in a former life I supplied ethylene glycol to several national paint companies).

> -Drew Frye, Good Old Boat contributor continued on page 54



We love to hear from our readers! Send letters to the editor to michael_r@goodoldboat.com. We publish additional letters in our monthly newsletter, The Dogwatch, along with new articles and book reviews. If you don't receive The Dogwatch via email, send your name and email address to Brenda (brenda@ goodoldboat.com).

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BY BARRY PICKTHALL

Organizers of the Golden Globe Race 2018 approved only a short list of seaworthy production sailboats to compete in this solo nonstop around-the-world race. This list included the Westsail 32, Tradewind 35, Vancouver 32/34, Baba 35, Cape Dory 36, Rustler 36, Hans Christian 33T, and Lello 34. All of the 17 sailors who started the race worked hard to ensure their boats were ready to withstand the months of punishment that the Southern Ocean was sure to inflict. Here we take a close look at some of the pre-race modifications made by a couple of sailors, so we can learn where they thought their production sailboats were most vulnerable.



Mark Sinclair's choice for the solo nonstop race around the world

his retro race could not have come at a better time," says Mark Sinclair about the Golden Globe Race 2018. "When I first read about it, I was exploring remote areas of Australia's coastline in my S&S 41, Starwave, often singlehanded." Within seven days of first hearing about the race, Mark had mailed in his entry, sold Starwave, and purchased the Lello 34, Coconut, for \$20,000 (\$26,000). "I'd watched a YouTube video of Coconut sailing in the Roaring Forties from South Africa to Adelaide," he says, "and I was so impressed I didn't look elsewhere."

The Lello 34 is a traditional longkeeled fiberglass ocean cruiser/racer designed by South African Bryan Lello for cruising in the challenging conditions around the Cape of Good Hope and with the first Cape to Rio race in mind. This heavily built, narrow-gutted design displaces more than 7 tons in load condition, and with one of the highest sail area/displacement ratios in the GGR fleet, is clearly performance-oriented. Several hundred were built between 1966 and 1985. Early versions had a plywood deck and coachroof, but *Coconut*, built in 1981, is all fiberglass. Many have been cruised to all corners of the world.

But it's one thing for a production sailboat to have a record of successfully completing long passages, another for it to sail non-stop around the planet — an endurance test like no other. Like the rest of the aged production sailboats competing in this race, *Coconut* would require well-thought-out modifications to ensure she is prepared to withstand the rigors of time and sea.

coconu

Mark is a recycler at heart and set about stripping *Coconut* with the aim of reusing as much of her gear and equipment as possible. He rebuilt her original Barlow winches, V-twin Farymann 22-horsepower diesel engine, mast, rudder, and Aries self-steering. Although he retained the original mahogany furniture, he removed the interior to fit new bulkheads. He also

Mark Sinclair and *Coconut* breeze through the GGR photo gate in the Canary Islands, main picture. Mark is always smiling.



installed a smaller watertight deck hatch above the forepeak and replaced all the rigging, chainplates, sails, electrics, and safety equipment.

Hull and deck

Coconut's hull and deck moldings were sound, but Mark was concerned about the power of green water. (Fifty years ago, the weight of water shifted the entire cabin trunk of Robin Knox-Johnston's *Suhaili*). He set about reinforcing the hull-to-deck joint, and strengthened the coachroof with three sets of hanging knees. To protect the companionway hatch and provide some shelter for himself, he built a substantial doghouse over the aft end of the coachroof. The doghouse carries three solar panels, and two more are sited on the coachroof.

He glassed a plywood crash bulkhead into the forepeak, and a watertight main bulkhead beneath the mast fitted with an aluminum watertight door to close off the forward quarters. That the head remains just forward of the bulkhead is purely coincidental. He also replaced the compression post beneath the mast.

Mark retained the original mahogany furniture in the saloon, but modified the upper sections to carry storage boxes on the port side, and bookcases

Mark fitted stainless steel plates with integral fairleads, cleats, and stanchion bases on each quarter, at right, and installed stainless steel rails around the deck to provide greater safety, far right.





and a bank of batteries to starboard, to reduce the risk of their being flooded.

Mark originally positioned his life raft on deck, forward of the mast, but later built a wooden shelf for it in the after part of the cockpit. In this, he followed the lead of other entrants who adapted space within a cockpit locker following the experience of Australian Shane Freeman, who abandoned his Tradewind 35 after it was capsized and dismasted west of Cape Horn while en route to the start of the race. The broken mast damaged the life raft casing, leaving Freeman unsure that the raft would still inflate. He cited this



Mark remodeled the forward end of the coachroof so he could replace the original hatch with a smaller and more watertight square one, far left. He also sealed off

the forepeak with a watertight bulkhead, above. To protect the companionway hatch and give him some shelter while working on deck, he added a doghouse, at left. It has handholds all around and provides a good location for solar panels.

as one of the reasons he chose to seek rescue from a passing ship and abandon the boat.

Mark had some stainless steel cleats (king posts) and solid fairleads fabricated. These encase the stern quarters and protect them from damage. To make a stronger enclosure around the deck perimeter, Mark replaced *Coconut*'s upper lifelines with a stainless steel tubular rail connecting the pulpit and pushpit.





Mark rebuilt the rudder with a new stock but reused the original internal support web, at left. The rudder has a foam core and a fiberglass skin. He had a new halyard sheave box, designed to minimize chafe, fitted to the masthead, at right.

Rudder and self-steering

Mark found on close inspection that *Coconut*'s rudder was in bad shape. Particularly troubling were cracks in the welds between the stock and the framework that supports the blade. He replaced the stock but had the original framework welded to it. Then, using one of the original sides as a base, he filled the interior space with high-density foam as a core and encapsulated the entire rudder with fiberglass. He has also made a novel emergency rudder that deploys inside the windvane. Two fiberglass cheeks have gudgeons that slip over a pintle bolted to the stern in a cassette-type arrangement. Into that, Mark inserts a daggerboard rudder foil, which is then held in place with three "nutcracker" screws on one side. A 2-meter-long emergency tiller bolts into the top of the cassette.

Ever keen to recycle, Mark has retained *Coconut*'s original Aries



Coconut's original Aries windvane self-steering. He returned it to the factory in the Netherlands, where it was identified as being at least 40 years old, so it may well have been secondhand when installed on *Coconut*. It has been around the world at least once, but the aluminum components and stainless steel framework were





Mark kept the original mast but stiffened it by going from single to double spreaders, at left. He fitted new chainplates and a new mast step with multiple sheave boxes, upper left, which he used to lead halyards and other sail-control lines aft to the doghouse, above, so he can manage the boat from within the cockpit. sound, so Aries simply replaced the bearings, control lines, and blocks and pronounced it all "as good as new."

Mast

Mark retained *Coconut*'s original mast extrusion after an examination showed it to be sound, but he has modified and strengthened it. He changed the single-spreader configuration to one with double spreaders and stiffened the mast's sidewalls with riveted-on strips cut from an old mast.

He had new halyard sheave boxes made for the top of the mast and the base of the mast, and fitted a new gooseneck and a staysail sheave box. He replaced the shroud tangs on the mast and bolted much stronger chainplates to the outside of the hull.

All the halyards and control lines now exit from the bottom of the mast and lead aft to winches and clutch stoppers sited inside the doghouse, where Mark can tend them without leaving the relative safety of the cockpit.

The final job was to rivet aluminum steps up both sides of the mast to facilitate going aloft to inspect halyards and rigging for chafe and damage.

Winches

The Barlow winches were in poor condition. The pawl housings had cracked and were so badly worn that the pawls often fell out and jammed the gears. The drums were fine, so rather than replace the winches, Mark had his local motorcycle engineering shop produce new pawl housings from a better grade of bronze. They are splined to bind onto the original stainless steel shafts. The shop also produced spares for him to carry on the GGR and plenty



The pawl housings in the original Barlow winches were badly corroded and worn, so Mark had new ones made, at left, as well as a good supply of pawls. Mark thought the two-cylinder Farymann diesel, at right, was too good to throw away, so he had it rebuilt.

of pawl springs, which Mark has found have a tendency to go "peow" and fire off into inaccessible places or straight over the side when he disassembles a winch for service.

Engine

The Farymann 22-horsepower diesel engine had clearly seen huge use over the years, but rather than replace it, Mark chose to have it rebuilt. Because of a hole in the cylinder head and badly pitted valves, the top end of the engine had to be rebuilt, and with new piston rings, valve seats, alternator, and water pump the engine performs like new.

"The Farymann is a great piece of German engineering — some would say over-engineered," says Mark. "Now, she starts first time, runs beautifully, and should be good for another 35 years." The engine is mandatory safety equipment in the GGR, but after he motors out to the start line, Mark says it won't be in gear again unless the proverbial hits the fan.

Under the GGR rules, competitors can use their engines in gear during the race, but are limited to carrying 40 gallons of fuel, so they have to balance motoring in periods of calm with the need to recharge batteries.

To reduce drag when sailing, Mark replaced *Coconut*'s original three-blade prop with a folding prop.

Navigation

The GGR sailors are restricted to using traditional navigation tools — sextant, chronometer, paper charts — and writing up their logs by hand. The golden rule is simple: if Robin Knox-Johnston couldn't have it on *Suhaili* in 1968, then it is not allowed.

That cuts out electronic self-steering, GPS plotters, and anything digital, including calculators, chronometers, computers, and even iPods. "I was brought up in the Navy relying on a sextant and logarithm tables, so I'm quite happy with this," says Mark.

Indeed, in keeping with this traditional culture, he has armed himself with two classic timepieces: a 1946 Hamilton 48-hour deck watch and a 1904-vintage Waltham eight-day chronometer. "I had both disassembled and serviced by a watchmaker in Adelaide, who cleaned all the small parts, removed the old mineral oils that tend to thicken and harden over time, and reseated everything in a modern synthetic oil that remains just as viscous in cold weather. Both have been carefully calibrated, and now the Waltham is running just 1.5 seconds fast per day and the Hamilton gains 3 seconds a day, which is easy to account for." \varDelta

Barry Pickthall is the former yachting correspondent for Britain's The Times and Sunday Times newspapers. A lifelong sailor, he trained as a boatbuilder and naval architect before turning to writing about the sport he loves. Barry lives in the UK and owns a classic wooden Rhodes 6 tonner, built in 1965, which he has faithfully restored to her original state. As a teenager, he was an avid follower of the Sunday Times Golden Globe Race, and has been instrumental in setting up the current GGR 2018 celebrating the 50th anniversary of Sir Robin Knox-Johnston's victory and achievement in becoming the first to sail solo nonstop around the world.



| Designer | | Bryan Lello |
|--------------|------------|-------------------|
| Builder | Henry V | ink Boat Builders |
| | | Pty Ltd (SA) |
| LOA: | | 34' 1" |
| LWL: | | 24' 0" |
| Beam: | | 9' 4" |
| Draft | | 5' 7" |
| Displaceme | ent: | 13,693 lb |
| Sail area: | | 470 sq ft |
| Ballast: | | 6,000 lb |
| Disp./LWL ı | ratio: | 442 |
| Sail area/di | sp. ratio: | 13.1 |
| | | |



Tools of the GGR Navigator

PHOTO BY MARK SINCLAIR, PPL, AND GGR





HOTO BY MARK SINCLAIR, PPL, AND GGR





The Golden Globe Race only permits the use of technology that was available in the 1960s. Clockwise from top left: Mark Sinclair's 1946 48-hour Hamilton deck watch; Mark using his sextant; Istvan Kopar's timepiece, a Wempe chronometer; Istvan's plastic sextant; Mark's 1904 Waltham chronometer.



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Tradewind 35

Istvan Kopar's choice for the solo nonstop race around the world

BY FIONA MCGLYNN

hen he heard about the Golden Globe Race 2018 (see "Sailing Back in Time," July 2018), Istvan Kopar had just turned 60. He signed up immediately because, despite his having two circumnavigations under his belt, going solo and nonstop remained on his bucket list. Adding to its allure, the Golden Globe Race (GGR) was not only a solo nonstop race, it had a twist that appealed to Istvan's old-fashioned aesthetic: racers would be limited to sailing boats designed before 1982 and using only technology that existed in 1968 - no GPS, watermakers, satellite communications, or a host of other accessories and innovations sailors take for granted today.

To secure his entry, and to get a head start on preparing for the race, Istvan needed a boat. He settled on a Tradewind 35, because it was among the first of the few boats approved by the organizers of the GGR and there was one for sale at the right price just three and a half hours from the boatyard where he planned to do his refit. Designed in the early 1970s by UK boatbuilder and designer John Rock, the Tradewind 35 is not widely known in the US, and seems an unlikely choice of boat for an American. Yet it has a familiar

look to it, perhaps because it is typical of its time, with long overhangs and a full keel with the rudder attached. About 70 are estimated to have been built, first in the UK and later in the Netherlands.

Weighing in at 19,442 pounds, the Tradewind 35 has a displacement/ length ratio of 504, which is high even for boats of its type and era. In a race that prioritizes survival over speed, Istvan reasoned that a heavier boat might prove to be an advantage. It will be speedy in anything over 20 knots of wind, and the sail area/displacement ratio of 16.0 indicates that it has adequate sail power for lighter winds.

But a production sailboat, however stout and heavy — especially one that rolled off the line more than three decades ago — isn't necessarily ready to sail around the world nonstop. And this particular boat, *Puffin*, didn't seem destined to spend her golden years being raced through the Southern

Istvan Kopar's *Puffin* shows a good turn of speed, main picture. In this shot, above, taken at the Canary Islands photo gate, Istvan looks as though he's on a daysail.



Istvan fitted side-by-side inner forestays so in following winds he can set a pair of staysails wing and wing, at left. He keeps his trysail in the blue sock aft of the mast, at right. Next to the mast are granny bars he can use to brace himself when tending the halyards.

Ocean by a bombastic Hungarian-born Floridian. She was accustomed to sun-soaked weekend-afternoon sails on placid Lake Champlain. Istvan had work to do.

Three years on, *Puffin*, docked at the Golden Globe Race village in Les Sables D'Olonne, France, was unrecognizable from her former self. She was now a glossy orange good old racing machine, the number 37 emblazoned in white on her sides. She cut a fine figure; only her lines belying her age. She has just the slightest tumblehome paunch, perhaps a vestige of her former sundowner days.

The grand tour

A week before the start, Istvan greeted me with a vigorous handshake as he invited me aboard for a tour of *Puffin*'s transformation, which had consumed the previous three years of his life and finances. (Just one year prior, race officials documenting racers' preparations wrote this about Istvan: "He has removed his wristwatch, not just because it is an obstacle at times, but to stop himself from checking off the days like minutes. There is just one year to the start, and *Puffin* is still half-naked.") We started at the bow.

"I added reinforcement at the lower section of the bowsprit," Istvan said. Upon buying the boat he noticed that freezing water had opened up the bowsprit's stainless steel tubing. "I realized the tubing was light and needed reinforcement. We made a new bobstay with larger-sized wire and a turnbuckle to match, then replaced the chainplate, so everything got beefed up."

We stepped aft a few paces and Istvan conspiratorially showed me what he termed a "*Puffin* special feature." Before me were two inner forestays, side by side. "This is unique, you won't see this on any of the other raceboats," he said. "This setup worked very well for me on my first solo circumnavigation, as it allowed me to hoist two identical sails wing and wing, a kind of butterfly setup. The other benefit is that it allows me to put my storm jib in standby mode."

Istvan hurried me over to the mast. "I may also be the only boat in the fleet who kept all the control lines around the mast."

Recognizing this as one of the great philosophical debates in sailing, and certainly in this race, I asked Istvan to explain his choice. "I firmly believe that when lines are led to the cockpit there's a greater chance that they will get tangled someplace," he said. "On the other hand, this is far more demanding; I need to dress up every time I leave the shelter of the dodger. If everything works fine and their lines



An aluminum knee supports the deck where it had been compressed by the mast, above. Tie rods connect the chainplates to the hull structure, at right.



Istvan still smiles, despite the orange paint with which he had to disfigure the deck. The new traveler is visible in this view.

stay untangled, those guys [who led their lines aft] will have an advantage. But in my experience, lines and blocks do become tangled and that creates more problems."

Istvan pointed to an orange sail wrapped in a blue sock at the base of his new Selden mast. "I always keep the trysail here, always on standby. At one of the boat shows I was given this demo spinnaker sock, so I just hid my trysail in this sock. The big benefit is that I can tie it to the handrail and it's not in my way."

Showing me one of *Puffin*'s hatches, Istvan said, "I was planning to replace the glass on all the hatches, but the budget didn't allow me to do that. Because seamanship is anticipation, preparing for the worst, I cut canvas covers the same size as the hatches to use to stem water ingress should the glass break. It's a temporary solution, but at least I'll avoid a sinking situation."

A pained expression passed across Istvan's face as he regarded the cabintop. "I painted *Puffin*'s hull safetyorange, figuring that would satisfy the race rule that there be 2 square meters



of orange on deck. But they were very clear that I wasn't exempted, no way. So," he said, pointing at the swath of orange paint on *Puffin*'s cabintop, "yesterday we did this. It was like butchering, very quick. Unfortunately, we made *Puffin* ugly."

From the cockpit, Istvan showed me how he'd moved the traveler track from forward of the helm to forward of the dodger. Where the traveler had been, he added a large locker for additional propane storage. This made the cockpit well smaller and, with the addition of two cockpit drains, better able to drain quickly in the event of a pooping or a knockdown. (I could appreciate this change, as I had sailed with Kevin Farebrother, another competitor, from Falmouth to Les Sables d'Olonne on his Tradewind 35. Although I enjoyed the comfort of the roomier cockpit, it drained slowly, and I had a cold footbath for the duration of our three-day passage.)

Istvan highlighted the importance of the line bags he'd added. "I put a couple of bags here because the lines, in heavy weather, they have the tendency to leave the cockpit." He also installed a new Lexan companionway dropboard, because he wants to see what's happening outside when he's below, and fitted several attachment points around the cockpit for his safety tether.

Istvan then showed me something that wasn't new. "This compass is a unique piece," he told me with obvious pride. "It was aboard *Salammbo*, the boat on which I made my first solo circumnavigation. I sailed 60,000 miles with this compass. It's an old friend." Istvan was referring to his 1990-91 solo one-stop circumnavigation in his self-built 31-footer, which he accomplished without GPS, autopilot, radar, watermaker, or a heating device.

Acknowledging he's not the same sailor he was in 1990, Istvan has outfitted *Puffin* with what he





Line bags keep order in the cockpit, at left. The new companionway dropboards include a clear one so Istvan can monitor the cockpit from belowdecks, above.



A grabrail on the dodger gives Istvan much-needed support, far left. As for lighting below, he is really old-fashioed and likes oil lamps, at left.

affectionately termed "age-related aids." "I am seemingly an old guy, 65. It's not a secret, so I need a granny bar," he said, pointing to the mast pulpit he'd use for support while reefing. He'd also welded a grab bar to his dodger frame and fitted stainless steel handrails to the cabintop. "The unique thing with those handrails is that they have their interior counterparts that I can grab when I am inside."



Structural reinforcements

With no complex electronics to install, Istvan focused on refining and strengthening *Puffin*'s systems. Down below, he showed me what he did for her chainplates. "The original chainplates were deck-mounted, with only a backing plate under the deck, nothing else," he said. "So I created this to distribute the load from the shrouds." He showed me

a cable that ties the underside of the backing plate to a point on the bulkhead where it meets the hull.

Istvan then directed me toward the head to inspect the compression post beneath the deck-stepped mast. During the refit, when the old mast had been taken out, Istvan removed the head door. "The race organizer was very stubborn that I had to reinstall the door, which is nonsense for a solo sailor. Who needs the privacy? But it turns out that this was a lifesaver for me. When I put the door back on, after a sea trial I couldn't close it. That's how I noticed that the deck was compressed forward of the mast." Istvan's solution is a custom aluminum bracket that ties an area just forward of the mast (the head doorframe) to the compression post. "Installing it took me four days of constant cursing."

Accommodations

Istvan is not one to do things by half measures, so when it came to his living space, rather than use LED lights (which are one of the few anachronistic race-approved items) he stuck to his retro sensibilities. He pointed to his oil lamps. "I'm an old-fashioned guy. I have old-fashioned lighting." The galley was what you might expect: a two-burner stove (he'd removed the oven) and a freshwater foot pump (he'd added a tank to give him 100 gallons of capacity). But he was most excited to show me a custom shelf a friend in Canada had built that could be transformed into a chart table. "So I clear my stovetop, fold this down, and create a really big table for serious chart work," he said, while flipping open the contraption to demonstrate. "You see, everything is for practicality."

Affixed to a bulkhead, smack-dab in the middle of the saloon, was a latched wooden box. From it, Istvan retrieved a plastic sextant. "A sextant is fragile, and you don't want to damage it before you finish," he said. Stowed nearby was another box that houses a beautiful Wempe chronometer (electronic watches are prohibited in the GGR). "This is really something," Istvan said, leaning back to admire it. "If I am lucky enough to finish the race, we'll auction it off for a really good charity."

At the forward bulkhead, Istvan showed me his stowable workshop. "It's a unique workbench with two working vises. The beauty of this thing is that I can just remove the securing pins and relocate it, including to the cockpit."



Istvan can set up his portable workbench where he needs it, including in the cockpit.







Performance under way

I asked Istvan how he thought *Puffin* would fare against the other boats. "There is no handicap in this race," he said. "While the Tradewind is a good solid design, it's a very beamy boat. *Puffin* is a very telling name because her shape is like a little puffin! The Rustler 36 [six of them started in the race] will probably beat me in a light and moderate breeze. My only hope is to catch up in heavy weather."

When sailing with Kevin Farebrother (unfortunately, Kevin retired early in the race), I found the Tradewind 35 tracked well, and it responded quickly when an overly eager GGR fan, keen to take photos, came within a couple of feet of hitting us. When the winds picked up, the boat seemed to sit back and dig in, easily plowing through the choppy waters of the English Channel. Her heavy displacement and broad beam allowed for a capacious cockpit and plenty of headroom below, important comforts for a sailor expecting to spend 250 or more days at sea.

Conclusion

Unlike boats used in modern races such as the Vendée Globe, where competitive entries cost \$10 to \$15 million, the GGR designs can be picked up for bargain-basement prices. On Yachtworld.com, at the time of this



A friend built a folding shelf that, when extended, covers the galley stove and adjacent furniture to give Istvan a large flat surface on which he can lay out a paper chart, the only kind permitted in the GGR.

writing, three Tradewind 35s were listed from \$47,000 to \$67,000, four Rustler 36s from \$79,000 to \$121,000, and a Biscay 36 for \$47,000. Any one of these vessels would make a nice GGR 2018 souvenir (though you'd have to travel to the UK to get one). However, anyone wanting to race in the GGR 2022 would be looking at spending \$100,000 to \$300,000 on improvements.

Istvan estimates that, sponsorships aside, he's invested \$100,000 or more of his own money and more than 2,000 man-hours preparing *Puffin* for the Golden Globe Race. \varDelta

Fiona McGlynn, a Good Old Boat contributing editor, recently cruised from Canada to Australia. This past summer, she was at the start line in France, reporting on the 2018 Golden Globe Race. Fiona also runs WaterborneMag.com, a site dedicated to millennial sailing culture.

Resources

Read more about Istvan Kopar's outfitting of *Puffin* at koparsailing.com. Follow his and his competitors' progress in the GGR at the Golden

progress in the GGR at the Golde Globe Race 2018 website, goldengloberace.com.



| Designer: | John Rock |
|-----------------------|-----------|
| LOA | 35' 0" |
| LWL | 25' 10" |
| Beam | 10' 6" |
| Draft | 5' 6" |
| Displacement | 19,442 lb |
| Ballast | 8,287 lb |
| Sail area | 725 sq ft |
| Disp/LWL ratio | 504 |
| Sail area/disp. ratio | 16.0 |
| Ballast/disp. ratio | .43 |



Coping with A dehumidifier keeps a cabin dry and free from mold **Cold-Climate** Condensation **BY WALTER HEINS**

y friend Don Smith and I live and keep our boats in Alaska. To control moisture aboard, and its negative side effects, mildew and corrosion, each of us operates a small electric dehumidifier in our boat's cabin. In the Seward climate where Don keeps Gimme *Shelter*, winter temperatures can drop below 0°F. About 300 miles south, in the warmer but rainier Ketchikan climate where I keep Golden Eagle, my Passport 40, winter temperatures can drop to about 15°F, but are normally in the 30-degree range. Both harbors are ice-free, so we both keep our boats afloat in their slips year-round.

Don asked me whether his cabin dehumidifier was doing any good when operating in winter. He noted that, with his cabin at 40°F, it produced very little water, yet at 65°F it was dehumidifying nicely. The short answer to Don's question is that humidity is dynamic and, yes, there are benefits to operating a dehumidifier continuously. But to understand the answer fully, some knowledge of dehumidifiers and psychrometrics — the study of the heat and water content of air - is necessary. Dehumidifier performance is intertwined with this science.

Psychrometrics

Water vapor is held in air; we call this humidity, and express it in absolute and relative terms. The absolute humidity of a sample of air is the actual amount of water it holds, measured in grams of water per cubic meter of air. That same sample of air at any temperature has the same absolute humidity. Relative



humidity (RH) is the amount of water vapor in the air compared to the maximum it could hold at that temperature according to the laws of nature.

Air's ability to hold vaporous water is governed by the ratio of water-vapor pressure to atmospheric pressure: the lower the temperature of water, the lower its vapor pressure, so the cooler the air, the less its ability to hold moisture. As air cools, the water it contains might approach the maximum — 100 percent — it can hold. This is 100 percent RH. That same air at a warmer temperature could be 50 percent RH or even less. An interesting fact is that the vapor pressure

of frozen water is almost zero, so the absolute humidity of air below 32°F is almost zero, yet the tiniest amount of vapor will raise the RH to 100 percent.

When an air/water-vapor mixture cools below the 100 percent RH point, it is no longer in balance, so some water must condense, becoming liquid. This happens to moist, warm breath exhaled on a cold day, to air when it touches an iced-tea glass, and to air in a

A dehumidifier will control condensation in a cool climate. Elevating it assures it will have free circulation of the warmest air in the cabin. It should be secured so it can't move, tip, or fall, at top.



dehumidifier. The temperature at which condensation starts, the 100 percent RH point, is called the dew point, or saturation point.

Without a dehumidifier

As the air in a boat's cabin warms on a sunny day, available water begins to evaporate, raising the absolute humidity while the RH goes down. As evaporation slows in the cool night air, absolute humidity remains stable, but the cooling air's ability to hold vapor falls, so the RH rises. If the RH reaches the 100 percent point, any further cooling of the air results in condensation. As normal circulation brings air in contact with the cooler surfaces of portlights, deck hatches, and the inside of the hull, the moisture condenses onto them. This condensation promotes mildew, rot, and corrosion - it's what we seek to avoid.

The role of the dehumidifier

On the warm, sunny day, newly evaporated water raises the absolute humidity in the cabin. Air drawn over the dehumidifier's cold coil cools until its water vapor drops below the dew point. This vapor must condense. The crucial factor here is for the coil temperature to be cool enough for condensation yet not so cold that it frosts up. When the coil temperature at, say, 37°F equals the



To conduct air from the dehumidifier to the chain locker, Walter connected 4-inch plastic dryer vent duct loosely to the dehumidifier's air discharge, above. Obstructing the air flow will severely limit a dehumidifier's performance, but he found that placing about half of the duct in the airstream allowed enough airflow to serve his purpose. A homemade wire clip holds the duct loosely in front of the discharge grille, at left, where it's further supported by a tape harness made by wrapping 1-inch duct tape in place, sticky side out, then covering the adhesive with 1-inch blue painter's tape.

Walter found that ample air flows through the 4-inch dryer duct as long as there are no sharp bends between the dehumidifier and the chain locker.

A service hole under the head conveniently connects with the chain locker. Walter set the vent duct against the round side of the hole and closed the remainder of the hole with plastic sheeting secured with removable painter's tape, at right.

entering air temperature, no condensation occurs. The dehumidifier and the air can be said to be in *equilibrium*.

The dehumidified cabin

In my boat, small amounts of moisture are forever invading the cabin: there is atmospheric moisture on a rainy day and liquid water in the bilge and from leaks via the deck, portlights, or hatches. On a warmer day, absolute humidity in the cabin rises due to evaporation of the invasive water, *but*, because the air is warmer, it is no longer



in equilibrium with the dehumidifier and new moisture is removed as fast as it is added. As the air cools at night, circulated vapor in the air does not condense on the portlights or on the hull in the chain locker. It is therefore unimportant that dehumidification ceases on a cool night; the air is kept dry in absolute terms, so vapor seldom condenses on the cold surfaces of the boat.

Demystifying the dehumidifier

The dehumidifier's refrigeration cycle creates a cold coil and a warm coil. It draws the same air over both coils, first dehumidifying, then reheating it. Since efficiency is not perfect, the air actually leaves slightly warmed.

The dehumidifier's internal controls read two factors: relative humidity in the air and head pressure in the refrigeration tubing. If the RH is higher than the RH setpoint, the refrigeration compressor starts. But if it is too cold, the head pressure will be too low and the compressor will shut off to protect itself from damage (refrigeration slugging). That temperature is probably about 35° to 40°F. A sophisticated dehumidifier would have a very cold coil and a defrost cycle. Then the air could be dried to a sub-cooled dew point, say, 0°F, without frosting the coil.

Different brands of dehumidifiers differ on the head-pressure shutoff point, but given that the cool air has only a small amount of moisture to begin with, the temperature range probably makes little difference. Warming its entering air will enhance the dehumidifier's performance slightly. That could be done by heating the cabin where it's located and ducting the dried air throughout the boat. I do this with an air duct to my chain locker.

When the dehumidifier fan is set to "continuous," air is circulating 24/7, while the refrigeration compressor starts and stops on its internal controls.





Setting the humidistat is a matter of personal preference. In my colder climate, condensation on the hull sides and portlights can be troublesome, so I set it to "maximum." Thus, whenever the temperature warms enough to let the dehumidifier compressor run, I remove as much moisture as possible. In cases where interior condensation is not an issue, 50 percent RH might be adequate. At a utility rate of about \$0.10/kWh, my dehumidifier costs about \$20 per month to run in winter, and slightly higher in spring and fall when it is warmer.

Small refrigerated dehumidifiers are available from most hardware and appliance stores for less than \$200. They are rated in pints of water removed per day or as suitable for a The chain locker is behind the head, and its louvered doors allow the ventilation air to circulate back into the cabin and to the dehumidifier. This continuous trickle of air keeps the locker and its contents dry all winter, eliminates odors caused by mold, and minimizes corrosion of the windlass base and electrical connections.



room of so many square feet. Neither rating is particularly enlightening, as they are developed under laboratory conditions, and the square-foot rating would be for a house. The smallest dehumidifier available is sufficient for my Passport 40.



Walter connected ⁵/₈-inch vinyl tubing to a barbed fitting inside the dehumidifier that permits the condensate to be drained continuously via a hose. He adapted a garden-hose fitting to the other end to allow a hose to be easily attached and removed, at left.

The hose takes the condensate to the bilge, where it accumulates until the automatic bilge pump discharges it overboard, at right.



Dynamic humidity

I have watched the RH in my cabin double just by my taking a shower or boiling a pot on the stove. This illustrates that moisture content is very dynamic, and I believe it is worth it to run the dehumidifier continuously to clip the humidity spikes that occur on warm afternoons. There is a heating benefit too. All the energy that goes into the machine eventually becomes heat. Therefore, when the compressor is running it releases about 350 watts of heat into the air. When only the fan is running, it releases about 50 watts, so it's essentially a small heater. In Ketchikan, I seldom need additional heat to keep the cabin above 40°F. although I do have a space heater set at 40°F just for security.

Coping with condensate

The byproduct of a dehumidifier is water condensate (this is clean distilled water). The dripping water may be collected in the integral bucket and emptied manually or allowed to funnel into a hose to drain continuously to a convenient location. Condensate disposal solutions include draining to the bilge for pump-out and draining



to a sink with a discharge above the waterline. I would not recommend keeping a seacock below the waterline open just for draining a dehumidifier.

During our non-boating season, approximately from October to April, I run my dehumidifier continuously. In other seasons, I run the dehumidifier, as convenience allows, whenever I'm not on board. Using the dehumidifier

Humidity Control in the Tropics

actively dries my anchor rode between uses. I enjoy the fresh air that greets me on my return to the boat, instead of that "funky boat smell" it used to have.

Operating a dehumidifier in a boat's cabin will reduce corrosion, rot, and odors associated with moisture. It can be effective in most climates, provided the cabin temperature is above 40° F at least part of the day.

Walter Heins was a mechanical engineer in the heating, ventilation, and cooling (HVAC) industry for more than 30 years. His infatuation with sailing began at Boy Scout camp on Lake Pepin, Minnesota, and was furthered when he crewed a 41-foot Coronado from Hawaii to San Diego about five years later. After a 30-year break for kids and career, he bought his first boat, a Lapworth 36. In 2009, he upgraded to Golden Eagle, the Passport 40 he now keeps and sails in Southeast Alaska.

-WH

In the tropics, and in other hot and humid regions, it seems that keeping a boat well ventilated is the best way to minimize the problems of mold and corrosion. In such a climate, a boat wouldn't have cold interior surfaces for water to condense on, so the dynamic humidity cycle (condense/evaporate/condense...) wouldn't occur.

A dehumidifier would work throughout the day and night to keep the cabin at, say, 50 percent RH, a level that does not generally support mold and mildew growth. However, the constant onslaught of ambient air infiltrating through any opening, such as ports, vents, and door gaps, could raise the operating cost. The dehumidifier's fan would aid in the circulation via ducting, as I demonstrated on my boat in its northern climate.

I am not a microbiologist so I can't say what air circulation does to spoor planting and growth. However, I imagine that if circulation were closed off, errant moisture would accumulate in the cabin, humidity would rise to nearly 100 percent, and spoors could find adequate growing conditions. Then, once one spoor matured, an explosion of spoors would overwhelm the small, closed cabin.

Mildew Be Gone!

BY DREW FRYE

s near as I can tell, boating consists of one part blue lagoons and white sails and two parts painting the bottom, fixing engines, and scrubbing mildew. While I can't change the overall reality, I don't scrub mildew anymore. How about them apples?

More than a decade ago, while researching borate-based wood preservatives (see "A User-Friendly Cockpit Grating," November 2018), I took a slight detour into mildew cleaners and preventatives. Our then new-to-us house was a good value in a very popular neighborhood. The backyard was heavily wooded, with 100-year-old oaks and mountain laurel ... and the basement had a nasty habit of flooding every few years, bringing with it mud and mildew. At the time of one particularly bad flood, I had a severe flare-up of back spasms, which confined me to bed. I was unable to tackle cleaning the carpets for nearly two weeks and by that time the carpet was a smelly multi-colored science project. But as a 30-year chemical engineer (at the time), I dug into what I knew about





Armed with a spray bottle of Formula B, a scrub brush, and an upholstery vacuum extractor, Drew attacked the mildewed carpet hull liner, at top. That area remained mildew-free after 80 months. Before treatment, this area of carpeting, at left, was covered with black mildew spots. Six months after treatment, it was still free of mildew, at right.

simple chemical brew chemistry, and dormant state. Mildew needs some-

Banish the black bane with a

microbes and cleaning chemistry, and came up with what turned out to be a novel and brutally effective weapon against the scourge of boat stink and black spots.

Mildew requires specific factors to flourish. Dark is nice, but it need not be total, just screened of strong ultra-violet light (UV). Free water or accessible absorbed water is required, but it doesn't need to be continuous, as it easily survives the dry times in a dormant state. Mildew needs something to eat, but it doesn't take much. Synthetic fabrics don't provide food, but soils do, and ironically, so do the residues of many cleaners and soaps, most of which are based on fatty acids or organic chemicals that mildew finds delicious. A surface pH in a livable range (neutral to slightly acidic) is vital. On deck, we can find mildew in shady corners and under lines. In the cabin, it invades our bedding, lockers, and perhaps most annoyingly, carpet head and hull liners.

Keep the boat dry

Moisture is a key requirement for mildew growth, so the first line of defense is to keep the boat dry. That's a challenge, but boats respond well to a systematic approach.

Leaks –Most of my boating mildew experience comes from minor hatch leaks. The carpet liner gets just a few drops now and then — not enough to be noticed, but enough to irrigate the crop. One new-to-me boat suffered from multiple deck leaks. I rebedded the deck hardware and was confident I knew just the chemistry to set right the interior, which looked like a Jackson Pollock painting.

Bilge –Can you keep the bilge dry? Failing that, can you vent the inevitable moisture to the outside instead of up through the cabin? In winter, it is generally sufficient to simply seal off the bilge. Nothing can grow in the cold, and there is practically no water vapor in the air at near-freezing temperatures.

Ventilation –Some people swear that more ventilation solves everything. Why then, on a freakishly warm and sunny mid-winter's day, are the sidewalks and streets soaking wet, as though it rained overnight? The answer is condensation. The ground is still frozen and the air is 60 degrees and loaded with water. In stable weather conditions, a good flow of air is proof against condensation, but a boat that's kept in the water or gets snow on the deck is going to collect some damp.

Dehumidify –If all else fails, run a small dehumidifier. Over the past 10 years, we've been happy with the Peltier-effect (aka thermoelectriceffect) type of dehumidifier. Because it uses a thermopile instead of a compressor, the only moving part is a fan, as opposed to compressor-driven dehumidifiers, which are regulated to turn off below about 55°F to prevent icing. All that is required is a defrost cycle, easily provided by using a timer or day/night lamp controller. It can safely operate at sub-freezing temperatures, and freezing solid will not harm it. A dehumidifier is most efficient at night, when humidity is highest. The greenhouse effect often warms the cabin above freezing during the day.

Peltier-effect dehumidifiers are quiet, typically rated at only a few quarts per day, and use very little power, reducing the risk of fire. They are even available in 12-volt models. My favorite is the Eva-Dry 2200, but I have used others. They won't pump out all the moisture a liveaboard can generate, but they will keep a sealed boat bone-dry — you don't ventilate and dehumidify at the same time, only one or the other. You will need to add a small drain hose to the tank (³/₁₆ inch is enough) and find a place to lead it. A sink is good if the drain is above the waterline.

But... if you own or buy a used boat, it will come with a history of mildew, and damp will always sneak in when you aren't looking.

Anti-mildew chemistry at work

Formula B, my mildew-busting brew (see "Formula B Mold Remover," page 25), has many uses on board a boat and around the house. Its workhorse application for me is cleaning synthetic carpets of mildew and soil.

Carpeting –Apply the solution with either a trigger spray for small jobs or a pump-up garden sprayer for larger jobs. Wet the carpet thoroughly, but not to the point that it's dripping, and work only the area you can finish within a 20-minute period. Allow it to soak for 5 to10 minutes, scrub the carpet lightly (or more firmly if needed) with a bristle brush, then vacuum up the



residue with a carpet extractor or shop

Hard surfaces –Use the same soak time as for carpeted surfaces, and remove the spent solution with a wrung-out cloth. Wipe it off with a cloth rinsed in tap water, then give the surfaces a final wipe with a cloth lightly dampened with the solution.

Teak decks – The best treatment is a regular scrubbing across the grain with seawater. Most commercial teak cleaners are very aggressive formulations based on oxalic acid and typically remove about 0.01 inch of deck every time they are used for "restoring" the deck — these are not chemicals you want to use regularly or even every year. However, Formula B will kill mildew and clean





In this "before" photo, at left, the side of the chair to the viewer's right has been scrubbed with water only. In the photo on the right, the mildewed chair has been scrubbed from the center toward the viewer's left with Formula B, and the left arm and leg with a bleachbased cleaner. The bleach does the better job of cleaning, but should only be used on color-fast surfaces.



Early borax products showed promise in the first round of testing, above. In a later test, the final formulation outperformed all others, including bleach, in preventing the return of mildew, at right

the deck without damage, while imparting some resistance to recurrence in the process — perfect for a non-damaging spring cleanup.

Sails –Borax formulations are good for cleaning sails (especially when followed with Oxy-Clean) but are not the first choice for mildew prevention. First, keep them dry, but if that is impossible, a light spraying with benzalkonium chloride (BAC), a common antiseptic, seems to be a bit more durable, particularly in the rain. The cheapest source is swimming-pool algae treatment, and a favorite brand is HTH Algae Guard 3X Concentrate. Mix 1 ounce per gallon of cold water, or about ½ cup in the typical 3- to 4-gallon garden sprayer.

Rope and canvas –These respond better when waterproofing treatments are used to keep them dry. Ropes treated with Nikwax Polar Proof will be freeze-proof, handle better, squeak less, gain less weight, and stay mildew-free. The treatment does not weaken the rope — ice climbers use it to prevent frozen ropes. (I am not aware of any other water-repellent treatments that have been tested on climbing ropes.) Canvas should be cleaned and then waterproofed; canvas that dries quickly doesn't grow algae or lichen.

Bedding and clothing –Borax can be irritating to the skin, so avoid using Formula B on clothing or bedding without a very thorough rinsing, following normal laundry instructions. However, used correctly, it can be an effective way to kill mildew. This formulation is safe for use on upholstery.

Pet mess –The antibacterial properties of Formula B will prevent the return of odor. If the mess has been there a few days, sometimes adding about ½-cup Renuzit Super Odor Neutralizer or

Drew tested his formula against other products by exposing treated canvas strips in a box of wet leaves for three months.



something equivalent helps; cleaning miracles go only so far.

Formula B has many uses around the home. It's ideal for cleaning basement carpets, of course, and works well on decks and siding.

Used on mildewed drywall before it has been primed, it's very effective at killing the mildew and preventing its return. It will not interfere with paint adhesion (many cleaners do).

In automobiles, it cleans seats and carpets and keeps them from getting musty in damp weather. However, for the shade-tree mechanic, it is not a degreaser.

Alternatives to Formula B

Concrobium, based on washing soda, baking soda, and TSP, is highly regarded and did well in side-by-side testing. It consistently finished second, behind the borax formulation, but at \$22 per gallon.

Borax Formula Comparison Tests

I've probably used 50 gallons or more of this formulation over the last 10 years, much of it on basement carpets, but quite a few gallons on carpeted cabin liners and inside lockers. I've shared it with many people and received nothing but positive, often amazed, reviews. It's simple chemistry, but so far, no one puts it in a bottle.

Drew Frye draws on his training as a chemical engineer and pastimes of climbing and sailing when solving boating problems. He cruises Chesapeake Bay and the mid-Atlantic coast in his Corsair F24 trimaran, using its shoal draft to venture into shallow and less-explored waters.

Formula B Mold Remover

Formula B is made with borax and washing soda, which can be found in the grocery store, and trisodium phosphate (TSP), which is sold in the paint departments of most hardware stores.

Ingredients

To 1 gallon of warm water, add 1/4 cup borax 2 tablespoons TSP (not TSP substitute) 2 tablespoons washing soda Cost = \$0.50/gallon

Shake the mixture vigorously for a few moments, then swirl it every few minutes. The powder should all dissolve in less than 5 minutes. One of the primary features of this product is that it does not require rinsing. If formulated at this strength and the free liquid is removed by sponging or vacuuming, the residue that remains will be just sufficient to prevent the return of mildew without being noticeable. For severe cases, the concentration may be doubled. But do NOT increase the concentration beyond this in the expectation that more is better. That will not make it more effective at cleaning.





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Testing the Waters in PHRF

All-inclusive fleets welcome novice racers at the starting line

hen I was a child, my family would spend every summer cruising and sailing out of our home port. Years later, when I bought my own boat, I continued to cruise, enjoying the feeling of adventure and freedom. Sailing melted my stress and transported me to a place of contentment. At the same time, although I had never raced on a sailboat, I was intrigued by the active racing scene at the nearby sailing club. I started heading out with friends on my own boat to watch the races. It looked exciting — the crews were engaged and

their boats seemed to sail so close to one another! I wanted to join them, but I had no idea how to do that. I had no idea what the rules were, and I was a bit intimidated.

Lessons from racing

That was years ago. I did get into sailboat racing and discovered that it is not only fun, it's a fabulous way to get more use out of your boat, get to know your boat better, and build your skills as a sailor, leader, and team builder. In the process, you develop a great sense of camaraderie among your crew of PHOTOS BY LANDON PARK family and friends and your local sailing community.

BY ROBB LOVELL

Becoming a competent racer is a long learning process involving the niceties of sail trim to mastery of the Racing Rules of Sailing, but the path is fun and rewarding. I started along it by reading, and that gave me a leg up on understanding what I was seeing on the racecourse and what I would experience once I dipped my toes in. Of the many books on sailboat racing, one of my favorites is *Getting Started in Sailboat Racing*, by Adam Cort and Richard Stearns, which takes the reader





through all the basics. It remained a great general reference guide as I built my racing knowledge and skills.

Although I've been racing for more than 15 years, I still read and re-read books and continue to learn from them. In fact, I've found that what I get out of a book depends on my level of knowledge at the time. Sometimes I go back to a book to retrieve knowledge I can apply but that I've not yet used. For example, last season we were frustrated by the downwind legs of the racecourse, so I reviewed the sections from various books in my library on downwind trim and tactics. I even read aloud excerpts to my crew before each race so we could apply the concepts that day. Our race results improved immediately.

Sailboat racing formats

Just as sailboats come in infinite varieties, so do sailors and the ways they race their boats, from professionals in grand prix regattas, to soloists in around-the-world marathons, to sixthgraders in Optimist dinghies. Sailboat racing is popular with ordinary folks too. You'll find a sailing club on almost any body of water that'll float a boat, and most of those clubs host races.

Club racing takes several forms, but most good old boats fall into one of two categories: one-design or PHRF (Performance Handicap Racing Fleet). One-design racing, where all the boats are of the same design (the J/24 is a classic example), is like a foot race — everyone starts at the same time and the first over the finish line is the winner. Under PHRF, every boat is assigned a handicap (see "PHRF Unwrapped," page 29). Everyone starts at the same time but the winner is the boat with the fastest "corrected time," which isn't known until all the boats have finished. Large PHRF fleets are usually divided into smaller classes of boats with similar handicaps.

Many clubs include a JAM (jib and main) class for sailors who prefer to use only their white sails, as it removes the stress of setting and dousing spinnakers. This class is a great place for newcomers to start racing their own boats. It also attracts cruisers who use colored sails only rarely and sailors who are just learning.

Some clubs run pursuit races, in which every boat is assigned its own start time based on its handicap, and the first boat to finish is the winner. This format reduces the pressure on the start line because the entire fleet isn't jockeying for position at the same time.

Learn by crewing

The best way to learn to race is to leave your boat at the dock and put in some time as crew aboard a boat with an experienced racing skipper. At most sailing clubs, skippers are always on the hunt for new and reliable crew. If you're already a knowledgeable sailor, you will likely be a coveted candidate.

I started out by racing on many different boats, until I eventually met a successful local skipper who, along with his crew, kept the racing at the right balance of competitive and fun. The skipper (now my good friend Scotty) not only knew what he was doing, but he was eager to teach and was skilled at talking his crew through

Below from far left: Brian Hendel sails with his father, Dennis Hendel, aboard *Rakaia*, a 1977 Abbott 33, in the Wednesday-night spinnaker class out of LaSalle Mariner's Yacht Club. Landon Park finds a moment on an upwind leg to take a crewie.





all aspects of a race. He would direct each of us through every mark rounding and sail change. Scotty not only taught me how to crew on a raceboat, he showed me the importance of teaching and developing crew members.

Sailing as crew allows you to figure out racing without the pressure of running your own vessel as skipper. This approach is all the better if you can find a skipper like Scotty, who is happy to teach and who employs a teaching and leadership style you enjoy.

When you join a crew, the skipper will probably assign you to a position. Begin by taking charge of your tasks and learning how to coordinate with the rest of the crew. Once you have mastered your role, start getting your head into the race as a whole. Time the start on your watch, think about how the rules apply when you encounter other boats, and watch the water for signs of wind shifts. Listen to the cockpit chatter on tactics and start thinking tactically yourself.

Your understanding of race tactics will develop over time. I spent two seasons racing as crew on other people's boats before venturing out on my own boat, racing once a week in a local jib-and-main race series aimed at newer sailors.

I still take part in regattas as crew on other boats, and I learn something new every time.





Practice, practice, practice

Even before you try campaigning your own boat, every time you go sailing you can work on building skills you'll need when racing. For example, practice tacking and jibing, so you can perform those maneuvers smartly and at short notice, then do that around navigational aids without the pressure of having fellow racers around.

Before my crew and I made the jump from JAM to spinnaker racing, we took the boat out and practiced launches and takedowns. That gave us the confidence to go on the racecourse and set and douse the chute while surrounded by a bunch of other boats.

And we still practice. Before the start of each season, we head out and get our sea legs with the goal of working out the bugs and getting our mistakes out of the way before our first day on the racecourse.

Racing your own boat

When you are ready to race your own boat for the first time, pick a suitable race or race series for a beginner. Take



into consideration the length of the race and how complex the course is. On race day, consider the wind and sea conditions before deciding whether or not to start.

Read the notice of race (NOR) and get to know the specifics. If you don't understand something, ask the race director or an experienced fellow racer for clarification.

If there is a skippers' meeting, make sure you attend, and don't be shy about asking questions.

Talk to other skippers and tell them you are new and ask for advice and help. Most sailors are eager to help someone get started in a sport they themselves are passionate about.

If you are anything like me, the first time you race your own boat as skipper, you will be nervous. What if I hit another boat? What if I didn't remember the course? Do I have all the rules straight? Anxiety is normal, but ahead of your first race, you can take some steps to alleviate it.

Draft experience – For that first race, find an experienced racer to go with you who can assist in talking you and your crew through the race and helping you stay clear of trouble.

Avoid other boats – If you are not 100 percent sure of your boathandling skills or of your knowledge of the rules, hang back a bit at the start and steer clear of crowded mark roundings. Ease into the experience.

Follow the leader – Don't be disappointed if you're not in the lead, but take advantage of having someone to follow around the course. Even as you improve your own skills, watch the best racers ahead of you, to see how they find areas of stronger wind and identify wind lifts or headers.

Make a cheat sheet – The night before a regatta, I distill the most important information from the notice



of race and make up a large-print one-page race sheet to fasten up in the cockpit for quick reference.

Set goals and keep it fun

In each race, only one boat will win, but every crew can have a good time. Sailboat racing is a complex sport full of challenges. It can take years before you score your first win. Don't spend that learning time constantly feeling frustrated. Have fun.

New racers commonly wind up toward the back of the fleet. When you're in this position, rather than focusing on the other boats, pay attention to how you can improve crew work and skills aboard your own boat. Before you know it, you will find yourself moving up the fleet.

Focus on measurable and attainable goals. Perhaps you want to work on completing a race with the cleanest, fastest tacks. Perhaps you want to make cleaner spinnaker takedowns and make a better start than in your last race. Set and share goals with your



crew and work as a team to achieve them. While the outcome of a race is often out of your control, you are in control of your boat, and concentrating on how you and your crew can learn to sail the boat better brings its own rewards.

Little in life that's worth doing is easy. Racing your sailboat can be one of the most rewarding and challenging things you will ever do. Post race, remember to think about what went right and wrong during the race and build on each race. Most important: congratulate yourself on becoming a sailboat racer. \varDelta

From far left, Mary Jane (MJ) Hutchinson steadies the boom in light air, Ryan Eyres takes the helm, and joins Landon, Brian, and Dennis in the cockpit.

Robb Lovell grew up sailing on Lake Huron aboard his family's Endeavor 40, where he caught the sailing bug. That was about 20 boats ago. Rob enjoys buying and restoring boats, and is an avid racer and cruiser based out of LaSalle Mariner's Yacht Club (LMYC) in Ontario. He currently races on a Cal 9.2 named Jade but owns three other sailboats and a tugboat ... yes, he has a problem!

This article is the first in a series in which Robb Lovell will talk up the benefits good old boaters can get from racing their good old boats against like-minded sailors in boats of similar age and characteristics. In Part 2, in the March 2019 issue, he will give pointers on how to set up a boat for racing and how to trim the sails for performance. Much of the advice he gives will also help non-racers get more out of their boats.



PHRF Unwrapped

PHRF, which stands for Performance Handicap Racing Fleet, is a handicap system used to level the playing field when boats of different designs are racing (as distinct from onedesign racing in which boats of the same design race as a fleet).

Each boat is assigned a handicap based on its estimated speed relative to a theoretical yacht that has a handicap of zero. A boat's handicap is the number of seconds per mile that the boat should trail the zero-handicap yacht. For example, if your boat has a handicap of 190 and another boat in your class has one of 170, that boat will owe your boat 20 seconds for each mile of a racecourse. Over a 6-mile course, it would need to cross the finish line more than 120 seconds ahead of you to beat you.

A boat's handicap is based on particular attributes, including its waterline length, displacement, sail area, size of its largest foresail, type of keel, and the type of propeller and number of its blades.

Local and regional associations set PHRF ratings for boats in the local racing fleets, taking into account the predominant sailing conditions in the area, such as light air or heavy air. As a particular boat establishes a race record over a period of time, that performance might be taken into consideration and result in a handicap adjustment.

While handicaps are assigned locally, US Sailing maintains a fleet handicap book that includes information on more than 60 PHRF fleets throughout North America, and handicaps for more than 5,000 (mostly good old) classes.

For more information on PHRF and racing in general, visit ussailing. org/competition/offshore/phrf. BY LESLIE LINKKILA AND PHILIP DINUOVO

Dress Up the Steering Wheel

Insulate and decorate cold stainless steel with French spiral hitching



Carina's tarred-twine wheel wrap has interesting color and texture, at top. It replaced an earlier wrap made from island-spun coconut twine, above, which lasted for years.

When a stainless steel steering wheel gets wet or, worse yet, wet and cold, it becomes difficult to grip and will quickly suck the life out of a sailor's hands. This isn't simply uncomfortable; it can be a safety concern. Accordingly, many sailors cover their stainless steel steering wheels, usually with leather. When we originally outfitted our Mason 33, *Carina*, we purchased a leather wheel-wrap kit that only required we lace it on with twine. When this cover eventually degraded from exposure to sun and salt air, we balked at the price of a replacement cover. Seeking an alternative, we remembered the lovely lashings on the tiller of our previous boat, *Aria*, and decided to wrap our wheel in a simple yet elegant French spiral hitching (also called French whipping).

The first time we did this, we used coconut twine handmade on Lamotrek Atoll in the Pacific. When, after many years, it began to degrade, we replaced it with #30 Tarred Nylon Seine Twine from Seattle Marine and Fishing Supply. Seine twine is sold by the pound; a pound of #30 is approximately 625 feet long and costs \$15. *Carina*'s wheel is 26 inches in diameter, its rim is 1-inch tubing, and wrapping it in a French spiral hitch required approximately half a pound, or about 350 feet. Tarred twine sounds primitive, but it brings benefits: in addition to its sheer lustrous black beauty, the twine is strong, abrasion-resistant, and hydrophobic, meaning it does not absorb water. Tarring also creates friction, which helps to set the knots firmly and neatly.

How to whip a wheel

Before starting, polish the wheel to remove any salt that would be trapped under the lashings and cause corrosion. Then mark the top of the wheel when the rudder is in its neutral, fore-and-aft, position. This is the most logical place to begin covering the wheel because, when you've completed the spiral hitching, you can hide the meeting point under a Turk's-head knot or other device to indicate "top dead center."

Put on gloves to avoid getting blisters from the repetitive knot-tying process, then begin the spiral hitching by tying a constrictor knot and setting it firmly (photo 1). When you're working from the helmsman's seat, the skein of twine should be aft, toward you, and the bitter end forward, away from you. Leave a few inches of bitter end that can be trimmed later.

Working counterclockwise, pass the skein through the wheel, up and around and back down through the loop of twine, forming a half hitch against the edge of the constrictor knot. Repeat this process to make subsequent hitches (photo 2). Tighten the half hitches firmly by pulling the standing part downward (photo 3). Pulling the standing part snugly in the opposite direction will form a larger knot and a longer spiral. Whichever method you choose, be consistent in the direction and tension used so that the pattern of spirals on the wheel is uniform. (A marlinspike or slotted screwdriver is handy for setting the hitch against the knot and setting sequential hitches against each other.)

As you repeatedly form half hitches, setting them firmly and aligning them, you will quickly see the spiral pattern emerge (photo 4).















References for Knot Tying

Want to try your own hand at knotwork aboard? *Good Old Boat* contributor Gregg Bruff recommends the following books as excellent references.

- The Ashley Book of Knots, by Clifford W. Ashley (https://amzn.to/2NB8C1V)
- Des Pawson's Knot Craft and Rope Mats: 60 Ropework Projects Including 20 Mat Designs, by Des Pawson (https://amzn.to/2QWViD4)
- The Marlinspike Sailor, by Hervey Garrett Smith (https://amzn.to/2zqUrDC)

When you reach a spoke, form two half hitches on the spoke with the standing part exiting the knot away from you (photo 5), then resume making hitches on the wheel (photo 6).

Continue around the wheel until you reach the neutral rudder position and your original constrictor knot. Bring the last hitches tight up to and against the constrictor knot and set the knot hard. To finish, and secure the end of the twine, trim the end to about $\frac{1}{16}$ inch and briefly burn it before squashing it flat, a process called riveting. Rivet the bitter end at the constrictor knot as well.

Using a heavier contrasting line, tie a Turk's-head knot to cover and mark the neutral rudder position (photo 7).

For our Turk's head, we used flat nylon purse-seine repair line because we had it on board, but round twine would have been preferable. We began this knot loosely and made three rounds before tightening. Whatever line you choose, it should be of a sufficient diameter to create a convex knot, so that when steering, the neutral rudder position is obvious to the touch. This is a great help in the dark or when you are intent on looking ahead in tight quarters.

Our French spiral hitch wrap is an economical and highlyeffective solution that will provide years of service while looking magnificent all its life. \varDelta

Leslie Linkkila and Philip DiNuovo became entranced with cruising in 1991, and in 2003 quit their careers and left the Pacific Northwest to cruise the South Pacific in their Mason 33, Carina. They closed the circle on their Pacific wanderings at Port Townsend, Washington, in 2017 after logging more than 41,000 nautical miles. They hope to mentor and inspire others in pursuing their own bluewater adventures.



-Editors

 The Complete Rigger's Apprentice: Tools and Techniques for Modern and Traditional Rigging, by BrionToss (https://amzn.to/2zsbSUq)

For instant help tying a constrictor knot or a Turk's-head knot, do a web search. Several sites will pop up. Here are three:

animatedknots.com netknots.com 101knots.com



Knotwork at Work on Board

-Editors

Good Old Boat readers use knotwork on board for practical and decorative purposes.

Brandon and Virginia Ford glued rope mats onto the companionway steps of *Oceanus*, their 1971 Columbia 43. "The weave is called Sailor's True Lover Mat and we got the idea from Hervey Garrett Smith's



book, *The Marlinspike Sailor*. Virginia and a Samoan friend wove them three years ago from ⁵/₁₆-inch nylon rope, which looks better with age. Nylon is tough and abrasion resistant, and we affixed the mats using adhesive caulk. They provide great traction and feel good when we step on them with bare feet."



Gregg Bruff sent us this photo of a weave he did on his pike pole. "I've used a flimsy aluminum boathook since we bought *Arcturus* and always wanted a robust pike pole

I could use for a variety of purposes, including fending off if I had to. I found a metal tip on eBay, bought a \$9 pine pole, and added this knotwork recently. A couple of coats of LeTonkinois and it's well on the way to being useful this season."

Gary Bratton didn't send us a photo of knotwork on his boat, not exactly, but he insists that his wife, Jodi, is always aboard when he is, so this qualifies. "We were in the Bahamas when Jodi met a girl wearing a Turk's head as an anklet. She wanted one. After trying several different ropes, we found that a reflective para-cord was perfect."







A New Classic DC Distribution Panel

BY TOM YOUNG



og-eared and dated, the 12-volt DC switch panel on our 1961 Alden Challenger, *Christmas*, was original. I had planned to replace it for some time but other projects took priority until last winter, when I made the time to take it on.

The first step was to cut the old switch panel out of the boat and see what was actually in there. It was interesting to dig into the state of the art of boat electrics circa 1960. The old main unfused cable from the housebattery bank was bolted to a terminal post and fed the toggle switches via a solid uninsulated copper wire. Nearly all the switches soldered to this solid bar were STDP (single throw, double pole), probably to save space.

An STDP switch controls two circuits. The throw of the switch turns both circuits *on* or *off*, which is handy for devices that have their own switches, like cabin light fixtures.

From the switches, the 1960s electricians split the power, via two ring terminals on each screw, into as many as four circuits per switch. Thus far, the circuits were still not fuse-protected! An electrical update for the 21st century preserves the 1960s aesthetics



Finally, the switched circuits were soldered to glass SFE fuse holders. The fuse-protected wire then connected to a positive terminal strip in the bottom of the box. The boat's various circuits were connected to the old panel's positive terminal blocks and a neutral bus bar.

These glaring problems aside multiple connections on the positive main power post, several inline fuses, mind-boggling heaps of wires burying terminal strips and bus bars, and unfused wires — the old panel still worked. Why change it?

Fire! The vast majority of fires on boats at sea are caused by the 12-volt DC wiring. That was brought close to home when a fiberglass fishing boat caught fire in my harbor, not far from where *Christmas* was moored. A loose wire that chafes through, or melts onto a hot engine or exhaust part, will cause a dead short. If that wire isn't fuse-protected, full current will flow from the battery to the short. The wire will burn white hot along its length, and the result is a fire. I've seen this happen on my boat.

The best additions to an old boat's electrical system are modern overcurrent protection devices (OCPDs). In

The original switch panel on *Christmas*, protected inside a small locker, was simple and tidy, above left, but the wiring was old and potentially unsafe.

With his new panel, Tom updated all the wiring and added LED indicator lights while preserving the old-time appearance, above right. He saved the original door to use on his new enclosure.







Behind the panel was a jumble of 65 years of accumulated wiring, upper left. Released from its bonds, at left, the panel was simplicity itself. A fire on a boat in Rockport Harbor prompted Tom to move ahead with updating the electrical system on *Christmas*.

the event of the short circuit described above, a correctly sized OCPD protects the wiring from burning by disconnecting the circuit when it senses more current than the wire can safely carry. Today, we have several types of OCPDs with which to protect all our onboard wiring. That's a real improvement over 1960 standards.

Design thoughts

Christmas is a coastal sailer used in season on the coast of New England. A main priority of ours is to have minimal energy requirements to allow us the freedom to sail as much as we want. I enjoy this old boat and try to preserve the 1960s design details that work well. The 12-volt DC electrical panel was installed in a cabinet beneath the companionway, where it was close to the batteries and convenient to use. Tucked beneath the bridge deck and behind a stout door, the panel has stayed dry and protected for 56 years. It's also a handy place to keep oftenneeded tools.

Breaker/switch panels, especially custom made as I would need, are expensive, and no stock panel would fit inside the cabinet. I knew I'd have to design and build my own panel, and I enjoy work like this. The project would be rewarding as well as a money saver. The box was the trick. Performing this tedious work under a dark tarp on the coast of Maine in midwinter wasn't going to happen. I'd take the work off the boat.

After dismantling the existing cabinetry and taking careful measurements, I built a new plywood 12-volt DC distribution box to fit into the existing space. I salvaged the original nicely built door so I could restore it and fit



Tom built a new enclosure and tested it in place before retreating to his warm shop, where he designed and built the new electrical panel over the winter months.

it to a new frame. Satisfied the box fit the space, I left the tightly wrapped and frigid boat and headed to my warm shop. My plan was to do all the panel wiring comfortably on a bench at my leisure. In the spring, I'd install the completed distribution box on board and move on to connecting the boat's circuits to the new terminal strips and bus bars.

Our house battery bank has two Group 27 (100 amp-hour) marine leadacid deep-cycle batteries. A separate engine-starting battery, safely wired and fuse-protected to carry a 250-amp current for the starter load, is isolated from the house battery bank. The house and engine batteries cannot be connected. We have no AC wiring on board *Christmas*.

This made the general electrical design easy. Using *Boatowner's Illustrated Electrical Handbook* by Charlie Wing (a good friend) extensively as a reference, I began researching several sources to determine what parts I needed to build a safe panel. It's a good thing Maine winters are long because, although studying allowable conductor voltage-drop tables and other



details, then gathering up the right parts, was a pleasant process, it took time. The pile of electrical components began to grow on the bench, and it became time to begin installing them all in the new box.

Panel components

All the components of the electrical system — wiring, switches, fuse blocks, terminal strips, and bus bars — had to be rated to safely carry the current for the OCPDs I chose to use. I decided that ATC fuse blocks — compact, easy to use, and affordable — would work in the limited space. Blue Seas makes several. Their 5026 fuse blocks provide 12 fused circuits. Two of the blocks fit nicely into the open back of the box, yielding a total of 24 fuses, which was comfortably more than I needed. There would be room to expand in the future.

ATC fuses are standard automotive blade fuses and readily available in many sizes, which makes protecting the smallest wires easy. As to fuses vs. breakers, in over 30 years of using boat DC systems with fuses, I've likely changed no more than a half dozen. The ATC fuses are far more reliable than the glass variety. They are easy to read, so it's much less likely an oversized fuse will find its way into a circuit.

When spring came, I would begin work on board, when I would install terminal strips and bus bars to provide more screw terminals for connecting the boat's circuits. As Tom made progress, parts began to pile up on the workbench. A warm workshop is a necessity when doing projects in the long, cold Maine winter. Canine company is always welcome.

For the panel itself, I chose to use toggle switches, which were typical in the '60s. To add a dash of 21st century, I would add LED indicator lights, which I think are intuitive for the switch user.

The switch panel

As I'd had success using ¼-inch polycarbonate for an engine switch panel, this material was an easy choice for the electrical panel. It took some thought, and much trial and error on paper, to find a spacing for the toggle switches and indicator lights so that they and the wiring behind would fit on the small switch panel.

When I was satisfied with the panel's design, I drilled ¹/₂-inch holes for the toggle switches and ¹¹/₆₄-inch holes for the indicator lights, sanded the back of the new panel with a random-orbit sander to give it tooth, and spray painted the back with several coats of enamel paint.

After securely mounting the fuse blocks, positive terminal strips, and neutral bus bar, I spent many pleasant winter hours in a warm, bright shop cutting, stripping, and crimping. I



Tom made the new switch panel from Lexan polycarbonate. After drilling the holes for the switches and LED indicators, he sanded the back of the panel prior to painting it in a color to match the original. tug-tested each newly crimped terminal before fastening it firmly to its new terminal screw. All the new 12-volt DC switch-panel parts, including switches, fuse blocks, terminal strips, and bus bars, are rated to safely carry at least 20 amps at 12 volts DC. All the new wiring inside the new panel (red for postive and yellow for neutral) is 12-gauge marine-grade wire, which is also rated to safely carry a current of 20 amps at 12 volts DC. Using the 12-gauge wire throughout the panel simplified the work and also keeps voltage drop to a minimum.

Onboard wiring

When the warmer weather came, I was able to easily fit the new panel and fasten it into the boat. Then the difficult onboard work began. Access for running wires into the open back of the new panel was a little tight, but much improved over the 1960 version. Under the dark boat cover, I'd spend an hour or two connecting a few circuits. There was no hurry: spring takes its time on the coast of Maine.

My first task was to run the new 3-foot-long #2-gauge main cables from the 5026 fuse blocks to the batteries. The red positive cable from the fusebox post connects to a marine-rated battery fuse (MRBF) holder bolted to the battery-switch terminal (there is not sufficient space above the battery posts). Next, I cut and crimped the yellow negative cable from the fuse box to the batteries and bolted it to the neutral post. The main switch panel's neutral bus bar and the fuse blocks are safety rated to 100 amps, so a 100-amp MRBF fuse protects the new cables from the batteries to the fuse box.

Moving through the panel wiring, I kept testing the hinged switch panel and bundled wiring. For peace of mind, I decided to add a removable ¼-inch Lexan chafe plate in the bottom of the box to cover the terminal strips and bus bars. This clear plate allows me to easily view the connections when the switch panel is folded down, but I Back on board *Christmas*, still covered and cold, Tom began connecting the switches on the panel to the fuse blocks mounted on the bulkhead, below. To separate the switch connections from the wires between the panel and the fuse blocks, he fitted a removable Lexan sheet to the back of the panel, at right.

can remove it to work on the terminals. When the switch panel is closed and locked, the plate isolates the terminal strips and bus bars from the folded wires behind it.

The new switch-panel box lines up with the engine panel in the cockpit, creating the main wire raceway. There is also some access through the starboard locker and a manhole in the cockpit

sole. Running a circuit meant making a few visits to each of these points extreme boat yoga at times but it was still fun, taken in short doses. I began to further appreciate all the work I'd completed in the shop before the onboard work began.

I examined each new circuit as I connected it to its fuse box. While all the new wiring in the new panel was rated safely above 20 amps, the connecting onboard circuit wiring varied in size. By referencing tables of allowable amperage for the various wire sizes, I installed fuses correctly rated to protect those circuits.

Project creep

A boat accumulates a lot of history over 56 years and three owners. Marine electrical gizmos and their wiring come



and go. I discovered unknown problems and rediscovered past deferred problems. This was the time to fix them all. The work grew — that's the nature of working on an old boat. Soon, the entire cabin was turned upside down and strewn with every tool and spare part.

This process, though it took longer than expected, was invaluable. I traced and eliminated long-unknown dead circuits, secured good old wiring, and cut out and replaced bad wiring and sketchy crimp terminals that came off with a tug. Slowly, as I made many short visits under the cover, dangling wires began to disappear. Even safely fuse-protected wires need to be properly secured. I cut old wire ties, sorted out the wires, and installed new ties.

I connected circuits to the new switches via the new terminal strips and



bus bar. Devices that run for 24 hours and have their own switching, such as the VHF radio and the chart plotter, I connected directly to the fused and neutral terminals on the fuse blocks.

As a finishing touch, I applied stick-on labels to the switches and to the ATC fuse blocks, so that someone in the future (I hope that will still be me!) will be able to trace the wiring without much difficulty.

Small LED utility lights are available these days in endless sizes and variety. I fitted one inside the box to illuminate the switches and the interior wiring when the panel is unlocked and hinged down for work. I liked the light so much I added several in the engine space.

It was a joy to finally throw the main battery switches and test my work. \varDelta

Tom Young, a lifelong sailor, is a design-builder. When he's not restoring old homes on the coast of Maine, Tom and his family — wife, Mary Anne, now-adult children Mary Jane and Thomas, and a couple of dogs — sail the world-class coast of Maine and New England every season. Tom cares for their 1961 Alden Challenger, Christmas, with a passion.



The further Tom got into the rewiring, the more the associated tools and clutter took over the cabin, at left. Project complete, *Christmas* looks the same, at right, but the original cabinet door, now restored, conceals a modern and safer electrical panel.

Revive, Enjoy, and Repeat



Fulfilling dreams with boats once destined for landfills

BY EDWARD HUBBARD

I n an age where the norm is to throw away the old and buy something new, I have learned that thrown-away sailboats can provide tremendous value. I found my first boat, a 1979 Venture 21, sitting behind a driveway in southern Kentucky covered in dead leaves, mold, and moss. This was the boat of my dreams. The owner had used her simply for fishing and had no advice to give me about how to sail her. I made a lowball offer, he accepted, and on a cold afternoon in November I pulled my new pride and joy home.

I began cleaning her up and arranging the inside, all the while imagining the adventures to come. I practiced raising the mast and rigging her. The Seahorse motor she came with was from an ancient time. When I pulled the cord wrapped around the flywheel, it sounded like tin cans banging together. My excitement grew as the time neared to splash her into the fresh waters of Tennessee's Big Sandy River.

That summer, once I'd discovered the purpose of the mainsheet and made my first uphill run, the world unfolded and a



Edward bought the Venture 21 from an owner who'd never sailed her, top left. Cleaned up and painted, she took him to quiet places on the Big Sandy River, center. A sunset can be enjoyed from any boat, even one that's been raised from the dead, above.



Edward named the Hunter 25 *Spray*, and after he'd refurbished and commissioned her, *Spray* took him down the Tenn-Tom Waterway and all the way to Mobile Bay.

sense of newfound freedom came over me. I could go anywhere and I could accomplish anything. I occasionally beached my boat, camped out, slept in coves, and sometimes woke to find my hook dragging into the main channel of the Tennessee River. It was the greatest summer of my life, and I knew I was ready to step up to a bigger boat.

Once again, I returned to Kentucky in November, this time to save a 1981 Hunter 25 from certain burial. The boat sat on a heavyduty roll-on trailer that had seen better days but seemed fully functional. She needed new portlights because she had none, only holes, and the thousand blisters that covered her hull

just below the waterline demanded attention. I spent the winter playing with epoxy and paint, grinding and sanding, and wiring and installing the various instruments for the bigger adventures ahead. I named her *Spray*, and splashed her into the Tennessee River that spring.

Spray didn't provide full standing headroom, but two people could share the cabin quite comfortably in comparison to the Venture 21. She sailed reasonably high on the wind and broke through waves with commanding weight. I soon began to look farther and farther south. That fall, I took Spray some 600 miles to Perdido Bay via the Tenn-Tom Waterway. I spent six weeks living aboard her and always felt safe, even after entering the much bigger waters of Mobile Bay. Spray seemed to be more at home with the wider rolling waves of the bay than the choppy waves of Kentucky Lake.

I parked her in Roberts Bayou, and on a sad day in December I sold her on the docks of Pirates Cove. But I did so knowing exactly what kind of boat I needed for continuing my journey south.

At $3\frac{1}{2}$ feet, the draft of the Hunter 25 inhibited me. In the Venture 21, I had become accustomed to running up onto soft beaches and exploring the river fully, as opposed to simply floating down it. The shoals of southern Alabama extend beyond the beaches. *Spray* would have to stay farther out in deeper waters, and a dinghy would not satisfy



my longing to get in close. This trend promised to continue along Florida's west coast. I needed a different boat.

In Perdido Bay, I had taken a short morning sail on a Wharram-designed Tahiti 21 built by a local adventurer. It was a great experience. This was a boat I could beach-camp in and that didn't need the heavy 9.9-horsepower outboard I had on the Hunter, the same motor that nearly killed me when I had to make repairs on the water. I envied Shawn, the owner of the Tahiti catamaran, for his ability to simply paddle his boat around the docks and beach. I began scrolling through the ads of every boat-selling website I could find. My search proved to be more challenging than I'd imagined.

That winter I was boatless and my soul was empty. All I could think of was the great winter sailing I was missing back home. Driving out to visit friends one cold day, I passed a boat graveyard of sorts. I knew the place and had scanned it many times before, a collection of old fiberglass fishing boats, pontoon boats, and other powerboats. This time, I noticed something in the middle of the yard. I tapped the brakes and turned into the semi-frozen mud of the graveyard. I walked in disbelief past the fishing boats, through the weeds, and right up to her. She was a Com-Pac 16, and she was intact. She sat on an old rusty trailer sporting a pair of flat tires. I walked up the hill to a square metal building that served as the office and maintenance shop. Inside sat a man who seemed delighted to see me. All the Com-Pac's sails were there in the corner of the



room, along with a pile of boxes containing various components of the critical kind. Looking through the inventory, I asked the price. He said he would take \$300 cash for everything. I nearly dropped my wallet fumbling to extract the sum. He signed all the paperwork, and I grabbed the sails, boom, and hardware.

Later that afternoon, I aired

up the dry-rotted tires and slowly pulled the Com-Pac home, where I immediately began cleaning her up. After a short time with a dish scrubber and some tub-and-tile cleaner, I discovered that the gelcoat, hull, and deck were in great shape — I wouldn't even need to paint her topsides. Using oven cleaner, I removed the name *Black Pearl* painted sloppily on one side of the transom. Her original name, *Messing About*, was still visible in the gelcoat. Sticking to tradition, I decided to keep that name.

Down below, I scraped off peeling mint-green latex paint and repainted with a white topside paint from TotalBoat. I fitted the berths with new padding and added homey effects here and there.

After equipping her with a 3.3-horsepower outboard and a bimini fashioned from a white twin bedsheet and PVC pipe, I splashed *Messing About* in March and began learning her





sailing capabilities. It was love at first sail. While the Com-Pac does get pushed around by waves, there is never a time when I feel like it's more than she can handle. For her 18-inch draft, she points rather well, and can really get going when the wind is steady and moderate. She's able to sail close into coves and beaches very nicely. Her flat-bottomed concrete-filled keel settles nicely in the sand and mud of the riverbed, steadying her when she's aground.

Spending two weeks on a 16-foot sailboat may not appeal to some, but it's how I sailed 147 miles to Pickwick Lake along the Tennessee River and back again. I find her accommodations very comfortable. The berths are wider than the Hunter's and the cockpit is surprisingly roomy. When motoring against current, the 3.3-horsepower outboard pushes the Com-Pac with ease.

Some might call me a boat Dumpster diver, but that falls short of insulting when I pull up on the beaches of Big Lagoon, or when I'm sitting in a cove by a waterfall soaking up the free air-conditioning. The pleasure these boats have brought me reminds me that things that have been thrown away are not always lost. Granted these boats all have their scars and imperfections, but I think accepting them helps me to accept my own imperfections, as well as those of others.

And maybe, just maybe, I get that much closer to being a better person and a better sailor. Isn't that the journey we're all taking? Δ

Edward Hubbard is a farmer, sailor, philosopher, artist, and troubadour, with a passion for cold beer and hot sauce. He draws his inspiration from the natural world around him and the living organisms he devours. Edward writes in an attempt to communicate his strange existence while at the same time challenging his readers to question their own.

Taking It from the Top Part 1

ownwind sailing with only a jib or genoa can leave a sailor wanting more. I wanted to fly a spinnaker on Hagar, my Viking 33, but I was intimidated by the 14-foot-long pole and all the lines associated with the symmetrical spinnaker that came with my boat when I purchased her. I didn't want to deal with whisker poles and gybe preventers, and I wanted to stay off the foredeck, so I sold my symmetrical chute and replaced it with a used gennaker that I could fly from a tacker at the bottom of the sail.

Wow! What a difference that made. But I still wanted to use my gennaker without needing a strong and nimble foredeck crew on board to hoist and retrieve it. That ruled out a dousing sock and led me to learn about furlers used for sails that are set flying, that is, their luffs are not attached to a stay.

A top-down furler takes the terror out of setting a spinnaker

In a conventional jib-furling system, the luff of the sail is held in a slot in a foil-shaped aluminum extrusion that fits over and rotates around the stay as the sail is furled or unfurled. As the sail unfurls, the furling line wraps onto a drum fixed to the extrusion.

BY HUGH JOHNSTON

The luff of a flying sail, such as a gennaker, asymmetric spinnaker, staysail, or Code Zero, is not attached to a stay. When designed to be roller-furled, a flying sail can be made to furl along its own luff, either from the

bottom up or from the top down. Both methods employ a cable or "torque rope" around which the sail furls. At the tack, the cable is, in most instances, attached to a drum or furling sheave turned by a continuous line. At the head of the sail, the cable is attached to a swivel, which in turn is attached to the halyard for hoisting.

For bottom-up furling, the cable is sewn into the luff of the sail, the tack is attached directly to the furling drum, and the sail tends to furl from the bottom up because that's closest to where the torque is applied. For topdown furling, the torque rope attaches to the drum and is separate from the sail, to which it attaches only at the head swivel. The tack of the sail attaches to a floating ring on the drum, so when the drum turns, the torque is

transferred to the head of the sail and furling begins at the top.

Bottom-up furling is best suited to sails, like the Code Zero or staysails, that are cut for close reaching to beam reaching. Top-down furling was developed for sails, such as gennakers and asymmetric spinnakers, that are designed for wider wind angles and have more material toward the head and convex luffs.

A key benefit to me of a foilless or flying-sail furler, as they



The top-down-furling gennaker powers Hugh's Viking 33, *Hagar*, on a reach, at top. Key components of the furler are the torque rope, above, and the furling drum, at right.





are also known, is that I could hoist the furled sail at the dock, unfurl and furl it at my leisure without leaving the cockpit, and lower it after returning to the dock. As I already had the gennaker, I started looking for a top-down furler.

Setting up the boat

Foil-less furling systems can be used on nearly any sailboat, but two primary requirements — an attachment point at deck level and a suitable spinnaker halyard at the masthead — might necessitate modifications to some boats. I fitted a deck-mounted retractable bowsprit to project the tack of the gennaker well forward of the headstay, and I already had two spinnaker halyards at the masthead.

When the sail is hoisted, the swivel at the head needs to be close to the halyard block or sheave. If it's not hauled all the way up, the halyard will twist a lot before the furler gets going. To prevent this, it's important to be fussy when measuring for the furler. But if the swivel has to sit lower for some reason, a torsion cable between the halyard and the swivel should keep everything from over-twisting.

One of my dock mates, an Aussie who'd been a professional sailor when he was younger, warned me about how



On *Hagar*, Hugh led the furling line to the cockpit via fairleads on the stanchions, at left. By leading the furling line through a block on a pendant with a snapshackle, he is able to move its point of attachment, center. His flying sail tacks to a retractable bowsprit, at right.

Masthead Halyard Crane



my furler might bind up at the top. In fact, that top swivel is new to the neighborhood up there and can get in the way, particularly on a masthead rig. It's important to keep the flying-sail halyard, the furler swivel, and the flyingsail headboard clear of the headstay and the top of the jib/genoa furler.

On a 7/8 or 9/10 fractional rig, it's easy to keep everything clear by running a new halyard (if there isn't one already there) a little above the headstay. On a masthead rig, the best solution is usually a mast crane that projects the spinnaker halyard well forward of the headstay. If necessary, one can be fairly easily welded or bolted on.

The furling drum needs a robust attachment point far enough forward to get the sail out in front of the headstay. Some people keep it real simple and put a block on the end of the anchor roller. I have seen boats where a steel square bar has been fitted to the foredeck with U-bolts and a block shackled onto the end. Whatever the solution, to ensure many years of carefree sailing, it's important to take into account that the sail will place quite high loads on the tack fitting.

A foil-less furler can also be used to set a staysail inside the headstay. The head of the sail can be kept clear of the headsail furler with a halyard restrainer/ deflector fitted to the mast below the halyard box. The tack needs a fitting in Spinnaker halyards on masthead rigs are usually rigged on a crane above the headstay. On a boat that's not equipped with a spinnaker halyard, a crane can usually be bolted or welded to the masthead.

a place on the foredeck that can be suitably reinforced, perhaps in the vicinity of the forward bulkhead.

Tack adjustments

With a foil-less furling system, because the luff is flying free, it's possible to ease it and let the foot of the sail rise. Easing the luff is usually most advantageous when flying the downwind sails used

with a top-down furler.

On a top-down furler, the furling drum is always attached directly to a hard point with a fixed attachment, such as a shackle. The tack of the sail is then attached to a swivel atop the drum. This attachment can be made with a snapshackle, but to gain the advantage of easing the luff, you can attach a block to the swivel and lead a tack line through it and to the cockpit. When unfurling and furling the sail, this tack line must be taut, but while sailing, it can be eased to enhance performance.

On a bottom-up furler, the tack of the sail is attached to a fixed point on the furling drum with a shackle or a snapshackle. But if the drum itself has been attached to the boat using a block and a tack line led aft, it can be eased in the same manner under sail.

The furling line

Most foil-less furlers are driven by a continuous line, rather than a line that wraps and unwraps around a conventional furling drum. This allows a much larger sail to be furled without the need for a very long line and a large drum.

The furling line is a loop and must be measured to length — from the furling sheave to the cockpit and back — and the two ends spliced together. (Where line guides or blocks, other than snatch blocks, are used to guide the furling line to the cockpit, the line must be threaded through them before it's spliced.) From the drum, the line is usually run through stanchion-mounted line guides back to the cockpit and then attached to a shock cord to keep it secure. A snapshackle on the shock cord will come in handy, as it will allow the furling line to be moved to the best position for hauling on it when furling and moved out of the way when the boat is sailing.

As with a conventional furler, the furling line must be made fast to prevent the furled sail from unfurling unexpectedly. This can be done with a double "over and under" cleat mounted on a stanchion near the cockpit.

Practicing rolling up the flying sail will build up forearms; there is a lot of sailcloth to wind and unwind, much more than in a genoa.

The cable

A cable, or torque rope, connects the drum at the bottom of the furler to the top swivel. That cable, whose job it is to transfer torque from the drum all the way up to the head of the sail, can be made of any number of materials.

Some cables twist more than others. As a general rule, the more twist in the cable, the more tension needed in the halyard to get the furler to work well. A low-stretch halyard (such as one made of Dyneema) can be winched taut enough to allow the furler to work, and

Makers of Flying-Sail Furlers

Several brands of flying-sail furler, bottom-up and top-down, are available, most of them through marine retailers, sailmakers, and rigging shops.

Bamar: bamarusa.com

Colligo Marine: colligomarine.com Facnor: facnor.com Harken: harken.com Karver: karver-systems.com/en Profurl: profurl.com/english.html Ronstan: ronstan.com Seldén: seldenmast.com



Top-Down Advice –Editors

At the Annapolis sailboat show last October we had the opportunity to talk to several vendors of furlers, top-down and bottom-up. Display models had furlers fitted with miniature sails, which allow the whole setup to be studied and operated without the need to peer up the mast through binoculars.

While noting differences between their own products and those of the competition, each vendor was quite clear on one aspect of the top-down furler especially: precise measurement is critical for getting the best performance out of the torque cable and the sail. The two are only connected to each other at the top swivel, so the luff of the sail must be the right length, and the torque cable, once tensioned correctly, must also be of the right length.

À sailor confident in his or her rigging skills could emulate Hugh Johnston by starting with the cable a little long and adjusting downward. The more timid can benefit from engaging the help of the sailmaker, who will have experience in setting up these furlers as well as a vested interest in getting it right. Hugh's staysail is an upwind sail and relatively small, so the wind-up furling drum works, at left. The sail furls around its luff. At the head, Hugh uses an Amsteel pendant. The staysail gives *Hagar* a versatile double-headsail rig, at right.

it will not lose that tension during the day. One manufacturer supplies a cable that hardly twists at all under load, and that cable works best when it is snug but not tightened down.

Each system has a different way of attaching the cable to the drum and top swivel. This step is simple with a Code Zero or a staysail, where the cable is in the luff of the sail. It gets a bit fussier with a top-down furler because the ends of the cable demand some work, more so with products from some suppliers than others. It's worth checking these details when choosing a supplier, and it might pay to hire a rigger to do the ropework.

When I installed my top-down furler, I cut everything way too long the first time and did it over a couple of times while the boat was in the water and the rig was up. This was a great help in getting it right. I even modified the setup after sea trials to push the whole rig out a bit farther from the boat's bow. If I'd not been able to see it live and test it to make sure it worked right, getting the measurements that deliver the right amount of stretch to the cable when it's hardened up would have been too tricky an exercise for me.

Furling and unfurling

When the sail is hoisted for the first time, it will be unfurled, so this is best done on a nice day with little wind. Attach the head of the sail to the top swivel and the tack to the furling sheave. Tie on at least one sheet to keep the whole thing from flapping like a flag. Haul up the sail, set the halyard to the tension that suits the "twistiness" of the cable, and then roll up the sail.

With a more twisty cable, it can take quite a few turns of the furling sheave before the top starts turning. A bunch



of torque builds up in the cable and it has to be released at some time, either when the sail is being rolled up or after it is furled.

Once the sail is furled, it's good practice to uncleat the furling line and ease out a bit of line to let the furling sheave unwind, taking the excess torque out of the cable. Failing to do this could result in the sail becoming a pretzel when it's lowered, and that will make relaunching and unfurling it very difficult.

The firmer the cable, the less this is a consideration. I have a very firm cable, and the only time I have to worry about stored torque in the line is when my top swivel binds.

The magic

The magic started for me when I'd practiced enough with my top-down furler to get the hang of it and become comfortable sailing with it when shorthanded. I have had my furled gennaker up double-handed with a rookie crew on board who only had one week of adult sailing instruction. I had a few epic fails while I was learning, but they made for great conversation with my sailing friends.

I hoist my gennaker at the dock "all rolled up" and take it down at the dock when I return. When rolling it up, I find that continuing to roll up the sheets around the bottom of the furled sail keeps everything tight and lets me sail upwind in a breeze without any part of the furled sail flapping. My top-down roller furler was such a delight that I bought a staysail furler as well. I put a used genoa staysail on the new rig that I can use in heavy weather instead of a Solent rig. This new furling staysail will also come in very handy for reaching, flown underneath my genoa or my asymmetric spinnaker.

Installing a furler is a bit of work, whether it's a headstay furler or a flyingsail furler. If my experience is anything to go by, the benefits are definitely worth the effort. Δ Hugh Johnston, a lifetime sailor from Atlantic Canada, grew up on a Pilot 35. He sailed prams, Flying Juniors, and Lasers in the 1970s, and competed in the 1977 Canada Games. In his mid-30s he moved to the Great Lakes and brought a Ranger 26 from Florida, then stopped sailing to focus on career and family. Five years ago, he bought the dream boat of his youth, a Viking 33, Hagar, which he daysails, cruises, and races out of the Ashbridge's Bay Yacht Club in Toronto. Hugh is the website author of Viking33.com.

Del Viento Meets the Code Zero

When we ordered a Code Zero sail and a Facnor FX 2500 flying-sail furling system for light-air upwind work, the sailmaker requested a luff measurement. "Haul a tape up to the masthead on your spinnaker halyard and then hold it taut at the point on the bow where you plan to attach the furling drum. That's the dimension I need."

I didn't know where I'd attach the drum. My cruising boat's bow looked crowded with pulpit rails, two large anchor rollers, and a headstay with a big conventional furling system. But I hauled the tape and pulled it taut, searching for a good spot that would be well forward of the headstay, clear all the obstacles, and leave room for the drum and furling line. The tape passed through the pulpit and landed square between the anchor rollers. It was perfect, but there was no place to attach a drum.

No matter. I measured the spot exactly where I wanted the drum to attach, a few inches above the

<u>–Michael Robertson</u> tops of the rollers.

tops of the rollers. Then I had a welder attach a simple robust arch between the anchor rollers (mimicking the existing bails) and include an eye for attaching a shackle from the base of the drum.

In Part 2 of this article, which will appear in the March issue, Hugh Johnston will provide some pointers on setting, using, and dousing the gennaker on its top-down furler.



On *Del Viento*, the flying-sail furler attaches to a stainless steel bail welded between the anchor rollers.

We've been using this setup for a few years now, no hitches. When we want to fly this sail, I drag the bag forward, attach the halyard to the top swivel, and raise the furled sail out of the bag, like a snake charmer. When the drum emerges, I connect it, tighten and make fast the halyard, run the furling line aft, and we're ready to unfurl.





BY CAROL SEVERSON

M



New sailors outfit an old boat for a future of adventures

y husband, David, and I have always loved the outdoors and water. We have been avid sea-kayakers and snorkelers. We have owned powerboats, but we tire easily of going up and down a river and filling a fuel tank. For decades, David has wanted a sailboat but was turned off by the prices of new sailboats. But with retirement around the corner, his urge to own a sailboat became a priority. So, for our 36th wedding anniversary, I surprised him with a 25-year-old 1990 MacGregor 26D — it's the first sailboat we've ever owned. But I didn't choose it.

David delivers for a trucking company. On one of his runs, he noticed the MacGregor for sale outside a house near DeKalb, Illinois. He stopped to look at it, but the owner wasn't home. I figured he'd forget about it. I was wrong. A few weeks later, David said he'd seen the boat and wanted me to see it. All I could see was a dirty boat with water leaking into all her storage compartments and lockers. Then David

Seabreeze shows off her new sails, main picture. David made the saloon table, which carries the maritime theme he and Carol chose for *Seabreeze*, top right.



Before Carol and David set to work on *Seabreeze*, her interior was tidy but bland, at left. New cushions, throw pillows, and a mahogany companionway ladder made by David brightened it up considerably, at right. New cushions in the cockpit elevate the comfort level, below, and the lifelines, terminated with pelican hooks, can be dropped to allow easy access to and from the dock.

told me how much fun it would be to teach our grandkids to sail.

In addition to using *Seabreeze* as a grandchild sail-training vessel in our retirement, we planned to enjoy long sailing trips. Both these goals meant we needed to make our boat safe and comfortable. We still had much to learn, so David contacted a local sailing club for help. That's how we met *Good Old Boat* contributing editor Allen Penticoff.

It just so happened that Allen is a sailing instructor and also owns a Macgregor 26D. He took us out for a weekend and taught us the basics of how to sail one. Everything aboard *Seabreeze* was original, and Allen recommended many changes and upgrades. We had a lot to do.

Cleanup

Our beautiful boat was yellowed, chalky, and covered with bird-poop stains. Streaks of rust highlighted the many fittings that had been installed with non-stainless-steel screws and bolts. While David worked on repairs, I attacked the yellow and grime and rust with every product ever made. And we replaced all the fasteners with quality stainless steel fasteners.

We degreased the outboard motor and painted it with motor paint from a local boat shop. When we applied original stickers we found on eBay for \$8, it looked almost like new.



Finding leaks

One of our top priorities was to make *Seabreeze* watertight. We discovered that rainwater was entering the cabin around the screws under the old and brittle rubrail. After removing the rubrail, we rebedded all the screws with silicone and installed new rubrail. (Hint: it takes two people to install new rubrail, one pulling and working it into the groove and one using a heat gun to keep it flexible enough.)

Another source of leaks was the cracked hose on the cockpit drain, which kept storage areas below it wet and ripe for mold. Replacing this hose was simple, but that wasn't the end of the leaks, so we kept searching. Ultimately, removing and rebedding all the chainplates and stanchions finally gave us a dry cabin.

Lifelines

Because I'm relatively short, I don't find it easy to climb over the lifelines when boarding the boat or to make the sometimes necessary leap onto the dock. So we replaced the lifelines and terminated their aft ends with pelican hooks that I can easily open to drop the lifelines and resecure them.

Electrical

With our sights set on sailing the Kentucky lakes or Florida Keys for weeks at a time without having to pay for a berth every night just

to plug in and charge our batteries, we needed more power on board. I like to play my iPod through a Bose speaker, and we planned to install cabin fans. We would also need power for charging iPads and phones, and perhaps to run a portable DVD player so we could watch movies on rainy nights.

Our first step toward increasing our available power was to reduce consumption. We changed all the interior and navigation lights to LEDs.

We also looked into using solar panels or a wind generator. Wind generators require too much maintenance and have a reputation for being noisy, so we decided to go with two 40-watt solar panels, a controller, and a meter. With this charging capability, we find that we can go out for three or four days, run all our power-consuming devices, and still come back with fully charged batteries. And we can even walk on our panels, as they're flexible and not slippery.





Water

We knew we would need to carry water aboard for washing up and doing dishes. Dave came up with the idea to install two 5-gallon jerrycans on the V-berth aft bulkhead and plumb them to the hand pump at the galley sink. The jerrycans are easy to fill, and if we are watching our weight, we can take one out.

Sails

Allen strongly recommended we replace the decades-old original sails, which had lost all their stiffness and shape. I wanted to make sure the replacement sails were the right ones. In this respect, Blue Water Yachts in Washington state was a godsend. They have everything MacGregor. So, for Dave's birthday, I ordered him a new mainsail, genoa, and spinnaker. The new sails made a huge difference in *Seabreeze*'s performance. For water tanks, David installed two jerrycans on the V-berth aft bulkhead and plumbed them to the hand pump in the galley, at left. The sails stow on a hammock over the V-berth, leaving room for grandkids to sleep beneath them. Carol likes everything to have a place, and David provided that for the crockery, silverware, and galley utensils, below left.

The only place we had to stow sails we weren't using was the V-berth, but they left little room for the grandkids to sleep. To solve this problem, Dave installed a removable hammock. It raises the sails above the bed, leaving plenty of sleeping room beneath them.

Cockpit shade

Although I love the wind in my hair and the sun on my face, as a fair-skinned blonde, I burn to a crisp in no time flat. On our second day out sailing, the air temperature was 98 degrees and even using sunscreen I just fried. I was so sick with heat stroke that I had chills and was shaking on the drive home. We ordered a bimini designed for the MacGregor 26.

Interior

We ordered cloth shades for privacy in the forward sleeping area and to cover the portlights in the cabin sides. To make the cabin more comfortable, we wanted new settee cushions. We took the old ones apart; using them as patterns, a local upholstery shop produced beautiful cabin cushions with vinyl sides and backs.

Refrigeration

We did our research and found Orca coolers that claim to keep ice for 10 to 14 days. We tested ours on a four-day trip. We left with food, frozen water bottles, and half a small bag of ice. We opened the cooler to take out meals, snacks, and cold water to drink. When we returned, it still held ice and the water bottles were still frozen.

We know now that finding *Seabreeze* was meant to be. We look forward to years of adventures aboard her, with our grandkids and friends. \angle



Carol and David Severson bought Seabreeze, their MacGregor 26D, with the intent to sail off into

retirement. Now that they have finished all the renovations, they want to share their ideas with others. They are currently putting together a website, sailingon seabreeze.com. The countdown to retirement begins.



Resources

Part of the boat owner's learning curve is discovering useful products and helpful services. Here are some that Carol and David found.

Blue Water Yachts for "everything MacGregor": bwyachts.com

Bass Pro Shops Rust Stain Remover: basspro.com

Star Brite Instant Hull Cleaner: starbrite.com

NewGlass2: newglass2.com

Orca coolers: orcacoolers.com



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From Lifelines to Liferails

Siting solar panels led to an all-around renewal

BY WILLIAM WEIGEL

fter deciding to add rigid solar panels aboard Alembic, our 1981 Whitby 42 center-cockpit ketch, my wife, Helen, and I had to address the question of where to mount them. Alembic's mizzen boom extends aft of the transom, and she also has a transom-mounted windvane self-steering unit. This configuration ruled out the stern arch commonly seen on cruising sailboats. As for mounting panels to the bimini, another favored location, we did not feel that our bimini provides adequate structural support for them. For our boat, the best solution was to mount the panels on rails just forward of the stern pulpit, where they would be less likely to interfere with sailhanding, boarding the boat, or docking maneuvers. To do that, we would have to replace the lifelines in that area with rigid tubing railings.

The distance from the stern pulpit to the closest lifeline stanchion was 12 feet. This is too long a span for unsupported 1-inch-diameter stainless steel tubing, so we decided to add a stanchion each side of the boat just aft of the mizzen shrouds, dividing the 12-foot spans into two 6-foot spans. Stanchion bases are readily available in many different configurations, and after shopping around, we found an exact match for those on *Alembic*. Once the stanchion was in place, our

next step was to add a top and mid rail between the new stanchion and the stern pulpit, using 1-inch stainless steel tubing and associated fittings.

One-inch stainless steel tubing is available in several wall thicknesses. The standard grade is usually 0.049inch wall thickness, but we used a heavier-duty grade with 0.065-inch wall thickness for both the stanchions and the horizontal rails. Constructing the rails from 10-foot lengths of tubing and fittings was straightforward. The critical steps were to take careful measurements for the tubing sections and making square cuts through the tubing. A good hacksaw with a new sharp blade will make a clean square cut.

After cutting all the lengths of tubing, we assembled the fittings to them and locked everything together with setscrews. Although these assemblies seemed to be quite firm when secured with just the setscrews, to ensure their strength and durability, we had all the joints between the tubing and the

Replacing the aft lifelines with rigid railings provided a convenient location for mounting solar panels, main picture. For security, the panels can be stowed vertically against the railings.





William used hinged connectors to secure the railings to the stern pulpit, at top. He used a 90-degree tee with anchor at the forward ends of the aft rails and at the gate ends of the cockpit rails, above.

fittings welded solid. The overall stern railings and pulpit are now made up of three sections: the two aft-quarter sections, with the stanchion and rails as welded assemblies, and the original stern pulpit. We joined the side rails to the stern pulpit with hinged connectors. With the solid rail sections on the aft quarters complete, we attached the solar panels to the top rails using rail mounts that allow the panels to pivot up to a horizontal position or swing down to a vertical position.

Midships security

Our success with the solar-panel rails prompted us to fit a section of 1-inch stainless steel rail to replace the upper wire lifeline alongside the cockpit. The sidedeck next to the cockpit of the Whitby 42 is fairly narrow. Going to the foredeck entails climbing from the security of the cockpit, over the

Resources

For more on replacing stainless steel lifelines with synthetics, see "Making New Lifelines" by David Lynn, March 2013. coaming, and stepping forward around the dodger along this narrow sidedeck. Having a solid rail to hold on to for this maneuver is comforting. We added the section of rail relatively easily by using 90-degree tee fittings placed on top of the existing stanchions.

From wire to synthetic rope

The rest of the lifelines that ran the length of our deck were in need of renewing. Rather than replace them with wire, we decided to use Dyneema rope, which doesn't corrode and is lighter and stronger than stainless steel wire rope of the same diameter. It's also cheaper, and it eliminates the need for swaged terminal fittings. Making an eye-splice in single-braid 12-strand Dyneema is quite easy - we mastered it after watching YouTube videos and practicing a bit. To tension the Dyneema lifelines, we fitted standard turnbuckles to anchor points attached to the ends of the rail sections.

For added security, we ran the length of Dyneema lifeline that leads forward from the aft rail sections through the centers of the railings alongside the cockpit. To accomplish this, we eye-spliced the end of the Dyneema line through the top hole of the forward stanchion and slid a tee fitting down over the top of the stanchion while pulling the Dyneema line out the side of the tee fitting. Because this stanchion is part of the gate in the lifelines, that particular tee fitting has an eye for attaching the lifeline gate. The one that we used is supplied by Sea-Dog and was a special-order item at our local marine store. We used the same fitting on the forward ends of the solar-panel rails.

Sea trials

After nine months, during which time we sailed extensively, including an offshore passage from the Chesapeake to Antigua, the rail sections, including the panel mounts, showed no signs of strain or loosening, and the Dyneema line still looked new. Given the success of this upgrade, we replaced the remaining sections of wire lifeline with Dyneema. This is a typical process on an older boat: each upgrade highlights another part of the boat that is looking a bit dog-eared and due for an upgrade. William Weigel and his wife, Helen, have been cruising full-time since the fall of 2015. They have logged more than 15,000 miles, including two seasons in the Western Caribbean, returning to Maine each summer. In the fall of 2017, they sailed from the Chesapeake to the Eastern Caribbean, and in 2018 crossed the Atlantic to northern Europe. Writing is a new hobby for William.





The Dyneema top lifeline leads from the aft rail, where it can be tensioned with a turnbuckle, at top, all the way through the cockpit rail to the gate stanchion, above.

This section of the Dyneema lifeline is eye-spliced into the top of the gate stanchion, below (shown here before being threaded through the top railing).







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"MUST-DO" REMINDERS

Novelty luggage tags help prevent embarrassing oversights

BY CORY CARPENTER

e all have a checklist, formal or not, that we consult before casting off. Depending on our boats and ambitions, to-do list items can range from "drain plug installed" to "ice in the cooler" to "South Seas charts aboard." I've always kept my checklist in my head, though I seem to recall my memory being more reliable in past decades.

With a new good old boat come new boxes on the checklist. *Bright Eyes* is a Catalina 22, our first trailer-sailer, and even before her hull kisses the sea we need to address a number of tasks that I never had to consider with our previous boat with its fixed keel. While it would be hard to overlook stepping the mast or extending the trailer tongue before backing her down the ramp, I have forgotten to remove her trailer strap at least once.

But no more. I've found an effective and amusing way to remind myself of some of the jobs we have to perform between arriving at the water and setting sail. My idea comes from the world of aviation, where pilots (and ground crew for larger planes) have their own critical pre-takeoff lists to address.

I once owned a couple of authentic "Remove Before Flight" streamers that I purchased at a surplus store. I never found an application for a 2-foot-long flag attached to 3 feet

of steel cable, but I have since found miniature versions that are 5 inches in length and intended as novelty luggage tags. They are widely available on eBay and Amazon in a variety of colors and with different messages, including "Insert Before Flight," "Rescue," and even "Pull to Eject."

The tags are nicely embroidered and include heavy split rings installed through grommets, yet they were so inexpensive that I purchased two lots of 10 for \$16.48, including shipping.





Because I had a surplus, I've made gifts of a half dozen each to friends and fellow Catalina 22 owners. So far, I have installed them on my mast crutch, the bow-roller assembly for my mast-raising rig, and, of course, on *Bright Eyes*' trailer strap. I think on a bigger boat, the "Pull to Eject" flag might appropriately be applied to an overboard discharge valve $\dots \checkmark$

TRUVE EERE E LIDH

Cory Carpenter's uncle taught him to sail when he was in high school. When his family relocated from the Pacific "Northwet," he left his beloved San

Juan 24 behind. He now lives on a subtropical island between the ICW and the Atlantic. There are palm trees but also sand gnats. He writes software for a living, very occasional magazine articles for fun, and is presently refurbishing the latest member of the Free Scottish Navy, Bright Eyes, a 1982 Catalina 22.

continued from page 7



More chain grabbers

I read with interest Drew Frye's article on anchor-chain grabbers ("Anchoring With the Bridle Plate," July 2018). Aboard *Adavida*, our Morgan 382, I use 5/16-inch high-test chain and have two chain grabbers. I rely primarily on the one shown on the left in the photo. It is easy to put on and take off and it holds the chain well.

I admit I don't remember where I found these chain hooks. I have had them for nearly 20 years. Nor have I tested them for safe working load. But they have served their purpose. —Terry Thatcher, Portland, Oregon

Wrench-wrap overflow

The picture accompanying David Lochner's article ("Wrenches in Wraps Won't Wander," September 2018) shows a beautiful, tidy new tool roll with one wrench in each pocket. That's how it begins. However, I can't imagine having only one wrench per size. I need at least two so I can put a wrench on both the nut and the bolt. Of course, I need a set of six-point wrenches for particularly recalcitrant and worn bolts, and my flex-head ratcheting wrench to tighten



the nearly inaccessible bolt that secures the distributor on my Atomic 4. The two flare nuts that attach the copper fuel line to the carburetor are so close to the bulkhead that a set of stubbies comes in handy. Finally, my father gave me a set of Snap-On wrenches, but those only come out on special occasions (royal weddings, for example) and even then, only when there is no chance of them ending up in the bilge or over the side. The result is something like what this picture shows. We won't discuss the stains.

-Stephen Gwyn, Victoria, British Columbia









Hold that beverage

Accon Marine's quick-release stainless steel drink holders use the same mounts as the quick-release fender hangers I reviewed in the September issue ("Quick-Action Fender Hangers"). Like the fender hangers, these drink holders are well made and classy. The universal mount is a rounded low-profile plate that doesn't interfere with lines or stub toes when the drink holder is removed. Pictured is the double drink holder in which I placed a wine bottle and a wine glass. While the holder is perfect as is for cans, bottles, and straight-sided glasses, a wine glass really needs the support of Accon Marine's Wine Glass Holder Insert, not pictured.

For more information: accommarine.com

Nancy Koucky, Good Old Boat art director

Pack that snack



When I was asked to test the Blue Water Bento snack containers by ECOlunchbox, I took one look and said, "They might be great in a household refrigerator, but those lids don't lock and so they aren't going to work in my boat's top-opening fridge, in which items can wind up in a jumble after a short sail." Well, ECOlunchbox insisted on sending samples, and I tested them - thoroughly. The silicone lids go off and on easily, but even when the containers are filled with water and tipped or dropped, they don't leak a drop. Being stainless steel, they clean easily. All sizes and shapes are available, as well as a range of other eco-friendly products.

For more information: ecolunchboxes.com

Michael Robertson, Good Old Boat editor



MagicEzy offers a pair of products that make repairing nicks and cracks in gelcoat the work of a few minutes. MagicEzy 9 Second Chip Fix is a tinted one-part filler, like wood putty but more fluid. I simply scrub out the chip, rinse, and allow it to dry. Then I knead the tube to blend the contents, squeeze out what I need, and use the tail end of the tube to smooth it off level. To seal the fix and create a hard gloss finish, I follow up with MagicEzy Hairline Fix. Done!

Hairline cracks in the gelcoat are even more common than nicks, and fixing them is even easier. I first scratch any dirt out of the crack with a sailmaker's needle, then fill it with MagicEzy Hairline Fix and smooth. (I don't try to cover any area that I can't fill and smooth in 10 to 15 seconds, and I don't work in direct sunlight; this stuff dries fast!). Repairs I've made have lasted three years.

For more information: magicezy.com Drew Frye, Good Old Boat contributing editor







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.

Good Old Classifieds

Boats for Sale



Vineyard Vixen 34 1979. Vineyard Vixen 34 doubleender. Hull #10 of 30 built. 27-hp Westerbeke, newer sails. Excellent coastal cruiser. Mid-Coast ME. \$37,500.

Contact the broker: Gordon Reed 207-650-4167 greed@robinhoodmarinecenter.com



Gary 678-230-1956 gkConcrete@ ConcreteEvaluator.com



Cat Ketch 24 1986 Sand Hen. Chuck Paine design. Draft 2'/4'. Disp. 5,000lb. SA/D 20. Freestanding masts on tabernacles. Sails old but serviceable. New sailcovers. Lines from mainmast lead aft. Honda 4-stroke w/alternator, low hrs, 2x50 AH AGMs. Simrad AP. Solar panel. Sleeps 4. Galley with sink, counter, storage. 100l flexible FW tank. Porta potty. Danforth anchor w/200' rode, 25' chain. Two-axle galv. trailer. Castine, ME. \$7,500.

> Silas Yates 207-326-0663 greendolphinsby@ roadrunner.com



Freedom 25 1984. Good condition. Simple, safe, easy to sail. Hoyt "gun mount" spinnaker system. Yanmar diesel, ST1000 Tiller Pilot, sail stack pack, Icom VHF w/ Command Mic. Yorktown, VA.

\$6,000. Mike Webb 757-810-8318 sailboatmike@hotmail.com



Columbia 28.5 1978. Columbia 8.7. Good old project boat! Selling as is. RF 135% North Sails jib '08, head and galley in good working condition, Atomic 4. Cabin needs renovation due to flooding. Arnold, MD. \$2,000 OBO. Victor C. Urrutia 443-254-6435 vcurrutia@aol.com

January/February 2019

All of these classified ads and more appear on our website GOODOLDBOAT.com



Cape Dory 28

1977. Yanmar 2GM20F 16-hp diesel, RF 135 jib, reefed mainsail, new bimini, Garmin GPS Map 441s, Raymarine ST 2000 AP, solarcharged batteries, new Jabsco head. Origo 2-burner stove, Magma propane grill, standing headroom. Engine serviced recently. Many accessories. Veteran of several East Coast voyages. Owner ready to retire. Galesville, MD. Reduced to \$9,750

Dixon Hemphill 703-250-9277 dixonh999@gmail.com



Bayfield 29

1986. Exceptional small cruiser set up for "off grid" living aboard. Fresh water only. Sails well, can be singlehanded. Well-maintained Yanmar. Due to the addition of grandkids we've bought a bigger boat. Write for extensive list of upgrades. Mackinaw City, MI. \$21,500.

Brad choirboy4@netscape.net



Catalina 30 Mk II 1987. Tall rig, fin keel. Dodger and bimini. Numerous upgrades: new GPS, autohelm, lazy-bag sailcover, jib and main halyards, freshwater pump, engine injectors, PYI dripless packing, SS prop shaft, Cutless bearing. Bottom painted May, '18. Solomons, Maryland. \$23,500.

Alan Suydam 410-394-3150 alansuydam@comcast.net



Cape Dory 330

1986. Alberg's redesign: cutter rig, taller 35' mast, roomier interior and cockpit. *Annie Laurie* is jewel of the fleet, loaded with upgrades: new Yanmar engine in '08, new yankee and Schaefer RF, new main in '12, new Bierig self-tending jib in '16, Hood in-mast RF, new rigging '14, 4 Awlgrip jobs since '00. Solid, safe, a joy to cruise, gorgeous. Perfect boat for couple with occasional guests. Mount Desert Island, ME. \$55,000.

Contact the broker: Newman Marine 207-244-5560 yachtworld.com/boats/1986/ Cape-Dory-330-3220159



C&C 35 Mk I 1973. Rare classic racer/cruiser. Draws 5'3"; fast, nimble, fun to sail. All lines led to cockpit. Solid hull/no blisters. Many upgrades, incl. 30-hp diesel, folding prop, FB main w/Dutchman, RF, 4 headsails, new halyards, bimini. Compass, GPS/Chartplotter D/S/W, VHF. Shorepower, regulated battery charger, dripless stuffing box. H&C water, microwave, propane cooktop. AM/FM/CD, electric bilge pump. Spinnaker/whisker poles, swim ladder, anchor. MD. \$14,500.

John Filipini 703-409-9187 johncfilippini@gmail.com



Camper & Nicholsons 35 1975. Masthead sloop, wheel steering, Mercedez-Benz diesel. Disp. 15,650lb. A serious oceancruising boat, seakindly, sensible and easy to handle. Cowichan Bay, Vancouver Island, B.C. \$36,000 CAD.

David Clegg 250-737-1042 campernicholson35sailboat.ca



Hinterhoeller 28 1966. Freshwater boat. Tiller steering. Sleeps 5. North main new '17, RF genoa. 1988 Mariner 9.9 elec-start OB in well. Autohelm 1000. Raymarine knotmeter. Electrical systems new '15. Plumbing upgrades '15. Life jackets, life ring, MOB pole, cushions, cockpit awning, Danforth anchor w/chain/nylon rode. Custom tandem-axle trailer. Clayton, NY. Price reduced \$8,500.

Mark Fontaine 410-956-5841 mrflady@hotmail.com



Pacific Seacraft 31 1997. William Crealock design. *Starfish* is capable of offshore journeys yet equally at home on protected coastal waterways. In excellent condition inside and out. Yanmar 27-hp diesel, all new canvas, and new diesel heat, batteries, and head. Full listing at www.SwiftsureYachts.com. Seattle, WA. \$89,500.

Ryan Helling 206-378-1110 ryan@swiftsureyachts.com



Pearson Vanguard 32

1966. Freshwater boat with same owner for 41 years. Heated inside boat storage. *Starcrest* is hull number 331 and features the dinette arrangement. Comes with many sails and a newer Universal diesel (only 237 hours). Many extras, including tender, dodger, Autohelm tiller pilot, very nice steel cradle. Holland, MI. \$15,000. Henry Dejong hysinc@gmail.com

616-335-3144



Marieholm 26

1973. Folkboat hull. Full-keel bay or bluewater cruiser (sisterships have crossed Atlantic). 18-hp Yanmar 2GM20 diesel. Custom hard dodger, chart plotter, radios, AP, Max-Prop, Doyle Stackpack main, jib, genoa, spinnaker. Head and galley w/standing headroom. New bottom paint and prop coating '18. USCG documented. Annapolis, MD. \$19,000.

Terry Otis 571-332-4473 terry.otis@verizon.net



International Folkboat 26 1976. Marieholm #2595. Featured in GOB Sept '14. Extensive equipment. 6-hp Tohatsu 4-stroke OB, '11 Sobstad RF jib, Furlex, Andersen #12 ST winches. Additional suit of hank-on sails, solar panel, SIMRAD Tiller Pilot, Delta anchor, new SS lifelines, Boomkicker, soft vang, Schaefer traveler and mainsheet blocks. New Standard Horizon DSC VHF. Raytheon depth. Charleston, SC. \$8 500

> Ken Jacobsen 843-609-9823 kjacobsen@knology.net



Bristol 32

1975. Classic designed by the famous Ted Hood. *Golden Dream* has been exclusively freshwater sailed and well maintained. Hull wrapped in vinyl in '18 and looks great. Recent upgrades include: full suite of B&G/Simrad electronics on NMEA2000 network, New 130 genoa, hull-deck joint resealed, fiberglassed, new toerail installed. Deck refreshed with Kiwi-Grip. Chicago, IL. \$17,000. Luke Wolbrink 708-466-1904

luke.wolbrink@gmail.com



Alberg 37 Mk II yawl 1975. *Shearwater* is a classic bluewater cruiser (always noticed in an anchorage). Second owner. Re-engined w/Kubota-based 37-hp diesel. RF, WS w/AP. Solar panels on dodger and bimini (500W). Complete cockpit canvas enclosure. 3 anchors (Manson, Bruce, CQR) w/200' chain-and-nylon rode. Other additions too numerous to mention. Achilles inflatable w/9.8-hp Nissan OB also available. Kinsale, VA. \$30,000. Tom or Kaye Assenmacher 804-472-3853 tjkasen@gmail.com www.alberg37.org ("Search the Site" for Shearwater)

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Reflections

Are Coaches' Clichés the Key to Success?

A high school sailor questions their value

BY CLARE LEEPER

y former high school sailing-team coach was always telling us "consistency is key." What does that even mean? What if consistency for us was last place? How is that the key to success? There are times when such clichés do apply, but that's usually by chance.

One of the rare occasions when "consistency is key" rang true to me was this past fall season, when my skipper and I were at the qualifying regatta for the Great Oaks Invitational, a national regatta for high school teams. We sailed well and raced well and consistently earned thirds and fourths in the first round. That got us into the final qualifying round, but a couple of 10ths (out of 14 boats) on Saturday and another on Sunday, prevented us from qualifying for Great Oaks. Had we consistently earned thirds and fourths, we'd have qualified. The "consistency is key" cliché didn't help us avoid the costly bottom-of-the-fleet finishes.

I can't tell you how many times I've heard the phrase "high risk, high reward." Another way I've heard coaches describe it is: "If you're in last, and there's even a two percent chance that a risk could pay off, take it." This past fall I started sailing a Laser Radial. By the time the Cressy Qualifiers came, I had sailed the boat eight times. (The Cressy Trophy is awarded to the winner of the National High School Singlehanded Championship.) My goal going into this regatta was simply to not finish last. My reach goal was to get 4th from last (I'm pretty good at setting low standards for myself).

The night before the qualifiers, I was more nervous than I have ever been ahead of a regatta, but by the end of the first day, I was more confident in my skills and had already learned a lot. I was mid-fleet when I made the "high-risk, high reward" decision, based on logic and convenience, to round the right leeward mark instead of the left one, separating myself from most of the fleet. I finished the race 11th out of 25 boats. I have never been more proud of my sailing than I was after that race.

Another cliché I hear from coaches is "Your start is 90 percent of your race." In Lake Geneva, Wisconsin, this past fall, we had more than our share of bad starts. In one race we were shut out at the line and started dead last. With nothing to lose, we took a big risk by ducking the fleet and sailing to the opposite side of the course from the other boats. The high risk didn't lead to a high reward. We didn't finish dead last, but we were close enough. I realized the two clichés are connected. We knew that, according to the cliché, our bad start meant a bad race, so we turned to the "high risk, high reward" cliché.

When I'm racing I have plenty to think about: Where is the wind coming from? Is the boat flat? Are we making progress toward the mark? Are we in clean air? There is a major difference between clichés and the questions I need to be focused on, the answers to which give me information I can act on right there and then. When I ignore those questions and answers and instead focus on clichés I hear so often from coaches, I'm abandoning the tactics that are key to sailing a successful race. Δ

Clare Leeper started sailing at age 6. A high school senior, she races International and Club 420s and Lasers at regattas primarily in Minnesota, as well as sometimes in Wisconsin and Illinois. Sailing is her favorite thing to do and talk about, and she loves her sailing friends and the community within the sport. Clare's next step is to find the perfect college with a sailing team.

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