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Issue 101 March/April 2015

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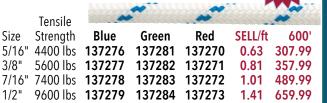
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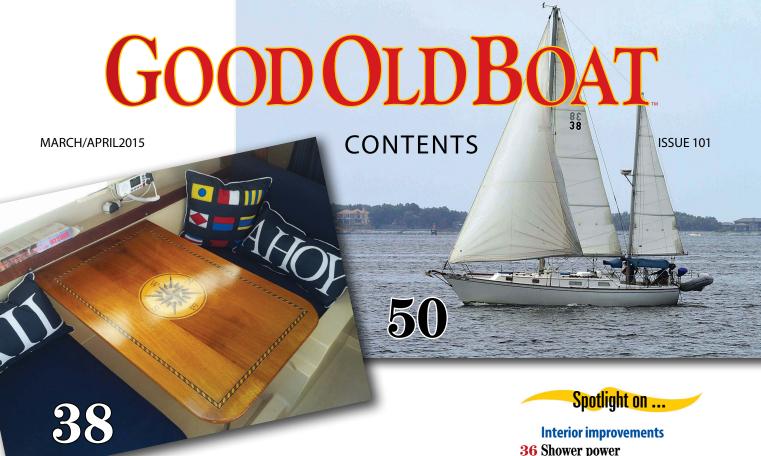
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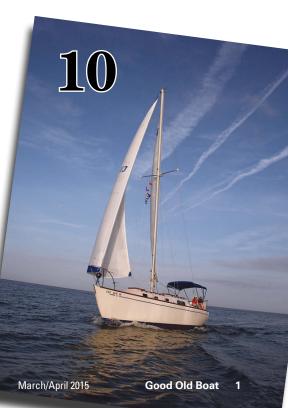
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Cherie Calabrese caught this shot of *Hado*, a 1963 Alberg 35 owned by Joy Sherman. Joy, who has had *Hado* in charter service out of Westbrook, Connecticut, since she's owned her (10 years), says *Hado* means "energy" in Japanese.

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#### **Editors' New Zealand blog**

By now everyone knows about the editors' trip to New Zealand, we're sure. (They've been positively insufferable about it.) There will be an article in a future issue of the magazine. Their blog is posted now: https://goodoldboat. wordpress.com.

#### **Annual index of articles**

Every year we publish in the December newsletter a full list of all articles printed that year in Good Old Boat magazine. You do know about our bi-monthly newsletter, we hope? Here's that issue of the newsletter with an overview of all articles published in 2014:

www.goodoldboat.com/ newsletter/14\_decnews99.php. If you need more, there's also a combined list of articles since issue #1 in 1998:

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Restoring an O'Day Mariner, A fresh bout of old-boatitis . A Cal 34's second life, Number SAILING 101 axial Cable 101, Num crificial Anodes 101, N

chase, refit, and repeat recked in the desert ... (B:

#### Days and Ways to Celebrate 2015



365 Days of Celebrations by Marcie Connelly Lynn CARIBBEAN

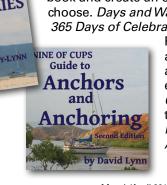
Circumnavigators Marcie Connelly-Lynn and David Lynn sure know how to have a good time. To prove it, Marcie has introduced an ebook with 365 celebrations, one for each day of the year. Build on the ideas you find in Marcie's newest

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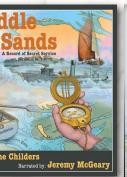
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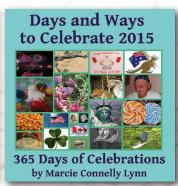
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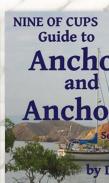
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he first time I heard it, the song brought tears to my eyes. It has had the same effect every time since. It wasn't meant to be sad; it's a song of celebration. So why do I respond with such mixed emotions?

The song was written several years ago by Tom Wells, the official *Good Old Boat* troubadour, pictured above. Perhaps he meant to inspire Jerry, who was trapped in the eternal refit of our C&C Mega 30. Perhaps it was written to help us maintain a positive attitude about the impact of a new addition to our fleet. (Two boats! Are you *crazy*?) Or perhaps this song just came to Tom, as songs tend to do.

He played it for us the first time at a boat show several years ago. It went right to the top of my list of favorite songs by Tom Wells (and there are many). But it made me cry and I couldn't have explained the reason.

The song is called "Mystic Sunflower" (after the names of our two boats). You can hear the song and see a slide presentation that Tom put together at www.goodoldboat.com/resources\_for\_sailors/videos/MysticSunflower.mp4. The lyrics go like this:

One is blue as blue can be Reflects the color of the inland sea She keeps us safe as we sail away To Isle Royale or Thunder Bay

One is yellow and she's born to race But we have given her a brand-new face She'll ride the road and take us anywhere From California to Delaware

What is the next cruise we want to take Gitche Gumee or some far-off lake? Blue or yellow, which shall it be The Great Lakes Lady or the Highway Queen?

One is our old friend tried and true We feel at home in her hull of blue The other we have made to be our home On any waters that we choose to roam When we go we'll have to face the choice They both are calling with a siren's voice And we will treasure anything we do If we choose yellow or if we choose blue

What is the next cruise we want to take Gitche Gumee or some far-off lake? Blue or yellow, which shall it be The Great Lakes Lady or the Highway Queen?

*Sunflower*, the project boat and highway queen, was launched in late June 2014. As planned, we spent the rest of the summer testing and tweaking, sailing and repeating.

We can't give the results a full 10 on the smile meter. The summer was too short, too cold, too windy, too rainy, and over before we'd mastered all the lessons *Sunflower* had in store for us. Learning to live on and sail a much lighter, narrower, and more tender sailboat took some doing. By the time we hauled her out in late September, I was referring to the experience as "the summer of our discontent."

Throughout the season, we agreed that we really missed the boat we have sailed for more than 20 years and know so well... the boat that laid the groundwork for all the comparisons with our new boat. *Mystic*, our C&C 30, is "such a lady," as Jerry always puts it, that the bar was mighty high and horribly unfair.

After some reflection, I believe the song brings tears because I fear we're being disloyal somehow to the blue boat we love so much by adding the yellow one to our fleet. But after a summer of getting to know the new member of the family, Jerry and I have been reminded in every way possible that these are two entirely different boats with two entirely different sets of capabilities and available for two entirely different kinds of adventures.

They cannot — should not — be compared. Each has her purpose, strengths, and weaknesses. It isn't about loyalty or loving one boat more than the other. As the song says so well, it's about cruising Gitche Gumee (Lake Superior) or some far-off lake. Still, the bittersweet melody plays on my mind for days on end.  $\triangle$ 

## Fair-weather sailors, paper charts,



#### **Fair-weather sailors**

My friend Steve Gausebeck discovered an alternative use for folding seat cushions while we sailed his Catalina 27, *Quilty Pleasure\**, on Kentucky Lake on a sunny 40-degree day, November 20. I had set it on the windward cockpit seat for the back to act as a wind deflector. When we exchanged turns at the wheel, I went below to get out of the wind for a bit. When I came out again I found Steve hugging the cushion. He needed it more than I — he'd not brought along his parka. I had seven layers on top plus insulated pants, so I was okay. The "wind block" worked great!

To say we had the lake to ourselves would be an understatement... one fishing boat, one tugboat, several immature eagles, and us, but we had some fine sailing in light wind. Since I iceboat and downhill ski, I feel as long as one is properly dressed, any outdoor activity can be enjoyable, cold or not. So despite our unpredictable Midwest winters, our sailing season ends up being fairly long, when the water isn't frozen solid!

\*The name *Quilty Pleasure* is an allusion to Robin Gausebeck's passion for award-winning quilting.

-Allen Penticoff, Rockford, Ill.

#### **Correction**

Sharper eyes than ours noticed that the true web address for the St. Petersburg Sailing Association is www.spsa.us, rather than the .org address we printed in our January 2015 issue. St. Petersburg Sailing Association is the organizing body for the annual regatta for good old boats held there each January. Our apologies!

-Editors

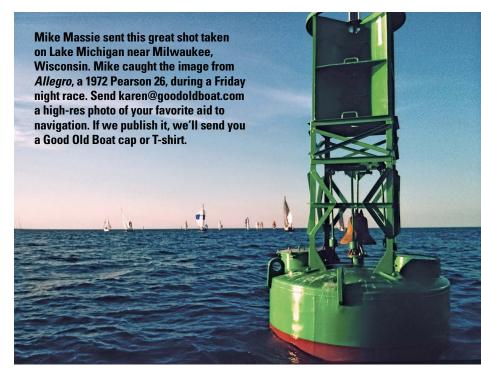
#### On paper charts

Don Launer's "Paper Charts 101" in the September 2014 issue struck a chord with me. My wife and I sail our third sailboat, an Islander 36 named *Holole'a*, out of Ladysmith, British Columbia, in the heart of the Gulf Islands. We are mostly cruisers now and anywhere inside Vancouver Island is our domain.

A few years ago, we made one of our occasional stops in Refuge Cove, the main provisioning port in the Desolation Sound area. A newer Catalina 36 was approaching the dock, so being neighborly, I went to help them tie up. It was fairly obvious there was some serious stress aboard this boat, crewed by a man and, I assume, his wife. The moment the boat touched the dock, the lady was off the boat like a shot and disappeared toward the store.

The skipper was in a rather short-tempered frame of mind and it came out fairly quickly that they were new boat owners from somewhere in Puget Sound. This was their first cruise and the %\*f!!@\*\*?! electronics (pedestal-mounted chart plotter, etc.) had all quit the day before. Guess what? They had no paper charts and no local knowledge. To add insult to injury, their now "de"-flatable looked rather forlorn on the foredeck with one flat hull. Apparently they had ripped it on some sharp oyster shells. There being not much sweetness and light forthcoming from the skipper, my offer of help with the electrical situation was rather soundly rebuffed, so I beat a hasty retreat back to *Holole'a* and probably poured a drink.

We use a laptop navigation program, currently Tiki Navigator using BSB-style raster charts. It's nothing fancy, but



## and mixing elbows

the laptop is located down in the nav station. The disadvantage, of course, is that anyone on the helm cannot see it. The big advantage is that whoever is driving the boat drives the boat, and is *not* staring at the electronic chart to the exclusion of everything in the real world.

We always keep some form of paper charts on the boat. We find them great for seeing the big picture and planning voyages. A lot of the charts are large scale, so they are not always detailed harbor charts but good enough to get somewhere safely. We also have a water-resistant chart holder, clear on one side, that can live out in the cockpit for reference. It is heavy enough to not blow away and yes, Virginia, we do fold our charts. We don't own a ship.

Another reason for paper charts is that I made a rather stupid radio call to the Canadian Coast Guard once, ques-

tioning a broadcast regarding the military exercise area Whiskey-Gulf (WG) in the Strait of Georgia. The navy occasionally plays with unarmed torpedoes, etc., in that area. Think 40-knot telephone poles that probably would not slow down too much passing through a pleasure boat. Anyway, the unusual broadcast was for a portion of that area to become inactive at a certain time to open for the transit of any nonmilitary vessels. Normally the whole area of WG is either closed to transit or open to transit. The longitude they broadcast was not obvious on the electronic chart; it was very obvious (later) looking at a paper chart. Keep up the good magazine.

-John Rodall, Ladysmith, British Columbia

#### **Holding tanks**

I just got my copy of the January 2015

Good Old Boat ... congrats on 100 issues!

I do have some comments to make on an article regarding a homemade holding tank ("Bottom-Up Head Rebuild").

Having designed and built multiple holding tanks and having a very sensitive nose, I see a major design problem with the tank. The discharge should never come off the bottom. Not only is it a potential source for a leak, but it forces waste material to remain in the permeable sanitation hose, which will result in horrible odors within a very few years. It's much better to put in a pickup tube from the top of the tank — zero chance of a leak and the wastewater never sits in the hose. It probably would also have been better to make the tank out of fiberglass with no gelcoat or paint. This way you can shine a light into the tank and see the level without adding windows that could potentially leak. Wood is not a good choice for a tank material. Also, always add two large vents to the top of the tank to help induce a cross-flow ventilation to encourage the growth of aerobic bacteria rather than anaerobic bacteria (the kind that stinks!).

-Dan Stadtlander, West Hartford, Conn.



I noted the article in the January 2015 issue regarding a canvas "hatchboard" with interest. We have a slightly different take on the same item. Ours is unique in that it uses some Pensacola Beach sand sewn in a tube in the bottom edge as a weight to hold it flat and closed without having to snap it at the bottom all the time. We store ours rolled up on top of the sliding hatch when it's not removed entirely in favor of the conventional teak hatchboards. Simple, but a huge convenience when coming and going a lot.

-Rob Hoffman, Nashville, Tenn.

#### **Taming the boat eater**

Reading about Matt Bowser's problems with dust when using an angle grinder to sand a bevel into fiberglass ("Rebuilding a Deck, Part 1," November 2014) makes me once again wonder why we don't slow the grinder's rotation for such tasks. Angle grinders were made for grinding and are a bit overpowered for sanding — hence the term "boat eater" for this aggressive little tool.

I use a Variac, a variable voltage transformer, to tame the boat eater. It delivers a controlled voltage output from near 0 to 120, actually a bit more. The angle grinder has become as easy to control as an eraser and I can use it for rather delicate tasks. It no longer throws dust all over the place. Variacs won't work well with induction motors, but for motors with brushes, they should work fine. I found mine on eBay.

-Henry Bruse, Wisconsin Rapids, Wisc.

continued on page 68



Rare is the man or woman who buys a boat and keeps it for a lifetime, handing the revered craft down to children like a family heirloom. Some people just have simple needs and small dreams, and the relationship with their boat is symbiotic. – Dan Spurr, Yacht Style

he early 1970s were watershed years for the U.S. boating industry, and nowhere was that more evident than on Florida's west coast. In spite of a difficult national economy at that time, Florida, with its growing population drawn to plentiful water, sun, and coastline plus the impact of the Southern Ocean Racing Conference, gave rise to the likes of Charlie Morgan, Ted Irwin, and Bob Johnson who established a Mecca for production boatbuilders.

In 1963, Ted Irwin designed and built the 31-foot wooden sloop, *Voodoo*, in a shed in St. Petersburg Beach. From 1964 to 1966, she won 24 out of the 28 races of the Florida Ocean Racing Association. In 1966, Ted started Irwin Yacht and Marine Corporation. Its initial

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building contained only 12,500 square feet, but over the next decade grew to 75,000 square feet and employed more than 200 people. By the early 1980s, Irwin Yachts was the largest privately owned builder of production sailboats in the U.S. During that time, Irwin designed and produced more than 50 different models. Among them was the 1970-designed Irwin 32.

Between 1970 and 1975, more than 20 North American boatbuilders offered close to 50 production boats in that size range. There's nothing groundbreaking in the design of the Irwin 32. She was offered in full-keel and centerboard versions. Her six-page original brochure, which includes hull construction details, complete specifications, and lists of standard equipment supplied with the boat, can still be viewed on the excellent website www.irwinyachts.com.

How could a prospective buyer choose a new boat and all its equipment from such an extensive list of choices without access to Internet sites like Yachtworld? I asked Merle and Pat Graser, the original owners of *Quest*, an Irwin 32.

#### A family of sailors

Merle and Pat both grew up "on the water," but in totally different parts of the sailing world. Merle began his sailing life in Ohio, where he learned to sail at the age of 14 on a 12-foot Nipper dinghy designed by Ray Greene. He daysailed it on Lake Erie and got his first taste of cruising while "camp cruising" overnight with the Nipper on the Maumee River. After moving to Miami, he owned a succession of one-design boats that he raced with his brother.

Pat was born in Trinidad, where her father was stationed as an airline pilot. He owned a bluewater sloop named *Tawana*. Pat began sailing on that boat at age 3. Coincidentally, both Pat and Merle moved to Miami in 1947. They were employed in the banking business and married soon after they met. In 1963, they moved to the town of Venice on Florida's west coast. Merle became one of the founders of the First

The Irwin 32, *Quest*, was launched in May 1973 and has sailed the west coast of Florida with the same family ever since.

## an Irwin 32...





The Grasers' first boat in Venice was a 20-foot V4, a locally built fiberglass sailboat with minimal cruising accommodations. By the time he was 3, their son, Shaun, was accompanying them on overnight cruises on this small boat. His younger sister, Cathy, soon became part of the crew. By 1971, the family had outgrown the small cabin of the V4. "The kids couldn't turn over in the quarter berth," Pat says.

Merle and Pat began a search for a new boat. They wanted a boat large enough for the four of them to cruise in comfort, but with shallow enough draft for Florida's west coast. They also wanted it to be safe in open water for cruising and to require minimal cosmetic maintenance. If it was built locally, all the better. They attended several Florida boat shows where they saw the Irwin 32 along with Pearsons, Morgans, and others.

Merle was familiar with Ted Irwin's reputation. He and Pat went to the Irwin yard in St. Petersburg. "It was spotless," Pat remembers. "You could





eat off the shop floor." In spite of the fact that they never had an opportunity to take a sister ship for a test sail, they placed their order for hull #113 in November of 1972. Their faith in the Irwin 32 was based on the appeal of her traditional lines, her keel/centerboard configuration, the winning reputation of Ted Irwin, and the fact that she would be built nearby.

#### **Eager owners**

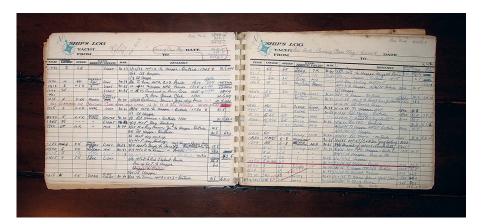
Each week through the winter of 1972 and '73 they drove to St. Pete to watch



Quest's interior is typical of the era in which she was designed: simple, intimate, and functional. Two generations of Grasers have kept her in tip-top shape, updating systems as needed but keeping her 1970s look even when renewing the upholstery.

their boat being built. In May of 1973, their boat was delivered to a boatyard in Sarasota for commissioning. Inspired by the song "The Impossible Dream" from *The Man of La Mancha*, they christened her *Quest*. Just before she was to be lowered into the water, the yard discovered *Quest*'s headstay was too short and asked to delay the launch until the following week.

"You need to make it work today as the Grasers *will take delivery today*," their broker responded. The yard installed a pair of extender plates and



Pat kept a handwritten log of the cruises the family made in *Quest*, above, earning five "cruising" stars from their sailing club. The Yanmar diesel, at right, replaced the original Atomic 4 in 1997, and Shaun and Paula rerigged the mainsheet, far right.

Quest sailed for her home in Venice, about 20 miles south. A week later, Irwin replaced the headstay.

Merle and Pat were impressed by the overall quality and simplicity of the Irwin: minimal exterior trim to be varnished, a simple sail plan that was easily controlled, a centerboard for sailing the shallows of Florida, sufficient accommodations for the family while cruising and, most important, everything worked. The original sails were part of the package ordered from Irwin. "It's a dream boat and handles beautifully," Merle says.

They spent their first season doing some local cruising, occasional club races, moonlight sails, and daysailing. Later that year, they began a family tradition that lasted for 20 years aboard *Quest*: a Christmas cruise to Useppa Island in Pine Island Sound about 40 miles south of Venice. Now that the boat was "broken in," they extended their cruising range to include frequent weekends anchored in Cayo Costa or docked at Useppa Island. Each summer, the family took longer trips to the Dry Tortugas, the Florida Keys, Miami, and the Bahamas.

#### Wider horizons

Their first offshore cruise was a crossing to the Dry Tortugas. Son Shaun navigated using a Bendix RDF. After several hours of sailing, Merle asked him for their position. "Well", Shaun replied, "If this thing is right,



we are in Ft. Meyers on Route 41 near McDonalds." They arrived in the Dry Tortugas without incident. On their return, they ran into heavy weather that continued to build. They reduced sail until they were sailing under the storm jib only while running before 15-foot seas. *Quest* handled it well. The only problem they experienced was a leak around the port running light, which was under water much of the time.

After the children were grown, Merle and Pat continued cruising by themselves. Over the years, Pat kept a handwritten cruising log describing each voyage, something rarely seen in today's electronic world. She dutifully recorded every mile, earning a star on a flag from the Cruising Class of the Sarasota Sailing Squadron for each 1,000 miles of cruising. Their flag carries five stars.

They eventually replaced the hanked-on jib with a roller-furling jib,



much to Pat's delight, as she did the foredeck work. They shortened the boom to accommodate a Bimini and installed air conditioning. Instead of trading boats, they stuck with their trusty Irwin 32, modernizing her with new equipment over the years.

#### Passed down a generation

In 1992, Merle and Pat moved on to trawlers and they turned *Quest* over to Shaun. He introduced sailing to his new wife, Paula, who quickly became as enthusiastic as he is.

In 1997, Shaun and Paula replaced the Atomic 4 with a 27-horsepower Yanmar diesel as the gas engine was becoming unreliable. The work was done by a local boatyard that also had to replace the engine mounts, shaft, and prop. Shaun and Paula rerigged the mainsheet with a bridle, added a vang and Cunningham, and replaced the chainplates and standing rigging. They also installed an autopilot and GPS. In 2013, they added a new North fullbattened mainsail on a Harken Battcar System. They replaced the cushions inside and out and covered the new ones with a plaid fabric to retain the original looks of the boat.

One item that requires replacement on occasion is the centerboard pendant. The inboard and underwater ends of the pendant are connected by a Delrin rod that slides in a tube that's sealed with a stuffing box. The underwater portion of the cable sometimes fails,





Among the additions Shaun and Paula made were a boom vang, at left, and a Cunningham to give them more control of the mainsail's shape. They also replaced the cockpit cushions, at right, and covered them with a material that matches the interior upholstery.

necessitating quick action to plug the tube. "It usually happens in January, when the water is cold," Paula says. They recently replaced that portion of the pendant with Spectra line.

They have also fitted a second high-water alarm and an additional high-velocity bilge pump. The original electric and alcohol combination stove is still on board. The electric top is used when connected to shorepower, and hinges up to allow access to the alcohol burners when the boat is not at a dock. The Grasers never added refrigeration and still use the trusty old icebox.

#### More generations to come

Shaun and Paula continue to use *Quest* primarily for daysailing. "We sail out into the Gulf of Mexico for two hours

and return," Shaun says. "We also do an occasional race now and then," Paula adds. Because Shaun has a successful dental practice in Venice, long-distance cruising is not practical for them.

Shaun and Paula's two older sons grew up sailing on the boat and have become sailors. Although they live in other parts of the country, they often race with Merle and Shaun when they visit their parents in Florida, making it a three-generation family affair.

Because, like Merle and Pat before them, Shaun and Paula have now owned *Quest* for about 20 years, I was prompted to ask Shaun what their plans might be for the boat. "Keep it," he says without hesitation.

With more sailors growing up in the family, it's likely that *Quest* will be

passed on to yet another generation. "I don't think anything will be happening soon," Paula says.

"It is absolutely the perfect boat for us," Shaun agrees. How much more can one boat be loved?  $\Delta$ 

Bill Jacobs has spent nearly 50 years in sailboats and powerboats. His marine photography is displayed in galleries, private collections, and museums, and has been printed in boating publications. His articles have been published in boating publications since 2004. Bill winters in Sarasota, Florida, and cruises on a Mainship 34. In the summer he can be found sailing his Cape Dory Typhoon on Lake Michigan off the shores of Door County, Wisconsin.





Shaun and Paula, above left in the foreground, are teaching their granddaughter, Abigail, the ways of a sailboat as Merle and Pat look on approvingly. At 40, *Quest* shows the care with which she's been maintained and improved throughout her life with one family, at right.

## The Irwin 32 ...

#### ... alongside two contemporary keel/centerboarders

BY ROB MAZZA

Data designed in the late 1960s and very early 1970s embody the later developments of the CCA Rule before the introduction of the new IOR again changed the shape of racing yachts. The CCA Rule was not a pure design rule as such, since it laid down specific dimensions based on length and either rewarded or penalized departures from these dimensions. The result is that the three designs I chose for this comparison are very similar.

CCA designs also represented the last hurrah of the competitive keel/centerboarder on the race-course, as exemplified by the race-winning performance of the Phil Rhodes-designed *Carina* and the Olin Stephens-designed *Finisterre* only a few years previously. The use of the centerboard greatly increases the cruising capabilities of these three boats, since raising the board allows access to cruising grounds with "thin" water. I have to admit a personal affinity for keel/centerboarders since our own C&C Corvette, *Trillium*, is of that configuration.

The Pearson 33 and Tartan 34C are very close sisters to the Irwin 32, since all are CCA-influenced keel/centerboarders from top designers and builders of fiberglass production sailboats of the day. Both Irwin and Pearson used "in house" staff designers; Ted Irwin designed his own boats and Bill Shaw of Pearson designed the Pearson 33. Tartan alone turned outside to the design firm of Sparkman & Stephens that had been so successful with previous Tartan products.

The other commonality between the three designs is the evolving separation of keel and rudder by the removal of the "deadwood" between the two in order to substantially reduce wetted surface area. This creates two separate specialized areas of lift: the keel and centerboard are primarily responsible for countering leeway and the rudder provides maneuverability and directional stability. This was a design



	Irwin 32	Tartan 34C	Pearson 33
LOA	32'	34' 5"	32' 11"
LWL	25' 0"	25' 0"	25' 91/2"
Beam	9' 8"	10' 2"	10' 0"
Draft (board down)	7' 10"	8' 4"	7' 7"
Draft (board up)	3' 6"	3' 11"	4' 0"
Displacement	11,500 lb	11,200 lb	10,930 lb
Ballast	5,000 lb	5,500 lb	4,200 lb
Beam/LWL	0.39	0.41	0.39
Disp./LWL	329	320	284
Bal./Disp.	.43	.45	.38
Sail Area (100%)	498 sq. ft.	527 sq. ft.	492 sq. ft.
SA/Disp.	15.6	16.8	16.0
Capsize Number	1.7	1.8	1.8
Comfort Ratio	31.9	28.3	28.2
Years built	1970-1974	1968-1978	1969-1975
Designer	Ted Irwin	Sparkman & Stephens	Bill Shaw
Builder	Irwin Yachts	Tartan Marine	Pearson Yachts

trend established on the racecourse in the mid-'60s by the success of the Bill Lapworth-designed Cal 40 and the Cuthbertson & Cassian-designed *Red Jacket*. Note that all three comparison boats employ fixed skegs ahead of and supporting the rudder, with Irwin opting for a partial skeg with a "horn" on the rudder for improved balance.

Note as well that the Tartan and the Irwin hide the prop in the wake of the keel, while the Pearson houses the prop in an aperture in the skeg immediately in front of the rudder. This necessitates removing the rudder before the prop and shaft can be removed, but does improve maneuverability at slow speed under power, since the rudder can more effectively deflect the prop wash.

I included the Tartan 34C in a previous design comparison of the Morgan 34 (see July 2013). Like the Morgan 34, the Irwin 33 incorporates the blended doghouse in the after part of the house for increased headroom in the galley area. This makes, to my

eye anyway, a pleasing profile and a good looking boat, especially with her reverse transom aligning with the angle of the backstay. The Pearson 33 also has a reverse transom, while the Tartan has opted for a conventionally raked transom to achieve more deck area aft and a longer LOA.

All three boats also have single-spreader masthead rigs, with the Tartan pointing the direction toward smaller mainsails and larger overlapping headsails and larger spinnakers, a trend that would become even more pronounced under the IOR rule that incorporated the same sail-measurement procedure as the CCA rule.

In comparing the "around the buoys" performance of these three boats, I'd have to give the edge to the Pearson

with her longer waterline length and lighter displacement. These give her a substantially lower displacement/ length ratio of 284 compared to those of the Irwin and the Tartan at 329 and 320, respectively. This would be of particular advantage running and reaching in any sort of breeze. However, the larger sailplan of the Tartan, which results in a sail area/displacement ratio of 16.8 compared to 16 for the Pearson and a low 15.6 for the Irwin, gives the Tartan the edge in lighter air where waterline length is not as important as increased sail area. Her higheraspect-ratio sailplan will also be an advantage in these conditions. All of the boats' capsize numbers are under 2 and thus guite conservative and safe, and their comfort ratios are similar. The

Irwin has a small advantage in both due to her slightly narrower beam.

All of these boats are pretty to the eye, with pleasing sheerlines, moderate CCA-type overhangs, and good balance between freeboard and house height. The Irwin, however, has an ever-so-slightly rounder stem profile, while the Tartan and Pearson extend the bow line in a straighter profile. All are fine examples of boats designed to exploit the best features of the CCA Rule in its later years.

Rob Mazza is a Good Old Boat contributing editor who, in his long career with C&C and in other design offices, has contributed enormously to the enjoyment of those who sail and own good old boats.





## **Wiring Terminals 101**

#### Making the right connections

BY DON LAUNER

or electrical wiring aboard boats to meet recognized standards for safety and reliability, wires should be connected to equipment and other wires by means of terminals attached to their ends. A wire should never be wrapped around a screw on an electrical terminal-board, and wire nuts used for household wiring should never ever be used for connecting wires together on a boat.

Wire terminals aboard boats must be able to survive harsh conditions — salt air, salt water, oil, heat, cold, and vibration — and not all electrical terminals are created equal. When doing a wiring job on your boat, use marine-grade terminals rather than those from the local hardware store.

#### **Crimp-on marine terminal**

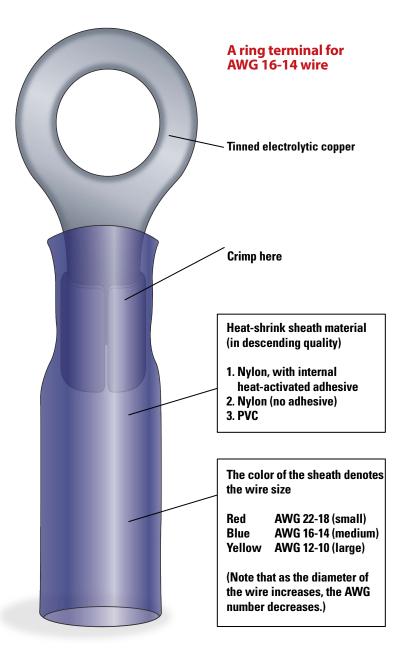
A crimp-on marine terminal is made of electrolytic copper that is tinned to reduce corrosion. Electrolytic copper is highly malleable. This allows the crimping tool to easily compress the terminal's shank around the wire without fracturing the copper. Terminals come in a huge variety of shapes and sizes, the most common of which are the ring, spade, butt, quick-disconnect, and snap-plug.

The round shank of the terminal where the wire is inserted must match the wire size being used, and the shrink-tubing covering the metal shank of the terminal is color-coded to indicate the wire size for which the terminal is intended (see the illustration at right). The shrink-tubing covers the shank and part of the insulation of the inserted wire, reducing or eliminating the intrusion of substances that might adversely affect the electrical connection. Although PVC is usually used for the shrink-tubing on terminals purchased at a hardware store, PVC tends to become brittle with time and crack, reducing the terminal's ability to stay dry. For marine terminals, the best covers are nylon sheaths that have a heat-activated adhesive on the inside. These seal the terminal sheath more effectively and also reinforce the bond between the wire and the terminal.

#### Wire gauge

16

The diameter of the conductor in a wire determines the wire's current-carrying capacity. For marine wiring, this diameter is specified using the American Wire Gauge (AWG) system (See "Marine Electrical Wire 101," July 2014). In this system, the larger the number the smaller the conductor's



diameter, and conversely, the smaller the number the greater the conductor's diameter. Thus a 16-AWG wire is small, with a conductor diameter of about .06 inch, and a 0-AWG wire has a large conductor diameter, nearly .5 inch, along with a high current-carrying capacity.

# Crimping a terminal Crimping tools vary tremendously in price. A ratcheting crimper will cost

Crimping tools vary tremendously in price. A ratcheting crimper will cost rather more than an inexpensive tool from the local hardware store but will ensure consistent and reliable crimps. The best professional-grade crimpers can cost \$1,000 or more.

Before crimping a terminal, strip the insulation off the end of the wire. Most hand-held crimping tools also have wire strippers, so select the wire stripper that matches your AWG wire size. Insert the wire into the terminal's shank. Then, using the appropriate die in the crimper, position the crimping tool over the shank of the terminal and squeeze the handles. Check each crimp for mechanical and electrical soundness by trying to pull the terminal off the end of the wire. When you have determined the connection is mechanically strong, it's time to shrink the sheath.

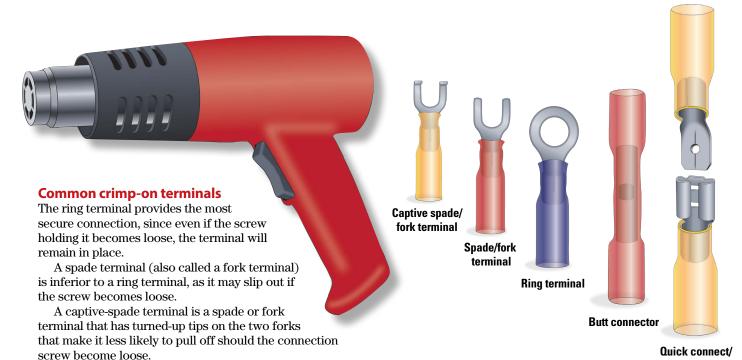
This is most easily done using a heat gun, similar to a hair dryer but hotter and made just for this purpose. As the heat shrinks the tubing, it activates the adhesive on the inside.

A butt connector is used to join the ends of two or

more wires together. Step-down butt connectors are available for connecting wires of different AWG sizes. Quick-disconnect terminals allow a quick way of connecting or disconnecting equipment. These terminals should be limited to currents of less than 20 amps.

Three- and four-wire connectors are used for joining multiple wires together.  $\Delta$ 

Don Launer, a Good Old Boat contributing editor, built his two-masted schooner, Delphinus, from a bare hull. He has held a USCG captain's license for more than 40 years and has written five books. His 101 articles through November 2011 are available for downloading as a collection from the Good Old Boat download website, www.audioseastories.com. Look under Archive eXtractions.



disconnect terminal



#### The diagnosis was elusive and surprising

BY ED ZACKO

ur passage up France's Seine river from Honfleur to Rouen was uneventful. We ran all day with *Entr'acte*'s engine humming along at 3,100 rpm. With 180 miles yet to travel before we would leave the current of the Seine River behind and enter France's tranquil canal system, during our stay in Rouen I inspected the engine very carefully to avoid further problems with blockages (see "Dead in the Water," January 2015). Then off we went toward Paris.

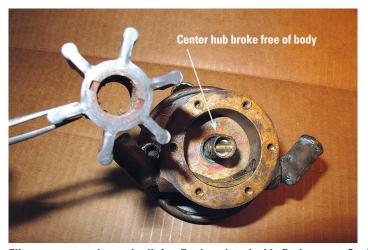
At Amfreyville, we entered the first lock. As we prepared to exit the lock, our temperature alarm sounded. No water was coming from the exhaust, and my heart sank as I immediately shut down the engine. The lock keeper pointed to a large mass of cut grass and weed that had floated into the lock from

upstream. We warped *Entr'acte* to the head of the lock away from the weed, re-started the engine and — voilà! *Beaucoup de l'eau!* False alarm! Off we went in the company of *Dolphin II* out of the UK, with whom we had shared the lock. Hour after hour, we both slugged along at 3,100 rpm making a slow 2.5 knots over the bottom. It was late May and the Seine was still in flood. Paris seemed a long way off.

The cruising guides show many opportunities to tie up between Rouen and Paris, but these are widely spaced, hard to find, and in some cases — despite what the guides claim — no longer exist. By late afternoon, the crews of both vessels were becoming anxious. The sun was going down and the promised tie-ups did not appear. We had only two options left: a set of steel

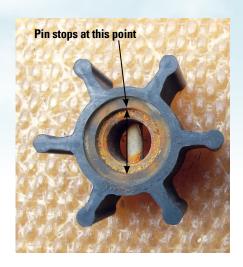
pilings set among the trees close to shore or a "promised" marina just half a kilometer ahead on the left among a small group of islets. Due to current, traffic, and water depth, anchoring was not a safe option.

We could see boats tied up behind the island, but neither the chart nor our three cruising guides showed any way in. The charts and guides do not show any depth information and there were no channel markers anywhere. As we cleared the headland, *Dolphin II* headed directly toward the boats and immediately ran aground. At that moment, our alarm sounded again and, sure enough, we had stopped discharging water. I shut down the engine and we drifted downriver out of control back toward the pilings. *Dolphin II* got off the bottom quickly,





Ellen expresses glee and relief at *Entr'acte's* arrival in Paris, at top. On the way, the engine had overheated frequently due to a damaged impeller in the raw-water pump, above. The center hub, which held the pin that engaged the drive shaft, broke loose — but gradually.



towed us to a piling, and disappeared into the dark in search of deeper water.

#### No apparent cause

First thing in the morning, I removed the water pump and, to my surprise, the impeller was completely intact. I reinserted the impeller, and on starting the engine was relieved to see a healthy water discharge. We hung onto the pole for 20 minutes with no problem and decided that we must have picked up more river debris in the intake — a common occurrence on rivers and canals. We disconnected from the piling and set off into a beautifully crisp, clear morning toward Paris and in search of *Dolphin II*.

Three hours later the alarm went off again. We moved toward shore and let go the anchor, right next to a large, very descriptive sign that said: "No Anchor!"

Here we sat in a 4-knot current out of everyone's way and in no danger as barge traffic passed from both directions. The no anchoring sign was a bit unsettling, but we made a pact that when we went to jail I would get the upper bunk, and I calmly set to work to solve this problem.

Again, I removed the water pump and inspected the impeller very carefully. It had seen less than 20 hours of service. It looked and felt perfect, supple rubber, no cracks, no broken blades, no deformity in any blades, perfect! I next removed the thermostat. New though it was, sometimes you get a bad one. I was surprised to find it *open*! To cause overheating, it would



have to be stuck in the closed position. As a gamble, I re-installed the old one. On starting the engine, we could see the usual abundant discharge of water at the stern. After idling for 20 minutes, we were cautiously under way, keeping the rpm to a modest 2,200 and traveling as close to shore as possible. At the lower speed, it was a slow go of only 1.5 knots against the current, but we were making progress . . . until 1400 when we heard the sound of the exhaust change from the usual "whoosh, sploosh" of water to the metallic "pong, pong, pong" of a dry exhaust.

This time, the anchor bit just as the alarm sounded and we shut down the engine. This was no longer fun. I had a spare water pump I had just rebuilt. I installed the spare and we were off again. By late afternoon, we found *Dolphin II* tied to a floating pontoon. They motioned us to tie up astern. As we went into reverse to back down, that now familiar and unwelcome "pong, pong, pong" sound returned and just as we made fast to the dock the alarm sounded once more.

This was embarrassing! *Entr'acte* had become "the catastrophe boat," badly maintained and always in trouble. Were we now the boat to avoid? I was getting angry!

#### A more thorough probe

Somewhere inside the cooling system there had to be a blockage. Slowly and purposefully, I removed every hose from the cooling system and pulled a dockline through each hose to clean out

In the new style of water-pump impeller, far left, the retaining pin does not extend past the metal hub. In the old design, near left, the pin passes completely through the body of the impeller to hold it captive.

any salt deposits (and there was indeed much to remove.) I did not stop there. I next removed both engine zincs, the thermostat, and its cover. Probing the depths of the cooling system with my fingers produced no debris that might clog the system.

I next took a hose and poured water into and through every opening in the cooling system, first from the top down and then from the bottom up. I exercised the greatest care to not pump water into the cylinders. That would have been a disaster. I was pleasantly surprised to see water running freely through all the openings of the engine block. There was no evidence whatsoever of any blockage or obstruction inside this engine. Finally, using a piece of stainless-steel wire, I probed and cleaned the orifices of the thermostat cover and again found nothing amiss. Leaving no stone unturned, I once again opened the water pump to check for possible debris, but saw nothing untoward in there.

And then King Neptune smiled on my efforts. Just before replacing the cover plate on the pump, I turned the pulley as I was looking at the inside of the pump and was stunned to see that, although the pulley was turning, the impeller blades were not. I rotated the pulley once again. The blades remained motionless while the center spindle of the impeller was turning.

I pulled out the impeller. Lo and behold, the rubber blades came apart from the center spindle, leaving the spindle behind. I have never been so relieved. But how could this be?

Our new batch of impellers differed substantially from the former design. In the old design, the drive pin passed all the way through the body of the impeller, much like the shear pin on an outboard motor's propeller. The new design has a much shorter drive pin that

only passes through a center hub that is somehow bonded to the outer body. It was this bond that had broken loose.

Everything was suddenly clear to me. The problem was a direct result of the event several weeks before when both passages of the exhaust mixing elbow became clogged. With the water passage blocked, when we pushed the engine to 3,100 rpm, the stress on the water pump impeller must have been severe enough to weaken the bond between the center spindle and the outer body of the impeller. The bond, although weakened, still had enough friction to turn the blades once the blockage was cleared. Eventually, the spindle began to slip at high speed, although it could still maintain traction to work normally at lower rpm ... until the bond failed completely. There was no way to foresee this type of fault without looking and testing specifically for it. Since I had never seen or even heard of such a failure, I did not look. I will be watching for it in the future.

#### Paris at last

Our final two-day run toward Paris was tense. With a new impeller, the engine was back to normal, but we were gun-shy, traveling close to shore at a low rpm and always on the lookout for an emergency anchorage. Local advice was to enter Paris just after sunrise to avoid the chaos of workboats, barges, and tour boats. Our plan was to stop for the night five miles outside Paris just after the final lock. If we got under way at 0600 the next day, we could enjoy a leisurely entry into Paris, snap some great once-in-a-lifetime photos, and arrive at the Paris Arsenal Marina by 0800, before everyone else was awake. It was great plan but, alas, this was not to be. Despite the numerous

locations shown in the guides, we could find no place to stop. Every available space boldly displayed "No Tie Up" or "No Parking" signs, so we carried on, always on the alert for the sound of the engine alarm.

Entr'acte passed the Eiffel Tower exactly at noon amid as much river traffic as can be imagined: boats of all sizes zooming around from every possible direction, each on its own mission. It was truly a spectacular sight. One mile from the marina, we approached the final hurdle, a "one-way-traffic" bridge. Traffic is controlled by signal lights that switch from red to green at set times every hour. If you miss the green light for your direction, you must wait. We drove hard against the current but - just as we reached the bridge — our light turned red and the downstream traffic began. We moved off to starboard and spent

#### **Lessons and caveats**

#### Never reuse an impeller

It sounds absurdly wasteful, but to reuse a water pump impeller is false economy. Our normal practice has always been to change the impeller every season. When cruising full time, we change it once a year.

Also, remove the impeller when the boat is laid up. Left inactive for months, the blades will sit in one position and "take a set." When returned to service, the impeller might not provide the same vacuum, especially at higher rpm.

#### Be mindful of collateral damage

When something fails, do not address the failure only. Think about what impact that failure might have on other components.

Upon replacing our exhaust mixing elbow in Honfleur, I should have changed the impeller. Even though the water pump and its impeller were not in any way the cause of the blockage, the resulting back pressure inside the pump severely compromised the impeller in a way that could not be seen, even upon close scrutiny. I had never seen nor heard of an impeller failing in the manner we discovered. Throughout this entire saga I continued to reuse the same

impeller because it was "new" with few hours on it. Had I changed the impeller along with the mixing elbow, the rest of the problems would not have occurred.

In the aftermath of the impeller failure, I resolved to find replacements of the "old style" where the pin passes completely through the impeller. This, after great effort, I accomplished, but apparently to no avail. Even this seeming foolproof design is prone to exactly the same sort of failure. Over a period of six months I saw three such failures and they were of both designs. The moral is to change your impeller often and carry spares. They just don't make them like they used to.

#### Stress plays a role

Keep your cool, no matter what. Try not to allow ego and emotion to get the better of you. This is not an airplane falling out of the sky. On a boat, you have time to have a cup of coffee and think carefully about the problem and how to address it . . . in most situations!

#### Never run an overheating engine If your engine's temperature alarm

If your engine's temperature alarm goes off, shut down the engine immediately. To run an overheating

engine for even 30 seconds is courting disaster. The excess heat will warp the cylinder head, resulting in a blown head gasket. There is also significant risk of cracking the cylinder head or even cracking the engine block itself. You can then kiss your engine good-bye. If the engine runs in this state for several minutes, the metal will eventually expand so much that the engine will seize and stop. Most of this is terminal.

Keep an ear tuned to the sounds of your exhaust. If you no longer hear water being discharged overboard, shut down the engine immediately and investigate.

#### **Read the manual**

Everyone should have on board the manufacturer's manual for their model of engine. Read it before and during any repair or maintenance job. I know our engine inside out and upside down and still missed something simple. The arrow on the thermostat cover is clearly mentioned in the manual. Referring to the book while making a repair, even a familiar one, might remind you of something important and save you hours and days of frustration.

a very long hour holding station in the current just off a stone wall from which protruded a large, ancient, and inviting steel ring. At the first sign of trouble, we agreed, we would grab that ring no matter what. An eternity later, our light

turned green, and Entr'acte crept under the bridge and locked through into the marina without further drama. sedate 1,600 rpm. I related the drama to John and confided that I had been ready to spring for a new engine at the first opportunity... but since discovering the bad impeller, I told him, "Everything is now OK and our engine troubles are

... most problems have very simple solutions, but this one was baffling!

Into the canals

Two fabulous weeks later, *Entr'acte* departed Paris, leaving the river and current behind to enter the Canal Lateral à la Loire. On board were our friends John and Paula of the yacht *Mr. John*, who were taking a break from their Pacific wanderings to make this canal trip with us. John is a retired container ship captain and a good man to have on board.

For two days *Entr'acte* made a steady 4 knots through flat water at a

a thing of the past." The words were barely out of my mouth when the alarm sounded again. Fortunately, the canal was narrow, and it was a drift of only a few yards to the bank and an easy tie-up.

After a long lunch while the engine cooled, I removed the thermostat from the engine. This was the last trick I had up my sleeve, the only move I had left. If this did not work, the engine would go over the side. It's not good for the engine to run it without a thermostat, but it is far better than constant

overheating. For the next five days the engine performed flawlessly, but I was going crazy. Why was this happening?

I could not believe that our engine went from extremely reliable to completely unreliable overnight. Over

the years, I have discovered that most problems have very simple solutions, but this one was baffling! I had done everything, tried everything, cleaned everything,

changed everything. There was nothing left! By then I feared that, even if I were to change the entire engine, it would probably still overheat.

Minus the thermostat, things seemed to settle down as we drifted calmly across France, but I knew it was a short-term solution. It nagged at me day and night. I was missing something fundamental.

One gorgeous afternoon, *Entr'acte* sat 5,000 feet above sea level in the most picturesque setting imaginable. Wild horses grazed in the field next





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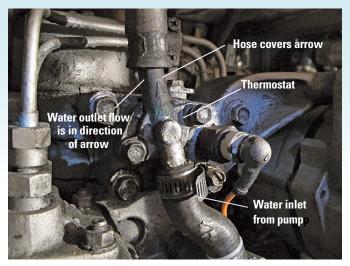
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An arrow on the thermostat housing indicates the direction in which water should flow, but this arrow is covered when the hose is installed, above left. The thermostat housing is symmetrical in appearance, above, and will fit the wrong way just as easily as the right way. Inside the housing it's a different story, at left. The inlet and outlet clearly must not be reversed.

to us. On the other side of the canal, acres of grapes stretched forever toward a magnificent chateau in the distance. All was right in our world. We had just finished lunch and the afternoon entertainment was moving both thermostats from hot to cold water, timing them and watching them open and close. No problems there!

#### Inspiration and a solution

It must have been the relaxed atmosphere, because that night I finally slept like a log. Suddenly at 0200 (why is it always 0200?) I bolted awake. I had it! I was so excited I had to fight to keep from tearing into the engine room right then. It was so simple. What a dunce I had been.

After breakfast I dove into the engine room, praying for all I was worth. I removed both hoses from the thermostat cover and looked closely at the cover itself. Yes, yes, *yes!* Sure enough, embossed quite clearly on the cover

but hidden under a hose was an arrow to indicate the proper flow of water. The cover should be mounted with the

arrow pointing up. I had mounted it upside down.

The thermostat cover has two ports, an inlet and an outlet. Viewed from the outside, the hose barbs appear identical. Inside the cover, however, the orifices are not only of a different size, but each is oriented differently to the flow of water. The water is supposed to flow through the open thermostat into the engine. With the cover inverted, the water pump was pumping seawater into the outlet and directly onto the top of the thermostat, rather than through it. This restricted water flow into and through the engine. Some water could flow, but only enough to cool the engine at low rpm for a short time. The temperature would gradually rise and finally set off the alarm, especially if we raised the rpm for any reason. As far as the engine was concerned, the thermostat was constantly closed.

When dismantling the cooling system to clean out the hoses, I had

been under quite a bit of stress and inadvertently installed the cover upside down. The cover can be installed easily in either orientation, hence the arrow. But in the heat of battle, that arrow is very easy to miss, especially when it's completely covered by the hoses.

Confession: I knew about the arrow and that the cover had to be mounted with the proper orientation. Over the years, I have even reminded others to watch out for it, but through a simple confluence of events, circumstance, and stress, I assembled it backward and paid the price in frustration.

Now all is well. Entr'acte's engine is back to normal and runs for hours and days on end as happily as it did before. It's magic!  $\Delta$ 

Ed Zacko is a Good Old Boat contributing editor. He and Ellen met while playing in the orchestra of a Broadway musical. They built their Nor'Sea 27, Entr'acte, from a bare hull and since 1980 have sailed across the Atlantic four times and the Pacific once. Ellen and Ed now split their time between cruising in Entr'acte and playing in the jazz clubs of Spain, France, and Morocco. Follow them at www.enezacko.com.

BY CLIFF MOORE

G-10 steps up

A mast gets a new foot to stand on

I've always been in the habit of pulling my mast when I lay my boat up each fall. It adds to the annual cost, but it's better in the long run. For one thing, it makes it easier to cover the boat, a 1981 Paceship PY 26, and there's less risk of the boat being damaged by winter storms.

Pulling the mast also allows me to inspect the masthead and rigging up close without worrying about falling out of a bosun's chair. Occasionally, I find something at the masthead in need of repair, such as frayed rigging wire or a bad anchor light, and addressing it is easier on the hard. But a few years ago, the trouble lay at the base of the mast.

As I was cleaning out the boat, I found a crack running from side to side at the after end of the all-aluminum step ... right under one of the big nuts that held it in place on the keel. I wiggled it with my fingers and it came apart in my hand. The step had been secured to the keel with the stainless-steel keel bolts that fasten the cast-iron keel to the boat. It was a textbook recipe for electrolysis and that, I knew, is never good.





A link on a website devoted to Paceship owners led me to a source — Rig-Rite — for a replacement mast shoe. If memory serves me correctly, it was somewhere north of \$100, but not by much. I was happy they had one at any price for a 30-year-old boat.

#### A non-corroding substitute

The remaining problem was how to deal with the corroded mast step. One of the boating magazines had an article about G-10 and how it could be used for backing plates under cleats and other deck hardware. It could even be used, in larger sizes, for engine mounts.

Although it sounds like the name of a group of economists, G-10 is a composite of fiberglass and epoxy, and it's available in a wide variety of dimensions and shapes.

I'm an empirical armchair engineer with no formal training, but it seemed to

The original mast step was in dire shape, top of page, as the result of years in contact with stainless-steel keel bolts. The G-10 replacement, while not pretty after two years in the bilge, is still intact, at left.

me that a material with a compression strength of 60,000 psi, a modulus of elasticity of 2,700,000 psi, a Rockwell hardness of 110, and a specific gravity of 1.82 should be plenty tough, plenty hard, and plenty heavy. Also, it had the qualities of being impervious to water, essentially non-absorbent, and non-conductive to electricity, thus would shield the mast from further corrosion due to contact with stainless steel in bilge water. It sounded ideal.

A little research indicated that G-10 could be milled, drilled, cut, and shaped like a hard piece of metal, but that any tools used with it should be carbide-tipped. I found it available online in flat sheets of various thicknesses, as well as in different shapes, such as tubes, bars, rods, and angled pieces. In fact, not too far from my home in New Jersey, McMaster-Carr had a warehouse with an amazing variety of thicknesses and sizes. It's also available from Jamestown Distributors, one of my favorite suppliers for stainless-steel and bronze hardware.

I found carbide jigsaw blades at my local hardware store and used only two of them for the entire job, plus a couple of carbide drill bits and an ordinary tap for a 5/16-inch bolt. However, the G-10 was so hard, and its position in the bilge is of "out of sight, out of mind," that I left it pretty rough, except for softening the edges with a sander. There was no way I was going to make this pretty, with nicely rounded edges, as I might have if I had used wood. I advise wearing protective gear when cutting, drilling, or sanding this stuff, as it will produce a lot of fiberglass dust. Don't breathe it.

#### Plan and execution

My plan was to remove the old mast shoe and cut away enough of the mast (about ¾ inch) with a hacksaw to remove the corroded part. I did that, then built a new mast step from G-10. The old step was 2 inches tall. The new one would have to be taller to offset the slightly shorter mast.

Referring to the old mast step as a model for its replacement, I ordered a 24 x 24-inch piece of <sup>3</sup>/<sub>4</sub>-inch-thick G-10 from McMaster-Carr for \$311.

Using an ordinary jigsaw with a carbide blade, I cut a piece of G-10 the length of the original step (about 18 inches) and roughly the width of the bilge (6 inches), leaving space for any water in the bilge to wash along its sides. This was to be the base and, at ¾-inch thick, it allowed the tops of the keel bolts to be exposed.

I cut a second piece as a spacer to make up for the shortened mast. Then, using the new mast shoe as a guide, I cut a third piece big enough



The old mast foot was severely corroded, as was the base of the mast around it.

to fit directly under the mast and cut a beveled slot in it to hold the tenon at the bottom of the mast shoe.

Once I had the upper section of G-10 cut out and properly shaped, I drilled

and tapped holes to hold four <sup>5</sup>/<sub>16</sub>-inch bolts. I then glued the three pieces of G-10 with epoxy and tightened the stainless-steel bolts to secure them together. The bolts were isolated so they would not touch either the keel bolts or the mast. It seemed like belts and suspenders, but this way, I felt the pieces wouldn't be likely to slip or slide under the tremendous sideways pressure the mast would exert when the boat was under sail.

Once I felt confident about the location of the upper portion of the new step, I used the original step, what was left of it, as a guide to cut holes for the two keel bolts holding it in place.

I tightened the keel-bolt nuts with a torque wrench to the builder's specifications (about 90 foot pounds), and used 3M 5200 sealant around the bolt holes. When the mast went in, the rigging wire fit well enough. Even though the step was, in effect, about 1/4 inch lower than it had been before, enough threads were showing on the





The tenon that sat in the mast step was also white with oxide.

turnbuckles that I could easily take up any slack in the shrouds.

My boat had been struck by lightning in the recent past, so I used a commercial electrician's connector, a small rectangle of aluminum with a short foot (about \$8), to connect a heavy copper ground strap from the keel bolt to the mast without corroding the mast. The connector has a hole drilled to take the wire, which is secured with a bolt. All I had to do was drill a small hole into the mast several inches above the cabin sole, for a #6 stainless-steel sheet metal screw,

to fasten the connector with, and lightly sand bare the aluminum surface to ensure a good electrical connection.

Over the past three years the mast step has held up very well and shows no sign of loosening or slipping. With luck, it should last another 30 or so years.

Ciff Moore's first boat was a Kool Cigarettes foam dinghy with no rudder or sail. Many years and many boats later, he's sailing a 26-foot AMF Paceship 26 he acquired and rebuilt after Hurricane Bob trashed it in 1991. He is the editor of a community newspaper.

#### Resources

#### Mast foot for the PY26:

www.rigrite.com

#### G-10 material in a variety of shapes:

www.mcmaster.com www.jamestowndistributors.com

The Paceship Website has a wealth of information for owners of all models of Paceships:

www.Paceship.org

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## overboard!

A family's unplanned evening swim

very third week our weekend sailing routine was interrupted by ... work. There I've said it. I know you're not supposed to use such language in a sailing magazine.

It was May 25. My wife, Lisa, was working a Saturday shift at the pharmacy. We were a little disappointed, but resigned to it. We would have to forgo our weekend time on the water. As the day marched on, I kept thinking of reasons to be on the boat. I noticed that we would have a full moon that evening and called Lisa to see if she would be up for the hour and a half drive to Lake Murray to enjoy a nice evening sail to watch the moonrise. As expected, she was all in, and shortly after she got off work we were headed toward Lexington, South Carolina, with our 10-year-old daughter, Haley.

Even though it was May in the Deep South, the evening was cool enough for a light pullover and long pants. At the dock, we were a little disappointed to see that there was only a slight breath of wind, but we decided to board our 1984 Helms 27, The Swamp Fox, and motored out to enjoy the evening as it was. We had bought our Helms a little over a year before and were in middle of refurbishing her. We couldn't help but notice we were the only ones out that evening. We had the whole lake to ourselves. Nice.

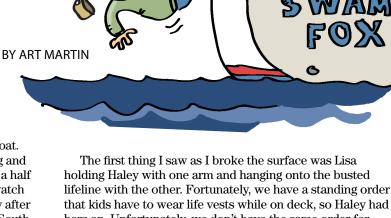
After about 20 minutes, I checked my watch. It was 9:30, approximately 30 minutes until moonrise. As we were in about 100 feet of water and a good half mile from any shore, I cut the engine so we could drift, relax, and appreciate each other and the beautiful moon that was about to show itself above the tree line.

Lisa and I leaned against the port lifelines staring at the stars and listening to the sounds of the night, trying to set an example for Haley in the art of being quiet. After having many questions ignored, Haley asked if she could sit next to us and all three of us settled back to wait for moonrise.

#### Splash!

26

There are times in our lives that we find ourselves caught between reality, confusion, and disbelief. So it was in the instant when the lifeline we were all leaning against snapped. The moment changed — from our reality of peace and contentment, to the confusion of falling backward heels over head, to our shock and disbelief as we plunged into the cool deep water.



hers on. Unfortunately, we don't have the same order for adults, so Lisa and I were treading water.

We made sure everyone was OK and slowly assessed our situation. The freeboard was way too high for us to reach the deck. The only way to get back in the boat was via the swim ladder on the transom. While Lisa was reassuring Haley that everything was fine and we would be back aboard in no time,

I swam to the stern and grabbed the swim ladder that was, of course, stowed away.

Going into superhero mode, I decided to simply pull my 200 pounds, plus an additional 25 pounds of wet clothes, up the stainless-steel ladder hand over hand. After two wholehearted yet feeble attempts, I abandoned this plan of action. As my thoughts began to wander to alternative ways of getting out of this mess, I figured I needed some help from the crew. I called Haley over and asked her to climb up on my



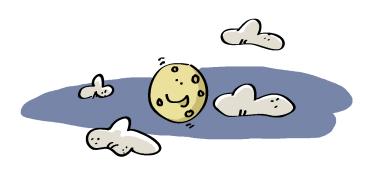
www.goodoldboat.com

**Good Old Boat** March/April 2015 shoulders while I held onto the swim ladder. She quickly climbed my back as she would an old tree and clambered aboard. With a little instruction, Haley dropped the ladder and Lisa climbed aboard, followed quickly by me.

We took stock: we were going to have to make our way back to the dock in wet clothes. I fired up our diesel and we started chugging home. All this had taken place in less than 30 minutes and, as we motored along, as an afterthought I glanced over my shoulder to see a glorious full moon easing over the trees to the southeast. Not to be denied, we turned back, if only for a while, to enjoy the view.

Eventually we docked and, as we secured *The Swamp Fox*, we accepted the fact that we had no other choice but to make the long drive home in wet clothes. With everyone safe and sound, Haley slept while Lisa and I talked and laughed and relived the event as we drove home. An old adage shared with me by a racing friend came to mind: "We don't sail because we love it, we sail for the stories we can tell." For us, this would become one of those stories.

Art Martin was introduced to sailing in the early 1980s but did not become an avid sailor until the mid-'90s. He learned to sail on his first boat, a Helms 24, on Lake Murray in Columbia, South Carolina, and by crewing on different boats in the Charleston Ocean Racing Association. Art and his wife, Lisa, now enjoy renovating and sailing their Helms 27 on Lake Murray.











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West Wight Potter 19

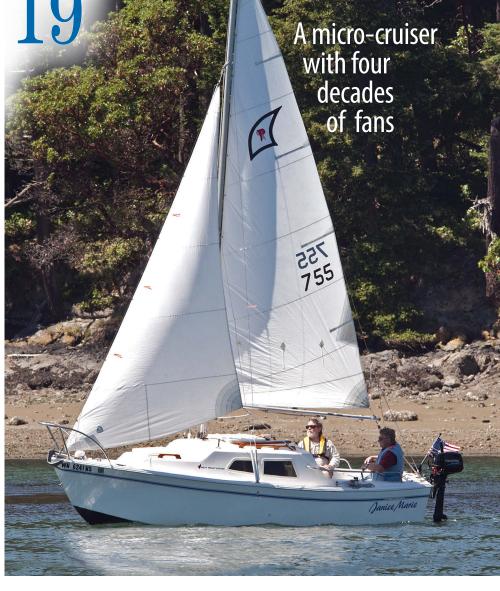
BY FERD JOHNS

avne Egleston is a lifelong resident of Island County. Washington, and was a powerboater until 2008, when he spotted a sad-looking 1996 West Wight Potter 19 on the way to his favorite launch ramp. The little boat was so black with mildew and dirt that Wayne walked away at first, but he couldn't get it out of his mind, so he bought it. The interior, sails, and cushions turned out to be in excellent condition, and the rest cleaned up perfectly with soap and elbow grease. Wayne renamed her Janice Marie for his wife (who nevertheless did not take to sailing) and has honed his sailing skills over the ensuing years.

#### **Background and history**

The story of the Potter 19 really begins with the Potter 14, designed and built in plywood in 1960 by Stanley Smith on the Isle of Wight in England. The tiny boat had a V-berth in a snug cabin, a gunter rig, and a heavy galvanized-steel centerboard that contributed greatly to its stability. In 1966, Herbert M. Stewart of Ingleside, California, bought a boat and the rights to U.S. production of the Potter 14, founded HMS (his initials) Marine, and began production in fiberglass. Almost immediately, the diminutive boat became a cult classic - owners seem to universally extol the simplicity, safety, and sailing virtues of this micro-cruiser.

The Potter 14 evolved into its current form over the first decade of production and, in 1971, Herbert M. Stewart designed the HMS 18 for family cruising, with four berths, minimal galley and head facilities, a deeper cockpit, and a hot-dip-galvanized lifting keel rather than a centerboard. He halted production of the HMS 18 in 1975, eventually selling the company and the Potter name to Joe Edwards in 1978.



Joe continued to build the smaller boat, renamed the Potter 15 (by adding the rudder and outboard bracket to its length), and resurrected the HMS 18 as the Potter 19 in the 1980s, using the same "measurement stretch" method. Some say quality of fit and finish deteriorated somewhat during Joe Edwards' ownership. He sold the company in 1992. It became International Marine and, after changing hands several times, was acquired by Ken Lange, the current owner. The company still produces both the Potter 15 and

the Potter 19 and Jerry Barrilleaux, a legendary figure in Potter Yachter circles, states that the quality of the current boats is as good as it has ever been. New molds have been tooled, keel-raising systems improved, interior modifications made, and additions made to the list of options offered.

Wayne Egleston trails and sails his West Wight Potter 19, *Janice Marie*, in the state of Washington. She handles nimbly and, thanks to the low-deadrise hull form, has good initial stability.





The daggerboard blocks passage through the cabin somewhat when raised, at left, but takes up less space than a centerboard trunk when it's lowered, above. A molded fiberglass liner forms most of the furniture and provides a place for a single-burner butane stove on the starboard side and a sink on the port side.

#### **Design and construction**

The HMS 18, like her smaller sibling, was created from a sheet-plywood plug with a hard chine and low-deadrise V-bottom. Since she was designed with much more freeboard, a straighter sheer, and a doghouse cabin trunk to maximize interior volume, she has a chunkier appearance than her more curvaceous little sister. The Potter 19 hull and superstructure are identical to the earlier HMS 18, but the deck, cockpit sole, coachroof, and other flat horizontal surfaces are cored with balsa rather than plywood. As with all wood cores,

care must be taken to properly bed fittings to avoid rot. No instances of core failure were reported by owners who responded to our request for comments.

Until 1997, the steel keel was not galvanized and was less shapely than the original HMS version. A galvanized version of the original keel shape appeared in later boats and an extra layer of glass fabric in the hull and cabintop, called "Blue Water Layup," was offered.

A fiberglass molding glassed to the hull forms the cabin furniture, which has minimal screwed-on wood trim, and marine fabric is bonded to the overhead. Closed-cell foam installed under the berth flats forward and aft is said to provide positive flotation.

A backstay, essential for maintaining good sail shape, was optional on older Potter 19s but is currently standard. The spreader-less fractional rig with upper shrouds and single lowers is rudimentary, but adequate and foolproof, and the mast and boom extrusions are relatively light.

Nylon mooring cleats are provided and the anchor rode is led through a cowl ventilator forward, but the design





Quarter berths are fitted either side of the cockpit with a stowage bin between them behind the companionway steps, at left. The overhead is unfinished in some areas, so some light enters through the translucent fiberglass. Although smallish, the cockpit is secure, at right, the backrests are a comfortable height, and a tall companionway sill limits the chance of downflooding.

## Overall headroom, measured to the cabin overhead under the raised doghouse, is 54 inches.





The deck has much of the hardware and many of the features of a larger boat, at left. As the Potter 19 draws just 6 inches with the keel up, no trailer tongue extension is needed when launching it, at right. Using the boom as a fulcrum, Wayne easily raises the mast by himself, below, and he says the mast is light enough he doesn't need to use the sidestays to keep the spar straight while he does so.

does not include an anchor well or a seat locker in the cockpit.

The factory has always offered many options, such as an anchor roller, boarding ladder, bow pulpit, opening portlights, electrical systems, extra handrails, stainless-steel cockpit rails, and running lights, and option "packages" have been popular. Most owners who responded to our survey stated that low storage and initial maintenance costs were a major factor in their decision to choose the Potter 19.

The Potter 19's dagger keel weighs more than 300 pounds and is raised by a wire cable that runs through a complex arrangement of blocks up to the cabin overhead and then aft under the cockpit coaming to a winch mounted directly under the tiller inside the transom. The winch handle is in the cockpit, convenient to the helmsman, and the combination of blocks and winch gearing makes raising the heavy keel relatively easy. Many owners have replaced the cable with low-stretch high-tensile synthetic line, and several (including Wayne) have modified the lifting assembly so it can be detached and moved out of the way after the keel has been lowered. The fully retracting keel,



along with the low-deadrise hull form, makes the boat exceptionally easy to launch and recover, and in spite of the substantial impact this keel design has on the cabin layout, few owners seem to consider it a problem.

Some owners with standard layup hulls mentioned slight pumping of the cabin sole when the boat is sailed hard in heavy weather, and some oil-canning and flex ocurs in the flatter portions of the topsides and cabin sides, but no one has reported failures of these components. Many owners related stories of hard groundings with minor or no damage to the heavily constructed keel trunk. One had added glass to reinforce the joint where the keel trunk meets the sole and several mentioned typical gelcoat crazing at stress points and sharp angles, but all felt the boats were solidly constructed for their intended use and would take far more punishment than their owners.

#### **Accommodations**

On the trailer, or to reduce "clunk in the trunk" at anchor, the raised keel decisively bisects the compact cabin between the port and starboard galley counters, but becomes less obtrusive when lowered into the 15-inch-high by 24-inch-long centerline trunk. The 22-inch (fore-and-aft) galley counters include a molded-in sink to port and a stove flat to starboard, plus stowage bins outboard. Below the counters are stowage cabinets, with the battery box to starboard in current boats. In the 1990s, the portable head was moved from the starboard cabinet to a molded

recess under the starboard V-berth cushion where headroom over the toilet seat is a full 33 inches. Personal experience confirms the head is far

more comfortable to use than when it

was located in the cabinet.

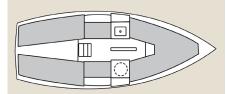
The V-berth measures 6 feet 6 inches diagonally. Each after-section of the V is 23 inches wide and has 28 inches of headroom above the berth cushion. A small hatch overhead is suitable for sail stuffing and ventilation. There is a small filler, but the mahogany mast-compression post prevents it from extending all the way to the head of the berth.

A storage bin/backrest molded into the liner creates an 18-inch-wide seat aft of the galley counter on each side and 26-inch-wide quarter berth flats extend another 6 feet under the cockpit seats. These have comfortable knee room and width but are not for the claustrophobic and are difficult to slide into, as they extend only 12 inches into the cabin. Overall headroom, measured to the cabin overhead under the raised doghouse, is 54 inches, and standing space under the open companionway hatch extends nearly 2 feet forward of the cabin bulkhead.

A short ladder leads up through a snug 21-inch-wide companionway

West Wight Potter 19

LOA: 19 feet 9 inches LWL: 16 feet 9 inches Beam: 7 feet 6 inches Draft (keel up): 6 inches Draft (keel down): 3 feet 7 inches Displacement: 1,225 pounds Ballast: 300 pounds Sail area: 132 square feet Sail area/disp. ratio: 18.4 Disp./LWL ratio: 116 Bridge clearance 27 feet 0 inches Trailer weight 500 pounds



to the compact cockpit. There is no bridge deck, but the sill is as high as the cockpit seats, which are a comfortable 15 inches wide and 15 inches above the footwell sole. Their 8-inch coaming seatbacks are supplemented by the optional stainless-steel guardrails that extend up another 6 inches. The cockpit seats are 5 feet 7½ inches long and the footwell tapers from 27 inches to 21 inches wide at the transom. The upper part of the companionway hatchboard hinges down to form a small cockpit table forward. Janice Marie was originally fitted with a tiny aftermarket access hatch, and similar small access hatches were offered as options on later boats. All the sail controls and the keel winch handle are within easy reach of the helmsman for singlehanding. The cockpit feels very secure and is quite comfortable for two large adults when sailing.

Most owners, like Wayne, use their boats for daysails and short cruises. Once adapted to the centerline keel trunk, which can make going forward a bit of a struggle, they are well pleased with the accommodations and layout. The commodious cabin comes at the expense of cockpit space, and while some might prefer a more flexible

#### **Comments from owners of the West Wight Potter 19**

While approaching Point Conception on a coastal sail in very rough conditions with 5- to 7-foot waves every 4 seconds, I broached on top of a very large wave. The Potter fell off the wave, responded immediately to my laying over the tiller, and was ready for the next wave. It sure scared me, but my little boat took everything the Point dished out.

-Bud Kerner, Rio Vista, California 2001 Potter 19 *Cat's Meow* 

I bought an early Herb Stewart Potter 14 brand new because I couldn't afford the HMS 18 at that time. I was considering a Potter 19 when I found a used HMS several years later and have fixed up the boat the way I want. The boat is fast if well sailed. I completely trashed a Catalina 22 flying a genny. I pointed higher

heading for the weather mark, stole his wind on the downwind leg to keep from falling behind, cut close rounding the mark, and then beat him on the upwind final leg, finishing four boat lengths ahead.

-Jerry Barrilleaux, Concord, California 1971 HMS 18 Sunshine

Great construction in my opinion. Not the fastest boat on the water but very comfortable in all conditions. She likes to sail "on her feet." If pushed too hard, she will heel, but becomes inefficient when heeling. She rounds up when hit by a gust. I've never had a fear of capsize. If it gets above 15 to 20, I take in a reef and hank on a smaller jib.

-Dave McNew, Virginia Beach, Virginia 1983 Potter 19 *Azilee* 

The slightly boxy profile of the Potter 19 is unmistakable, but the boat is surprisingly nimble, especially when heeled a little.

and open interior with less built-in "furniture" (the very newest boats do eliminate the port galley cabinet in favor of an extended settee berth), the cabin layout and volume seem strong selling points for the boat.

#### **Under way**

Once away from the launch ramp, Wayne shut down the 6-horsepower long-shaft outboard and raised the sails from the cockpit. We slipped out into Cornet Bay with about 8 knots of wind and the usual swirling currents funneling through Deception Pass.

The boat handled well under full mainsail and lapper jib, but would have been happier with a genoa in the moderate air. She was extremely stiff, so at one point both of us moved to the leeward side of the cockpit to heel her to 15 degrees, which, with only half of the bottom immersed, would have been optimum with a bit more wind. I sailed a Potter 19 in the Chesapeake some years ago, and by maintaining a 15-degree angle of heel while flying a genoa in a stiff breeze experienced a



two-hour sustained 6-knot broad reach. But even with the smaller headsail and lighter air of our test day, *Janice Marie* behaved very well, ghosting slowly but surely out of dead-air spots in the lee of Ben Ure Island and accelerating under complete control. The helm was responsive and predictable, the boat pivoted crisply, tacking and jibing decisively.

The wide beam and bottom configuration keep her level and the hard chine is said to aid in going to windward. Although definitely a cruiser rather than a weatherly racehorse, she was anything but sluggish.

Several owners use the popular lightweight 4- to 6-horsepower four-stroke outboard motors, which provide plenty of power for the boat. No one reported any difficulty maneuvering under power with the keel and rudder in the down position, but some mentioned using both the rudder and the outboard to steer in tight reversing situations.

An aftermarket rudder foil by Ruddercraft is a popular modification that is said to improve windward performance, and many owners have led halyards to the cockpit and fitted jib downhauls or roller furling. A few owners have installed Biminis and some have added boom vangs, Barber haulers, improved outhauls, and Cunninghams to improve sailing performance.



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#### Trailering and launching

The smallest tow vehicle in our survey was a 6-cylinder Honda Odyssey. Several who towed with an SUV or pickup said it was easy to forget the boat was back there. Some said fuel economy dropped about 20 percent when towing.

Rigging and launching takes about 40 minutes and, with her nearly flat bottom and low-rider trailer, the boat slips easily into the shallow water without wetting the truck tires. For the test sail, Wayne lowered the keel, dropped the kick-up rudder, started the engine, and backed out smartly. The near-flat-bottom design makes the boat difficult to control unless the rudder and keel can be dropped, especially in any wind or current.

On our return to the ramp, Wayne started the outboard and deftly furled the sails without leaving the cockpit, using a jib downhaul and a neat rig for furling the mainsail. At the launch ramp float, he raised the rudder and outboard, cranked up and locked the keel, and went to get the truck. Tall aftermarket "goal posts" guided the boat onto the trailer once her foils were retracted, and she slid easily onto the trailer bunks.

The Potter 19 was designed to be stored in a standard garage, but the low-slung trailers that aid in launching and garage storage use small-diameter wheels that can be prone to overheated tires and bearings. As a result, in spite of the ease of towing and light rig weight, the running gear must be watched closely, especially when towing for long distances at speed.

#### Conclusion

The Potter 19 has intrigued and seduced a wide variety of sailors for over four decades. It has provided an affordable introduction to sailing and cruising for many. A loyal following of very experienced sailors has continued to race and cruise these rugged little boats.

Unusual looking, with a solid, functional charm all their own, these beamy, hard-chine boats can be made to perform better than specifications and appearances might suggest. But the real appeal for most owners is the ability to cruise safely in a trailerable, seaworthy, solidly built, affordable sailboat with a long pedigree.

In spite of accounts of bluewater exploits (usually in heavily modified boats), the Potter 19 should really be considered a moderate-weather coastal cruiser. The initial stability and lack of heel resulting from the hull form may be reassuring to an inexperienced sailor, but the boat, like most hard-chine shoal-draft designs, has a limited range of ultimate stability.

Used-boat prices range from nearly \$16,000 for a 2008 model to less than \$3,000 for a mid-1980s version, so an older boat can provide a lot of economical sailing adventure. Owners' associations are active throughout the country, and the boat is still in production, so sails and many parts are available from the factory.

Ferd Johns and his wife, Beth, are retired architects now living on Whidbey Island, Washington. Ferd's once formidable fleet has been reduced to two trailerable sailboats and a minitrawler (not counting assorted kayaks and dinghies), which they use to cruise the Pacific Northwest, Chesapeake Bay, and the Florida Keys

#### Resources

Active owners' groups, with members like Jerry Barrilleaux (HMS 18) and Dr. Judy Blumhorst (who owns two Potter 19s, Redwing and the seriously hot-rodded Little Deuce Sloop) of the Potter Yachters, help keep the enthusiasm level high by sharing experiments, insights, and experience and by sponsoring small cruiser races.

www.potter-yachters.org





### Where there's no wheel, there's still a way

BY GARY GERBER

umerous dining tables have been designed to fit on the binnacle consoles on sailboats with wheel steering, but on a tillersteered boat, like mine, making a table and its support to accommodate the tiller presents challenges. It must not impede the full swing of the tiller, and in my case had to allow the tiller to hinge up when not in use. Another important consideration for me was the height of the table. To further complicate things, I wanted a table that was convenient to use, could be set up and removed easily, and was easy to store below.

For starters, I needed to bridge the distance in the cockpit between the base of the tiller and the cockpit's aft bulkhead. I decided an open teak box could bridge the gap, hold food-service items, establish the proper height for the table, and provide a sturdy place for attaching the aft end.

While seated in the cockpit, I used a tape measure to establish the height the table needed to be based on knee clearance. With that measurement in mind. I designed the teak condiment box as an integrated accessory for the table. The table would mount directly to

the box. The overall size of the box that works best for my boat is 14 x 51/2 x 83/4 inches, but other boats will be different. I used ½- x 14-inch teak for the front and back of the box and 3/4-inch teak for the ends and bottom. I added a drain hole in the center of the bottom of the box for ease of cleaning.



The next design consideration was to make the table so I could set it up and put it away without using tools. I used stainless-steel table brackets, mounting the bracket receivers (they







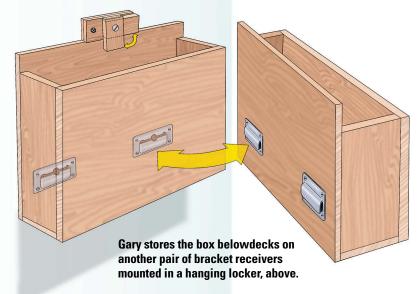
The condiment box attaches to the cockpit bulkhead with pintle-and-gudgeon-style brackets, above left, where it is clear of the tiller, above center. The tabletop attaches to the box with half hinges, visible above center, above right, and below left, with the tiller in its vertical position. The opening for the tiller in the tabletop is wide enough to allow the table to be slipped onto the hinge mounts, below center. The hinged wings allow the 24- x 36-inch table to fold to 12 x 36 inches for convenience and ease of storage, below right.







## cockpit table



are pintle-and-gudgeon style) on the aft bulkhead in the cockpit just ahead of the lazarette. I mounted a second set of bracket receivers in the hanging locker in the cabin so I can store the condiment box there.

My design for the box allows the tiller, when pivoted to its vertical position, to clear the front face of the condiment box. To attach the table to the box, I used a pair of stainless-steel pull-apart hinges, with half a hinge on the box face and the mating hinge fastened to the underside of the table. For stability, I spaced the hinge halves as far apart as possible.

I built the table of ¾-inch walnutveneered plywood that I happened to have on hand, and it matched the teak condiment box well enough. The table when open is 24 x 36 inches. Its fixed face is  $12 \times 36$  inches and it has two 6- x 36-inch folding wings attached with 36-inch-long stainless-steel continuous hinges, also known as piano hinges. I notched one end of the table's fixed face to accommodate the tiller in its stored position. I completed the tabletop by covering the edges with veneer edge-banding tape (available in hardware stores), then finished it with clear polyurethane.

### Single support leg

Rather than fitting two legs at the corners, I made a single aluminum-tube leg for the forward end of the table,

which makes it easy for a body to slip in and out with the table in place. I centered a ¼ x 20 female threaded insert on the underside of the forward end of the table to receive the 21½-inch-long, 1-inch-diameter aluminum tube, into which I fitted a ¼ x 20 male table-leg insert. (These threaded inserts for tubing are readily available in hardware stores, and some are available as either female or male fittings.) To finish off the bottom and to protect the deck, I added a 1-inch-ID rubber foot over the tube.

I store the folded tabletop belowdecks on supports attached to the inboard vertical face of the quarter berth on the starboard side. The leg snaps into a nearby plastic holder.

I used walnut plywood that I had in stock for the table. As alternatives to teak, I would recommend birch or oak plywood with matching veneer tape. These woods are cost-effective and readily available.

Gary Gerber, a retired industrial designer, has been sailing for more than 40 years in coastal New England, the Caribbean, and the Mediterranean. He lives in Annapolis, Maryland, and sails his 1970 Morgan 33 on Chesapeake Bay.

The forward end of the table is supported by a single aluminum leg, below. A female threaded insert in the table receives a male threaded fitting that is a press fit in the leg. A rubber foot protects the deck. Gary stores the folded table on the bulkhead of the starboard quarter berth, at bottom. The table leg clips into a plastic clamp on a 24-inch-long wooden bracket that holds the upper edge of the folded table.





### **Material costs**

Material Costs	
Plywood, <sup>3</sup> / <sub>4</sub> x 24 x 36 inches	\$18
Wood edge-banding tape, ¾ inch	\$8
Stainless-steel continuous hinge, 1½ x 72 inches	\$30
Aluminum tube, 1 inch x .062 inch x 211/2 inches	\$10
White rubber tube foot, 1-inch inside diameter	\$1
Female threaded insert, ¼ x 20	\$.50
Male table-leg insert, ¼ x 20	\$.75
Stainless-steel pull-apart hinges, one pair	\$26
Stainless-steel table brackets, two pair	\$30
Teak for condiment box, approximately	\$25

## Shower power

### A portable system becomes permanent

BY DAVID AIKEN

ath time on our 35-foot sloop has taken many forms in 30-some years of living aboard. The easiest and most fun was jumping overboard in the Bahamas with a bottle of Joy dishwashing liquid and letting its magic salt-loving bubbles scrub away. With the increased population in harbors everywhere, "overboard"

In head compartment

is no longer a reasonable option. And while most 35-foot sailboats have an arrangement of some kind for onboard showering, our Chris-Craft did not. We assume she was originally a weekendat-the-marina boat.

Our solutions were many and varied. We liked to move around a lot, anchoring whenever possible, so a

In cockpit

marina shower was only an occasional treat. Sponge baths in the head were OK for occasional necessity, but not the best of ideas relative to the rinse water. If our gray water drained to the bilge, we'd get dirty all over again cleaning the bilge. (We did not have success with a small sump we installed.)

A solar shower worked well. The center cockpit on our boat is sheltered from view, particularly when the bather is seated on the cockpit sole. The sun heated the water nicely and the gravity-fed warm water provided a decent rinse. Better yet, the water exited via the cockpit drains — no more soapy water in the bilge.

Our next improvement was to use a small garden sprayer made for killing bugs or weeds. I exchanged the unit's spray wand for a kitchen-sink sprayer. We filled the container with water and pumped up the spray mechanism, giving us pressure water with on/off control at the sprayer. This required heating the water, but the sun can take care of that, too, with enough preplanning. Water kept in a dark blue jerry jug will heat sufficiently if placed in the sun for a few hours. Water in a white bottle can be encouraged to heat the same way by wrapping the bottle in a black trash bag or some dark fabric before setting it in the sun. On cloudy days, there's always the stovetop.

Of course, the pumping mechanism couldn't last forever when used regularly. When our pump quit, I came up with what became a favorite "Why didn't I think of this before?" idea.

### **Tubing goes** through bulkhead to **Tubing** cockpit from head compartment Line or strap to hold tank Spray nozzle <del>ceremalar</del> with on/off trigger **Sprayer** tank **⊚**⊚ Bracket **Barb** Shelf **Tubing Switch** 12-volt

#### Electric upgrade

The new, improved bath sprayer uses the same bug sprayer container, but I replaced the broken manual pump with a small 12-volt water pump that delivers consistent water pressure. The on/off sink sprayer is still functional, so the showerer can control the forced water stream.



On our boat, the head compartment is located directly forward of the center cockpit, so we can leave the tank inside and run tubing through the bulkhead out to the cockpit, where we shower. I built a small shelf in the head compartment to hold the tank and attached the pump to the bulkhead underneath the shelf.

tapped the side of the tank near the

bottom to accept a %-inch barb.

I wired the pump to the boat's 12-volt system, using standard 14-gauge wire, and wired the toggle switch onto the pump.

Using %-inch (ID) reinforced clear tubing, I ran one section from the tank to the pump intake and another section from the pump's outflow fitting, through the bulkhead, and into the cockpit to connect to the hand-held spray nozzle that controls the water spray. (Depending on the make of the nozzle, it may be necessary to use a reducing barb for this connection.)

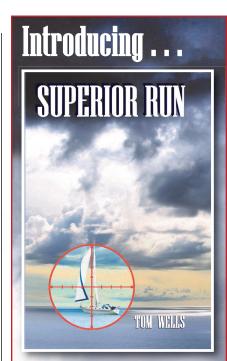
Anyone who installs a system along these lines has an excellent reason to heat up some water and test it — to clean up after all that hard work.

David Aiken and his wife, Zora, are the authors of several books about boating and camping. Their seventh children's book illustrated by David, Chesapeake Play Day, is due out by April. Their movable studio, office, and home is Atelier, a good old, now classic, 1963 35-foot Chris-Craft sloop. See examples of David's work at davidaikenart.com.





The shower nozzle lives in the cockpit, at top, on the other side of the bulkhead from the tank in the head compartment, above.



### A suspense novel written for sailors by sailor/author, Tom Wells.

Paul Findlay is living his dream, sailing the Great Lakes aboard his beloved sailboat and writing about his voyages to pay the bills. When Paul receives a cryptic call for help from his old college roommate, Rich Perry, the dream quickly turns into a nightmare. A deadly game of cat-and mouse across the greatest of the Great Lakes begins . . .and the cat has all the modern advantages.

### About the Author

Author Tom Wells is an engineer, a longtime sailor, and a Contributing Editor and boat reviewer for *Good Old Boat* magazine.

He has a sequel in the works, featuring Paul Findlay and his sailboat in another nautical setting.

### What readers are saying

This book is addicting. It practically reads itself ... [Superior Run] could be the offspring of Tom Clancy meeting Sandra Brown on a Great Lakes cruise ... Tom Wells' knowledge and passion of sailing and the Great Lakes makes this a richer read, enough to whet your interest in one of the most beautiful spots on Earth. I will be awaiting the sequel(s).

- Dave, NY

An imaginative plot and excellent narrative pull the reader in. — *John, RI* 

Superior Run is a true sailor's novel.

— Karen. OR

Available through: Amazon, Kindle Reader, Barnes & Noble, and Tower Books.

### **Interior improvements**

ou owe my father \$175," Carolyn told me one day when I came home from work. "What for?" I asked. "For the wood to make the boat table." That's how I learned from my wife that our 1984 Catalina 22's original and perfectly good Formica table and its rusty support leg were suddenly no longer acceptable. "We," apparently, had decided that a new table was in order now that our interior renovation was complete with new cushions, blinds, privacy curtain, and Porta Potti. So my wife and her father, a skilled woodworker, had conspired to purchase some Iroko wood.

With no choice but to embrace the idea, I accepted as truth that the old table made the boat's interior look shabby. A quick Internet search for sailboat interiors showed beautiful examples of tables with inlaid wood trim and insignias . . . all on high-end boats. While no one could ever mistake our boat for one of those, I was confident that rope inlays for the table's perimeter and a compass rose in the center would be within our budget.

I found exactly what I wanted at Inlay Product World and, with a vision of creating not just a functional table but a piece of nautical art, I consulted Jim Mattavi, my father-in-law, to see if we could incorporate inlays into the project. Jim, who has created legacy-quality furniture and other items in a basement shop most woodcrafters would envy, assured me it could be done. I had the inlays — a compass rose and four 3-foot strips of rope — delivered to his house in Tennessee. They were waiting when Carolyn and I visited from Virginia for a long weekend. Before jetting off, I had measured the original table's length, width, and depth and made a paper template of the shape, since the edge of the table that attaches to the hull is angled to follow the form of the boat.



## An inlaid table.

### ... buys megayacht looks for a small outlay

### Preparing the wood

Jim had procured the Iroko (sometimes referred to as African teak) from Jeffries Fine Lumber in Knoxville, Tennessee. Although it resembles teak, Iroko is unrelated to teak and costs substantially less. I learned through Internet searches that Iroko is native to the west coast of Africa and is tough and dense but weaker in structure than teak. It is also moderately resistant to marine borers and decay. It was perfect for my purposes.

Jim and I cut the single Iroko plank into three pieces roughly the length of the original table. We then fed them through a planer until we had nearly the correct thickness. Next came a jointer to achieve straight edges. We selected the plank surfaces with the most interesting grain to be the table's top

surface, applied waterproof Titebond III wood glue to the edges of the planks, and clamped them together on a flat surface to let the glue set.

The next day, we ran the now merged planks through a wide drum sander with 180-grit sandpaper to trim them to the correct thickness and smooth the surfaces. We finish-cut one end of the table and Jim used a circular saw with a metal straightedge guide to make the angled cut for the table edge that attaches to the hull on the port side of the boat.

He rounded the two inboard corners with a band saw to match the template I had made and used a spindle sander to smooth them out. Then we rotated the table against a router mounted vertically in a router table to produce



Surrounded by colorful props and reupholstered cushions, the inlaid table makes a bold impression, at left. The boat's interior is hardly recognizable from its former state, below.

we ultimately settled on a rectangle with the rope inlay 2 inches from the edge of the table. The rope inlays were narrower than the conventional router bit Jim planned to use to cut the inlay groove, so he had a friend grind the bit to the correct diameter.

To ensure the inlay grooves remained a consistent 2 inches from the edge and intersected each other

circle template on the table and positioned the plunge router at the center of the circle. He moved the router in a spiral path outward from the center until it contacted the template edge.

In this way, at least half of the router base was supported by the top of the table at all times. While accomplishing our goal, this approach is very "sporting," in that Jim only got one crack at it. Unlike when routing the rope inlay groove, he wouldn't get a second chance to re-rout the circular inlay

radius of the circle equaled the radius

of the circular inlay plus roughly the

made an adjustment for the radius of

the cutter depth at a little less than the

proud of the table. Next, he placed the

inlay thickness to leave the inlay slightly

the router cutter. Once again, he set

radius of the router base. He then

Seating the inlays

When the routing was complete, Jim glued the rope and compass inlays to the table and used a vacuum bag to seat them firmly. The vacuum bag applied the equivalent of 6 tons of evenly distributed force to the top of the table, or 1,150 pounds to the circular inlay alone.

cavity if he found out the initial pass had

rendered the cavity too shallow.

After the glue dried, he removed the table from the vacuum bag and hand sanded the inlays with 180-grit sandpaper to bring them level with the table surface.

### **Varnishing**

Once the woodworking was complete, Jim shipped the table to us so I could begin the varnishing. After considering several varnishes, I took the recommendation of an old salt who worked at my local West Marine store. He used West Marine's Five Star High Gloss Premium Varnish by Epifanes to varnish the wood in his den. After he showed me pictures of the result, I was sold.

For the initial varnish application, I lightly sanded the table's top surface and edges with 220-grit sandpaper, then

a ¼-inch roundover on the top and bottom edges. We did not make a roundover on the table edge that would mate with the hull interior.

At this point, Carolyn and I returned to Virginia and left Jim to do the complicated inlay router work, for which he was eminently qualified.

### Recessing the inlays

We planned to use the rope inlays to highlight the table edges and frame the compass rose, but the angled edge for the port side led to some discussion. In placing the inlay around the table's perimeter, should we follow the angled edge, creating a sort of right-angle trapezoid, or ignore the angle and go with a simple rectangle? Since the goal was to frame the compass rose,

at 90-degree angles at the corners, Jim made a router jig that fit over the table and precisely guided the router. He set the cutter to make a cut slightly less deep than the thickness of the inlay, leaving the inlay a little proud of the table. Following a light sanding, the fit was perfect.

The next challenge was how to rout out a 10-inch-diameter circle for the compass rose. A computer-controlled xyz router found in industrial shops would handle this task nicely, but Jim's woodshop lacks such an expensive piece of equipment. After some head scratching, he came up with a simple, but effective, approach.

First, he cut a circular hole into a sheet of ¼-inch particle board using a router mounted on a pivot arm. The



wiped the surfaces with a tack cloth to remove the dust. I diluted the varnish with mineral spirits to 50 percent, poured the blend through a paper paint and varnish filter, and applied it to the table's surface using a high-quality paintbrush. After letting the varnish dry for 24 hours, I repeated the process, but this time I used 400-grit sandpaper and diluted the varnish with 25 percent mineral spirits.

For the third and fourth applications, I again used 400-grit sandpaper, but diluted the varnish 15 and 5 percent, respectively. For coats six through ten, I sanded between applications with 400-grit sandpaper and used 100 percent varnish, waiting 24 hours between applications.

I repeated the process for the table's bottom surface, but only applied five layers of varnish.

Two weeks later, I applied Meguiars Flagship Premium Marine Paste Wax to the surface to complete the high-gloss finish.

#### A focal feature

During the varnishing phase, it became clear to me that this project was turning out better than expected and that we were creating something we'd be proud to have as a keepsake. With that in mind, I didn't need Carolyn to tell me that reinstalling the original rusted table leg was out of the question.

With additional Internet research, I ultimately ordered from Catalina Direct a stainless-steel table leg manufactured specifically to replace the original. After fastening the new





### **Products and supplies**

### **Project costs**

i i oject costs	
Wood (Iroko)	\$175
Compass rose inlay	\$62
Rope inlays	\$24
Support leg	\$49
Varnish	\$42
Total cost	\$352

### **Products used**

- Titebond III Wood Glue
- West Marine Five Star Premium Varnish by Epifanes
- Meguiars Flagship Premium Marine Paste Wax

### Resources

### Jeffries Fine Lumber

8807 Valgro Road, Knoxville, TN 37920 865-573-5876

Inlay Product World, Inc.

www.inlays.com

### **Catalina Direct**

www.catalinadirect.com

#### **West Marine**

www.westmarine.com

The tabletop is made from three Iroko boards planed, jointed, and glued together, far left. For routing the recess for the rope inlay, Jim Mattavi built a jig around the tabletop, at left. To cut the recess for the compass rose inlay, he began cutting from the center of a circular template, below left. A vacuum bag ensured the compass rose inlay was glued down firmly, below.



table leg and other attaching hardware onto the table, I couldn't have been more pleased with the results.

Later, when I installed the table in the boat, it dramatically transformed the appearance of the cabin even beyond the effect created by the new cushions, shades, Porta Potti, and privacy curtain. The table became the signature piece of our boat's cabin and probably the boat itself, creating a more interesting and welcoming place to loiter after evening and weekend sails. Now visitors and passersby can't help but take notice and compliment the high-end table in our low-budget boat.

Rocco Dryfka and his wife, Carolyn, sail their 1984 Catalina 22, Carolyn's Eyes, on the Potomac River near Quantico, Virginia. They offer special thanks to Carolyn's father Jim Mattavi, a retired General Motors mechanical engineer who now enjoys woodworking, music, his grandchildren, and numerous other interests. He and the love of his life, Mary Ellen, live near Knoxville, Tennessee.

## Renewing

## Investing in overhead pays dividends below

aving owned my almost-40-year-old Islander 36 for 17 years, I am always looking at ways to renew its beauty. One of the items that needed updating was the headliner. Made of a white perforated vinyl material, much like the headliner in my old VW bug, it had yellowed and become unstapled along the edges. Since I had been wanting to check the integrity of through-bolted deck fixtures, and the only way to do that was to open up the headliner, I was doubly motivated.

Normally I can be quite impulsive, but anticipating this to be the biggest project I'd taken on to date, and accepting that I am not a truly gifted craftsman, I figured I should spend some energy researching my options and working out a solution to fit my skills. Having sailed on a wide variety of boats, from C&Cs and Sabres to Beneteaus and Jeanneaus, I had developed a fairly wide knowledge of how other manufacturers finish their overheads. To get an idea of how other Islander 36 owners have dealt with headliner restorations, I spent some time perusing the Islander 36 website and communicating with other owners about what worked for them.

There were lots of options, including fairing out and painting the overhead, gluing fabric onto the bare overhead, and creating new headliner panels using any of a variety of materials. I settled on a rather traditional look of removable white panels trimmed and held in place with teak battens.

I wanted a durable surface that was easily cleaned, so I chose a hard plastic material for the panels called Panolam Fiberglass Reinforced Wall Board (FRWB). I found it at Lowe's in white and almond, and similar products are readily available at home-improvement stores under other brand names like Sequentia and Glasliner. The two

the headliner



sides of this material have different textures; one has a shiny, pebble-like finish and the other is rather dull and smooth. I decided to expose the smooth non-glossy side.

Finding enough teak at a reasonable price for the trim took some doing. One day at our local recycling store I came across a mother lode of ready-to-finish ¼-inch-thick by 1¾-inch-wide teak battens in a variety of lengths at a very good price.

As originally constructed, the Islander 36 has few good handholds for crew to grab when moving about in the cabin with the boat under way. It seemed that a teak handhold along the centerline would be a good addition. I found an appropriately sized handrail at my local chandlery.

A much brighter and warmer interior was Mike's reward for the time and effort he put into the headliner replacement, at top. The old headliner was yellowing around the edges and generally showing signs of its age throughout, middle. Removing the old headliner, staple strip, and foam insulation was easy, at right, but removing the hundreds of staples left behind took a bit longer — approximately 40 hours.









After removing the old headliner, Mike was able to inspect the overhead for leaks and signs of rot, at top. Starting with the centerline, he laminated plywood strips to conform to the curve of the coachroof and provide enough space for the insulation, above. Once he'd installed all the furring strips, Mike, supervised by his boat dog, Diaz, began to install the insulation, below. With all the white panels in place, at bottom, the overhead was ready to receive the teak trim that would finish the job.





### Planning and preparation

The first step, once I had located the materials, was to create a plan for the size, shape, and placement of each panel. Fortunately, the Islander 36 Association has the line drawings for the boat on its website, so I printed out the overhead view and began to pencil in the panels based on cutting my materials in the most efficient way.

I was ready to remove the old headliner material. The original vinyl had been stapled in place along the edges, with trim pieces added to hide the staples. It was easy to remove the edging and vinyl by grabbing a corner and pulling, since most of the staples had deteriorated. Underneath the vinyl was ½-inch-thick open-cell foam insulation that had also been stapled in — and also pulled loose easily.

However, while the old headliner had come off easily, it left behind hundreds, if not thousands, of staples and pieces of staples that would have to be removed tediously, one by one. I modified an old small screwdriver by bending it over at the point and grinding it narrower. Loosening the staples with this screwdriver and then pulling them out with a small pair of flat-nosed pliers was the most efficient way I found to remove them. Just the same, it took almost 40 hours to remove them all.

Once the headliner and old insulation were removed, I had a great opportunity to inspect the through-deck fittings for leaks and to inspect the backing plates for my lower shrouds. The deck and cabintop were reinforced on the inside with plywood and I was relieved to find that, at close to 40 years of age, the decks were sound.

### Foundation and insulation

Acknowledging that I needed insulation between the cabin roof and the new headliner, but not wanting anything that could absorb moisture, I went with a material called Reflectix that had been recommended by others who had used it to insulate their boats. This material is available at home-improvement stores and looks something like foil-covered bubble wrap.

The insulation would need space behind the FRWB panels. I decided to glue strips of plywood to the coachroof to create the necessary space for the



The new headliner with its removable panels made it much easier to run wiring for additional reading lights.

insulation and provide anchor spots for the panels and battens. To get enough space, and to more easily form them to the curvature of the Islander's overhead, I chose to laminate two pieces of 2-inch-wide, ¾16-inch plywood one on top of the other.

I located the centerline of the boat and laid the first plywood strips fore and aft along it. These strips were 4 inches wide so I could attach the handrail to them.

I realize that a handrail should really be through-bolted. That was not an option for me in this project, so I worked out a method that I felt would be the next best. I through-bolted the handrail to a ½-inch-thick piece of teak that I could then glue and screw to the strip that I had already attached to the centerline of the coachroof.

For laminating the strips and gluing them to the coachroof I used West System Six10, a rather new epoxybased material that comes in a tube to fit a standard caulking gun, is easy to work with, and cures quickly. I cut each strip to size, applied the epoxy, and held it in place with one hand while using an electric drill to insert several ½-inch #6 stainless-steel flathead screws that would hold the strip in place while the epoxy cured.

After the epoxy for the first strip had cured, I attached a second strip over the first in the same manner. Because boats tend not to have square corners or straight lines to start from, I found it was important to start by installing the fore-and-aft centerline piece before placing the other support strips. By starting from the centerline, I was able to create the square corners and straight lines I needed.





By creating prototypes out of scrap wood first, Mike achieved the shape and look he desired for the curved trim around places such as the mast, at left. Adding the overhead handrail, at right, made moving about the cabin while under way much safer.

Once all the strips were in place it was time to attach the Reflectix with 3M Hi-Strength 90 spray adhesive (contact cement). I cut a piece of the insulation to fit between the laminated strips. After spreading dropcloths to protect the rest of the interior, I sprayed the adhesive on the overhead section, then took the matching piece of Reflectix outside to spray it. After letting the adhesive dry for 10 minutes, I attached the Reflectix, sprayed side to sprayed side, and it bonded immediately.

### Panels and trim

The FRWB panels would be next. To get the most efficient use out of the materials, I made templates with thin plywood door skins, and to get the most out of each door skin, I started with the largest panel first and worked my way to smaller ones. Once I'd made and tested each template for fit, I transferred its shape onto the FRWB with pencil. When working overhead, and then laying out and cutting on material below you, it's important to keep in mind the reverse orientation, especially if the material is two-sided like FRWB.

I made most of the cuts with a scroll saw, but the FRWB is flimsy and needs to be supported well. I did cut some pieces with my table saw, but found that it tended to chip the material more than I cared for. I attached the panels to the wood strips on the overhead with several ½-inch #6 stainless-steel flathead screws.

Back at home, I had finished the long strips of teak battens by first sanding them smooth and then applying at least three coats of a semi-gloss, water-based Aquafin varnish, letting one coat dry completely before applying the next. Once all the panels were in place, it was time to fit the teak battens to the new headliner. Again, I started from the center and worked outward. I cut the pieces one-by-one, keeping in mind that there are few, if any, square joints. As I was making these cuts on board, I used a small, fine-toothed, Japanese pull saw.

Several tools and methods could be used for determining the angles to cut. I found a variable angle tool to my liking for this work. I attached most of the trim pieces to the strips with three ¾-inch #6 oval-head stainless-steel screws, one in the center and one toward each end. I didn't add plugs in the battens as I wanted to be able to

### Resources

### Fiberglass Reinforced Wall Board (FRWB)

Available from home-improvement stores under various brand names: Panolam (Lowe's), Sequentia (Lowe's), Glasliner (Home Depot)

### Reflectix insulation

Available from home-improvement stores

#### West System Six10

www.westsystem.com

Available from marine and hardware stores

### 3M Hi-Strength 90 spray adhesive:

www.3m.com

Available from marine and hardware stores

### **Islander 36 Association**

www.islander36.org

remove them easily anytime I wanted to mount a new piece of hardware or run an electrical wire above the headliner.

While most of the trim was straight, several places — such as around the mast, hatches, vents, and the companionway — required irregularly shaped pieces. I used scrap wood to work out their shapes before committing them to the expensive teak.

### A satisfying job

I must say that, considering my very basic knowledge of woodworking, the project was not that difficult, although it did take longer than I expected. I stayed within my budget. I spent more on screws and adhesive than I thought I would but I saved considerably on the recycled battens.

It pays to buy the screws in bulk in packages of at least 100. It's also important to measure twice, or even three times ... and then to think about what you are about to do before making the cut.

The new overhead grabrail has made it much easier to move about on *Islander* under sail. A similar addition should be a definite consideration on any boat that lacks handholds below.

Mike Reed, over the past five decades, has sailed good old boats all along the left coast from Vancouver Island to Cabo San Lucas. Now retired, he lives in Bellingham, Washington, holds a USCG Master's license and, as an ASA-certified instructor, teaches sailing for local sailing schools. Along with his wife, Karen, and their boat dog Diaz, Mike cruises the islands of the Salish Sea and beyond in their 1974 Islander 36, appropriately named Islander.

# Anchoring when solo,

### The head-to-wind drop under sail or power

BY KAREN SULLIVAN

o matter how you anchor, the basics are the same: have your ground tackle ready for instant use, choose your anchorage with care, and visualize your boat spaced evenly among neighboring boats while riding at the perimeter of a circle drawn by your rode as its radius. Good ground tackle and knowing how to use it are your boat's best insurance policy. Two properly sized anchors and enough chain, marked rode, and chafe gear are the minimum for a cruising boat. I've rarely had to use more than two anchors, but when I did, it was mighty good to have them.

When choosing a spot in a crowded anchorage, it sometimes works to drop your hook just astern of and a few yards to one side of the boat that will be lying to windward of you. That will allow you full use of your swinging room. Be sure to note whether other boats are using all-chain rodes or a combination of chain and rope, and try to anchor nearer to boats of similar size to yours that are using similar ground tackle. A large, full-keel boat on all chain will swing differently from a small, fin-keeled boat on a combination rode.

It's discourteous to anchor too near another boat if there's room elsewhere, so when given the chance, I always anchor as far from other boats as possible. That way, if the wind shifts or pipes up, I can let out more rode without crowding anyone. A parking-lot mentality pervades some harbors as boats anchor practically atop one another, but you're less likely to have problems if you stay away from the crowd — even if it means moving to another spot because someone's crowded you. Pay attention to the weather forecast and perhaps choose a less crowded anchorage if the sky looks threatening.

Assuming you've chosen a reason-

ably protected spot, the most critical pieces of information are the depth where you'll be dropping anchor and the quality of the bottom. Both can be obtained from the chart, which should be kept within reach of the helm, or from an old-fashioned lead line with a wad of tallow in its hollowed-out base. Knowing the nature of the bottom is important because it determines how well your anchor might hold and even what kind of anchor to use. This anchor has been cleared and is ready to drop the moment the boat is in position. It's also high enough out of the water to not be swept into the hull.

Karensullivan 2014

## part 1

### **Upwind approach**

When you reach an area near your anchorage that's calm and clear enough of obstacles for you to leave the helm unattended for a moment, heave-to or stop the boat. Walk forward and, if you have a bowsprit, ease the anchor off its bow roller, letting it hang above the surface of the water. Keep the dangling anchor high enough that it's clear of the water and can't be pushed against your hull by a wake and secure the rode on a cleat or bitt. If you don't have a bowsprit and are worried about the dangling anchor hitting the hull, just have it ready to tip off the bow when you reach the drop spot. Eliminating the need to fiddle around with releasing the anchor will reduce the chance of drifting out of place once you're in position to drop it.

The most common way to anchor is to glide upwind or up-current, stop, drop the hook, and back down. If you have a rope anchor rode, prepare a length of it three times the water depth ready to run out initially. Rope can be "faked" on the foredeck in a large figure eight laid perpendicular to the direction it will run or piled loosely, fisherman-style. If you have all-chain rode, just let it feed out from its locker.

### **Under sail**

If you're under sail, furl or lower the headsail before or just as you make the turn to glide to windward, because you won't be needing it. If you don't have a furling headsail, have sail ties ready at the lifeline (see "Simplify Sail Changes," January 2015), and after lowering the sail to the deck, pull the sheet tight so it doesn't flop into the water.

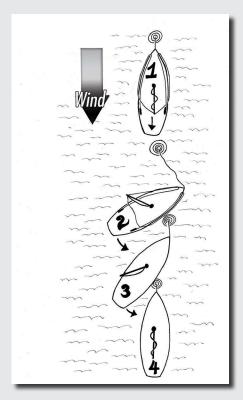
You should already know how far your boat will glide upwind in different conditions. Fix the helm so the boat continues to glide straight. As you approach the drop spot, either lower the mainsail — the halvard should be ready to run — or raise its topping lift high while easing the mainsheet. This de-powers the sail and it will act like a flag, but the boom may swing around, so be careful. Topping up the boom and easing the sheet to de-power the sail is a modern version of an old trick called "scandalizing." Back when most boats were engineless and gaff-rigged rather than Marconi, they didn't lower certain sails until they were sure the boat was securely anchored. On a gaff sail, you'd lower the peak to scandalize it, but on most modern sails, lifting the boom with the topping lift does the trick. If you have a mizzen, sheet it in tight to help weathercock the boat into the wind.

### **Under power**

If it's your first time solo, or if the harbor's crowded, it might be best to try anchoring under power alone. Motor up to the drop point, stop the boat completely, and center the helm (you should be facing into the wind or current, whichever dominates). Make certain your dinghy painter won't foul the prop, and engage reverse gear at low rpm if you need the engine's help to go astern at a knot or two. Walk forward and lower the anchor, keeping an eye on your position relative to neighboring boats or other obstacles. Lay the chain out on the bottom as you go backward; try to avoid letting it land in one big pile or it could foul the anchor underneath. If your boat's small enough, you might be able to slow the rumbling chain by pressing on it with the sole of your boot as it feeds out, but do this carefully.

### Backing down under sail

If the boat drifts sideways to the wind and the mainsail is still up, push or pull (depending on where you're standing) the topped-up main boom



### **Backing down under sail**

- 1. Preventer lines to the boom have been rigged and are reachable from the foredeck. The mainsail is scandalized and luffing and the helm is centered. The anchor has been dropped and the boat is moving backward.
- 2. The boat turns sideways while backing down as anchor rode is let out. Pulling on the preventer to move the boom to windward causes the sail to fill and the boat to pivot around the mast.
- 3. The stern falls off the wind as the mainsail is backed. The preventer is eased, the anchor rode is lightly snubbed, and the bow comes into the wind. (Preventer lines are not drawn on steps 3 and 4 for clarity.)
- The scandalized sail resumes luffing. This can be repeated on the other side if the bow falls off to port.

to windward on the side opposite the direction you want the stern to move. For example, if the bow is falling off to starboard and you want to move the stern to starboard to straighten out the boat, push or pull the boom to windward on the port side. On sloops or cutters the sail will backfill and push the stern away from the wind as the boat pivots around the keel.

One way to manipulate the boom from the foredeck would be to hook up its preventers before going forward. If your preventers are led from the boom end to turning blocks on the foredeck,

it might be possible to reach down and grab one to pull the boom to windward, because you probably have enough leverage to do that in light to moderate

wind. On many boats, a properly scandalized mainsail won't fill even if the boat turns sideways to the wind, but you can still use it to swing the stern one way or another as you back down on your anchor. Sails are for so much more than sailing!

### "Milking" the anchor in

If you use a combination of chain and rope (we have 65 feet of chain and 300 feet of rope on our main anchor) and you have a small boat, let the rope feed through your hands once the chain's gone out. Begin a series of soft tugs to straighten both the rode and the boat and to start "milking" the anchor into the bottom. A light touch is required; only a tiny snub every 10 to 15 seconds is all you need or you'll upset the anchor. If you wait to lightly snub the anchor until you have more than a 3-to-1 scope let out, the weight and friction of the chain on the bottom could stop the boat before the anchor does, and you won't know for sure how it's holding. The idea is to let the rode slip through your

or not. For example, the difference between the feel of an anchor biting into sand or slipping over rocky shingle is dramatic. You can gauge this only by the feel of the rode and not from way back in the cockpit. Don't forget to keep an eye on nearby obstacles, and interrupt the process to reposition the boat if necessary. When the anchor begins to set firmly, "sway" it in by leaning back slightly, with your feet spread wide fore and aft for balance, while snubbing harder and slipping the rode. This is what I mean by "milking" in the anchor. It's like a gentle tug of

war. Repeat until you feel it grab hard enough to stop the boat or begin to pull the rode out of your hands, then quickly get that

rode secured on a cleat or bitt. I've done this on boats from 24 to 66 feet.

It goes without saying that you must use extreme care when handling any line under load. Tune out all distractions when handling anchors, chain, and rode. Even small boats can exert big forces. You risk injuries to fingers and feet if you let the rode run with insufficient line faked on deck and then try to cleat it off. If things feel out of control, stop the boat using the engine, have a think, and re-start the process.

# \*\*Feeling the way the anchor begins to "bite" tells you if the bottom promises to be good holding or not. \*\*\*J

hands, lightly snubbing and assessing the "feel" of the bottom as the anchor begins to dig in.

Meanwhile, keep pulling enough rode from its locker to ensure there's enough slack on deck for cleating it off. If the boat's big, or if it's windy, or you're going astern too fast, wrap the rode around a cleat, bitt, or samson post to slip and snub it.

This technique of feeling the way the anchor begins to "bite" tells you if the bottom promises to be good holding

### Scope and how to measure it

It's a good idea to mark your anchor rode so you know exactly how much scope you have out. Scope is the ratio of the length of rode deployed to the sum of the depth and the height of your boat's bow above the water. For example, if you want a 5:1 scope in calm weather, you're anchored in 20 feet, and your anchor roller is 4 feet above the water, you need to have 120 feet of rode out (5 x 24).

If bad weather threatens, you'll want more scope. In the Pacific Northwest we try to find places where we can let out as much as 10:1 or more if a gale is coming. If your tidal range is large, you'll need enough scope for the maximum depth. In Alaska's Prince William Sound I had to account for a 33-foot tide, which could have put me on the beach at low water if I wasn't careful. If you cruise in northern waters, a longer length of chain is often a good idea, because it helps to shorten the amount of scope you'll need, and thus the amount of room your boat takes up in an anchorage.

We have found when marking rode that smaller increments, like every 30 feet, are easier to use than larger increments, like every 50 feet. We have tried a variety of techniques: twine whippings with contrasting colors; sewing sail tape or sailcloth tabs into the rope in combinations of one, two, and three that can be felt in darkness; or using the pre-marked tabs you can buy at chandleries. Since we use headlamps at night, there's less need to rely on identifying scope by feel, and we have been using the pre-labeled colored tabs. Cable ties also work but can be hard on your hands.

Paint works well as a marker on an all-chain rode but it has to be renewed periodically. An easy way to do that is to put a loop of chain into a plastic bag and spray paint it inside the bag, which spares your deck or dock surfaces. There's no standard system for marking anchor rodes on yachts, so create one that's easy to remember and works for you.





Leading the anchor rode through a snatch block at the end of the bowsprit, at left, reduces chafe on the bobstay and lessens the boat's tendency to "hunt" around the anchor when it's windy. Chafe gear is essential in rough weather. Here, 6-foot lengths of old fire hose lashed around each rode, at right, protect them from chafing while the boat rides out a 40-knot gale in Mexico.

If your rode is all-chain, you can still get a feel for the bottom characteristics by resting your hand lightly on the chain forward of the bow roller as you use the chain stopper. Chain rumbles and transmits vibrations up to the boat, so learn what these feel like. Rocks and mud make the chain feel and sound different as it moves over them. Even with a combination rode, you can sometimes hear the chain rumbling on the bottom if you're belowdecks. This can be a signal to check whether the boat is changing position.

So far, so good. You've determined in advance how much scope you'll need. Don't scrimp. Let out the right amount as the boat continues downwind, then secure the rode and walk back to the cockpit. Increase the engine rpm very slowly, until the boat is pulling hard enough to confirm that the anchor's set but not so hard as to break it out. The biggest mistake is too much reverse too soon, which can pop the anchor out before it's able to bury itself, so be patient and let the anchor work itself in. This is especially important on bottoms with marginal holding.

#### **Settling in**

While the engine's pulling, select an object abeam of you as a visual mark. Watch your mark to see if it stays in place against the backdrop of shore or other boats. If your mark moves forward against its backdrop, it means your boat is moving backward and your anchor may not be holding. Once the

anchor's set, remain alert for an hour or so while it buries itself under the surface from the force of gentle tugs by the boat.

Some boats have the tendency to "hunt" back and forth at anchor while others stay put. If your boat has a bowsprit, you can reduce the amount of movement, not to mention chafe on the bobstay, by bringing the rode out to the end of the bowsprit. A sturdy snatch block that opens to admit the rode and can be unshackled when not needed will steady the boat. In crowded anchorages, this is a plus. A couple of Spectra loops of the type used in climbing gear, are strong enough to hold the snatch block to the bowsprit under all but the heaviest loads. If your boat doesn't have a bowsprit, a bridle rigged to center the anchor rode in front of your boat can give the same reduction in movement.  $\mathcal{A}$ 

Karen Sullivan sailed with her partner, Jim Heumann, from Port Townsend, Washington, to New Zealand in their Dana 24 from 2011 to 2013. Before that she cruised in Alaska's Prince William Sound and soloed down the Inside Passage in her previous boat, also a Dana 24. A long time ago she sailed between Maine and the Caribbean in various boats. She is at work on a book about their Pacific crossing. Read more at: http://karenandjimsexcellentadven ture.blogspot.com.

In part 2 of this article, in the May 2015 issue, Karen will discuss anchoring while going downwind, putting out a second anchor, weighing anchor, and what to do if it drags.



### **SAILING INSTRUMENTS**

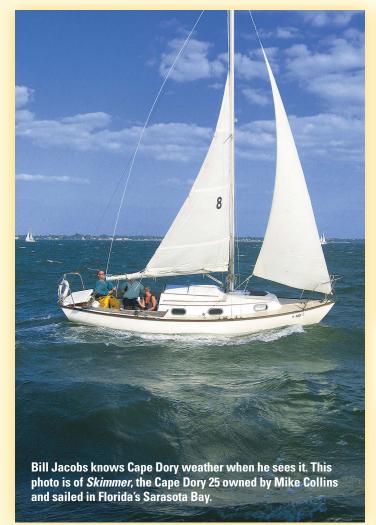
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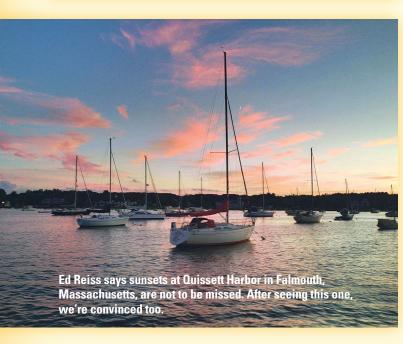
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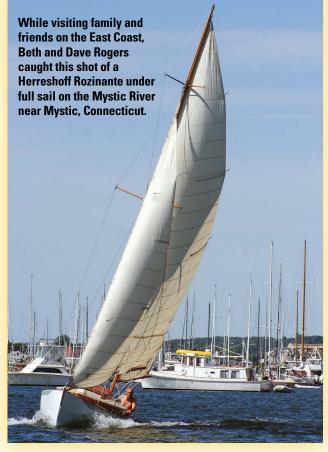
## Readers' favorite boat pictures

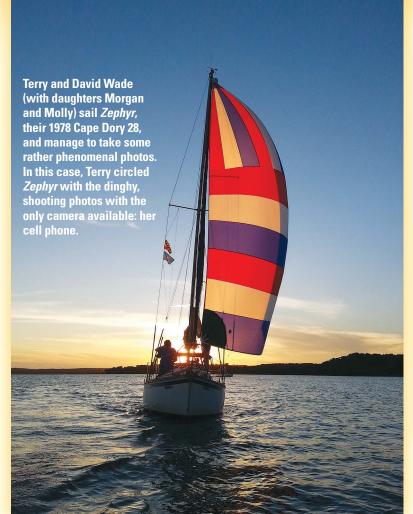




Richard Charette sails *Panache*, his Sea Sprite 30, with all the exuberance her name suggests following an extensive refit and launch in 2007. Here she sails on Lake Michigan near Sheboygan. Photo by Gunnar Vagenius.

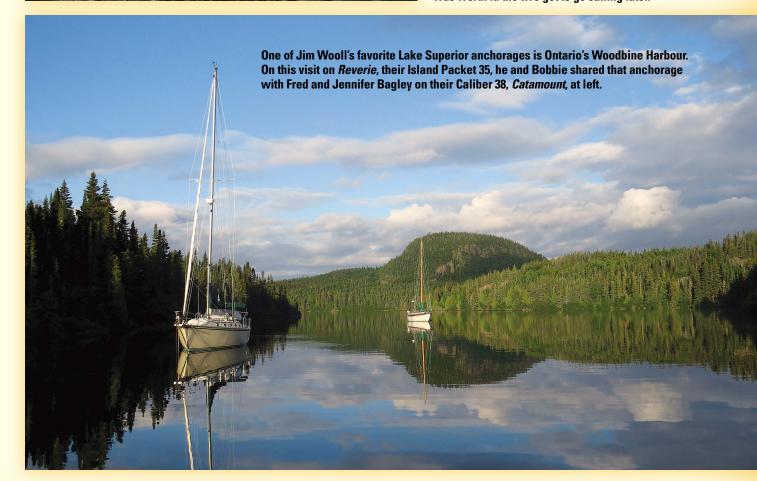








When Durkee and Mary Jeanne Richards' ship, Sirius, comes in, a pair of twin grandkids might very well be the local greeting party. Charlie and Flora's dad, Brad Richards, captured the moment. Apparently, the wait was worth it: the two got to go sailing later.



## Pearson 365 ketch

hen 33-year-old Don Sailors initially purchased *Schurr Thing*, 1976 Pearson 365 hull #38, he may have realized he was buying a proven and comfortable design, one of the most popular cruisers ever built by Pearson Yachts. After five years of sailing her and receiving numerous compliments on her beauty and excellent condition, he was convinced. Without question, Don and his wife, Lindsey, have come

to appreciate how well designer Bill Shaw pulled together so many diverse

The boat Bill Shaw designed for himself

features in this boat.

Schurr Thing's early history is vague, but we do know that Alfred Schurr, founder of Schurr Sails in Pensacola, Florida, purchased her in 1991. Alfred, a longtime fan of Pearson designs, had previously owned and raced a Pearson Flyer and a Pearson 10 Meter. He found the neglected 365 in Sarasota and brought her to Pensacola for an extensive restoration.

In addition to organizing a complete exterior refit that included paint, hard-



A low-aspect, well-balanced sail plan enables the Pearson 365 ketch to stand up in a blow, above. Lindsey Sailors, at left, and her husband, Don, command their *Schurr Thing* from an elevated custom swiveling helm seat.

### Design

Introduced by Pearson Yachts in 1976, the Pearson 365 was one of the Portsmouth, Rhode Island, company's most successful cruising

designs. Its popularity prompted Bill Shaw, the company's chief yacht designer and general manager in the 1960s and '70s, to add a second production line to keep up with demand. Although designed as a ketch, the 365 was also offered with a sloop rig, and the company built a total of 405 from

1976 to 1982. Functionality, ease of handling, and comfort were priorities in the design, and as a result, this aft-cockpit cruiser has survived as a viable alternative to some present-day sailboat models.

The Pearson 365's moderately heavy displacement/length ratio of 293 is typical of the average cruising auxiliary of its time, and the 7,300 pounds of lead ballast encapsulated in the modified fin keel provides stability suitable for coastal sailing. The rudder is mounted on a skeg that provides surface area aft to improve directional stability

ware, running rigging, standing rigging, and sails — Schurr Sails, naturally — Alfred upgraded the interior. Once she was sailing again, after his experience with competitive Pearson designs he was disappointed with the 365's performance. That's about the only negative many owners can name.

50

The U-shaped galley, top right, has a three-burner propane stove in the center, a huge icebox, a single sink, and a clever storage area above the icebox. The starboard settee, middle right, pulls out to form a double berth. Above it is a pilot berth, which on *Schurr Thing* has been converted to accommodate a television and an air-conditioning system, and aft is a spacious nav desk. A pullout settee on the port side, bottom right, faces a dinette table that folds up to the starboard bulkhead. The propane heater was on the original list of options.

(tracking). A sail area/displacement ratio (SA/D) of just 14.5 underscores the relatively sluggish light-air performance of the Pearson 365 ketch. Without the mizzen, the sloop's SA/D is even lower at 13.5. Safety and comfort, rather than performance, were the guiding criteria behind the 365.

#### Construction

As with most Pearsons built over the decades, the 365 has a solid fiberglass hull and a deck cored with end-grain balsa for stiffness. During Bill Shaw's tenure, which began in 1964, the company stopped making "stick-built" interiors built up of plywood components tabbed to the hull and deck and developed the more efficient and less costly molded fiberglass pans and liners. While an overhead liner provides



The high bulwarks provide secure footing for crew tending the ground tackle. The bow platform creates maneuvering room but must be supported with a strut if it is to properly handle heavy loads on the rode.

a clean, smooth one-piece surface, it prevents bulkheads from being tabbed to the deck with fiberglass. Tabbing is stronger than the newer method in which bulkheads are simply fitted into slots in the molding and perhaps mechanically fastened with screws.

Years ago, when fielding a question on this subject in

an owners' association newsletter, Bill Shaw replied that the company's boats of this era were not intended for offshore work. That surprised a lot of owners who felt their 365s and other models were tough, capable boats. They are indeed. Perhaps Bill was simply hedging his bets. The 365 has made numerous offshore passages safely, but his remarks do speak to the structural differences between boats with monocoque hulls, in which bulkheads and other components are part of the structural whole, and those with fitted parts that will tend to "work" more under stress.

The ballast is a lead casting set into the molded hull and glassed over. The hull-to-deck joint is screwed together rather than through-bolted. Some owners have had to replace the original steel or aluminum fuel tank.

### **Exterior**

Don and Lindsey are determined to maintain their ketch in pristine condition, and it shows in the brightwork, glistening Awlgrip finish, and polished stainless-steel and bronze fittings. From the varnished original teak bowsprit, to the finely fashioned teak caprail, the cabin trim, and the handcrafted







companionway doors, *Schurr Thing* exemplifies how beauty and function are complementary.

The 8-foot-long aft cockpit was designed for comfortable and safe cruising. A lazarette under the helm seat supplements large storage lockers on each side of the cockpit. *Schurr Thing*'s aftermarket free-spinning seat with its



backrest is elevated to provide clear visibility for the shortest of people from behind the pedestal-mounted steering wheel, which is fitted with one of the popular inexpensive "wheel pilots." A stainless-steel deck plate in the cockpit

Adjacent to the head, the Pearson 365 has a separate shower stall, which is unusual on a boat of this size and period. It's justified by 150 gallons of water in three tanks.

sole covers the top of the rudder stock and can be removed for attaching the emergency tiller.

The mainsheet and traveler lines can be easily adjusted from the forward end of the cockpit but are beyond the reach of the helmsman. The jibsheets, however, are handled with two Lewmar #43 winches the helmsman can reach. Under each winch is a handy storage compartment with side access. The mizzen sheet is located directly behind the helm.

The stern pulpit is wide enough to support a grill and a pad for an outboard motor, and *Schurr Thing* has dinghy davits mounted on the stern.

### **Interior**

To port of the companionway is a U-shaped galley with a three-burner propane stove, a large stainless-steel sink, and plenty of stowage within easy reach for the cook. Across from the galley on the starboard side is the outboard-facing nav station with a swing-out seat and a large desktop. It has copious storage and plenty of room for installing electronics. Aft of the nav station are a hanging wet locker and additional stowage compartments. This part of the interior receives light from fixed portlights over the galley and nav station and an opening port between the galley and the cockpit.

Forward of the nav station is a settee with pullout sleeping for two. The original design had a pilot berth above the settee, but a previous owner closed in the space to create a cabinet for additional storage and to house a reverse-cycle marine air-conditioning system. A folding table is mounted on the forward bulkhead.

### **Comments from owners of the Pearson 365**

"My wife and I own hull #66, Vixen, built in 1976. Ours is an early model with the deep sump aft of the encapsulated ballast. That makes the boat fragile in a grounding, because the sump can be breached. Later models have a false floor partway down the sump and dealers retrofitted some earlier models. On the plus side, the keel will ground well before the rudder.

"When purchasing a 365, watch for three major repairs: engine overhaul, V-drive overhaul, and fueltank failure. These all come due eventually. The tank is mild steel and will pinhole in time, even if the boat never sees salt water. The Walter V-drive is easily removed for an economical overhaul at the factory. The engine can be moved forward into the cabin for hoisting. To remove the fuel tank intact it's necessary to pull out the engine. I solved our fuel-tank failure by converting the forward holding tank to fuel with an ATL bladder."

-Bill Merrill, Golden Valley, Minnesota

"The 365 sails just like you would expect a shallow-draft ketch to sail: very well on a reach and downwind but it does not point well and makes a fair amount of leeway. Motorsailing to windward is much less frustrating. The hourglass shape of the hull does make it seakindly. The build quality is quite good. Although the hull-to-deck joint is mostly screwed (it's through-bolted only in the section under the long genoa track), I never had a joint leak.

"Some of the equipment placement (such as the water heater and batteries) detracted from the usefulness of the two large cockpit lockers.

"The mizzenmast made it challenging to come up with an acceptable Bimini design, and I settled for a sort of underway awning. The fuel tank developed some pinholes and started leaking. Removing it required cutting the side of the port cockpit locker. It was surprisingly inexpensive to repair and you could not tell the cockpit had been cut.

"I had to rebuild the Paragon gearbox, but it was not difficult. The V-drive was no problem. If the anchor platform is not reinforced, it needs a support if it's to be used while at anchor."

-Al Gastón, Port Orchard, Washington

"The build quality was excellent; there were zero blisters in the hull. The hull-to-deck seams never leaked. It was a dry boat. The mechanical systems were easily accessible. The cockpit lockers were huge, as was the cockpit.

"The only problem I had was the stock bridle for the mizzen sheet. It chafed through at the center-mounted Nicropress sleeve that formed a fixed loop.

"The boat was not fast and didn't sail to windward particularly well. It was a heavy boat. However, it was the perfect seaboat for me. Speed wasn't my first consideration."

-Bern Juracka, Payson, Arizona

### Genoa tracks on the caprail and outboard shrouds leave the sidedecks uncluttered.

A settee on the port side pulls out to make a single berth. Additional stowage is above and behind the comfortable backrest. Three 50-gallon freshwater tanks are located under the settees and in the bilge. Forward of the port settee is a large cabinet and a bulkead-mounted propane heater that was an option offered with the boat. A large hanging locker is also in this cabinet.

Across on the starboard side is an enclosed head with a mirror, towel racks, teak-trimmed Formica cabinets, an opening overhead hatch, and an opening portlight. There's also a shower stall with standing room and a seat. A 6-gallon water heater provides hot water for the head, galley, and a cockpit shower.

Completing the sleeping accommodations is the well-proportioned V-berth with comfortable cushion support. Built-in shelving and cabinet space offers plenty of room for personal effects and a large hanging locker is located on the starboard side adjacent to the bulkhead. Two opening portlights and a large overhead hatch provide light and ventilation.

Overall, the interior of *Schurr Thing* is finished with white Formica set off with varnished teak trim on countertops, drawer fronts, and bulkheads. In some 365s, as in other models, Pearson Yachts made extensive use of laminate with a simulated-teak finish.

All the portlights have curtains. An eye-catching accent, the teak-and-holly cabin sole, was added during the major refit. An overhead hatch lights and ventilates the saloon. Headroom is 6 feet 3 inches.

### **Under way**

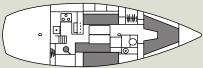
Schurr Thing's Westerbeke 40 diesel turns a Max-Prop feathering propeller via a V-drive. Access to the engine is less than ideal behind the removable companionway steps. The 50-gallon fuel tank is under the cockpit, aft of the engine.

On the day of my visit, clear skies and mild temperatures prompted Don and Lindsey to take me for a sail across Pensacola Bay. With Don at the



**Pearson 365 Ketch** 





Designer William H. Shaw 36 feet 5 inches LOA: 30 feet 0 inches LWL: Beam: 11 feet 6 inches Draft 4 feet 6 inches Displacement: 17,700 pounds Ballast: 7,300 pounds Sail area: 615 square feet Sail area/disp. ratio: 14.5 Disp./LOA ratio: 293

helm and Lindsey handling docklines, the Pearson maneuvered easily under power out of the marina and into the bay. Lindsey raised the mainsail and then the mizzen, while Don unfurled the jib. In a matter of minutes the engine was shut off and *Schurr Thing* was sailing.

In the 8- to 10-knot northeasterly breeze, *Schurr Thing* jumped to life as we reached across the bay on a port tack. Gliding across the flat water, she reached 5 knots with no weather helm or discomfort, very little heel, and a kindly motion. All three sails were trimmed from the cockpit. Well-placed lifelines, raised bulwarks, and clear sidedecks help crew move safely when going forward. Moving about the cabin while under way is easy and effortless, thanks in part to well-placed overhead teak handrails.

When we reached our destination at Pensacola Beach, Don and Lindsey stowed the sails and docked the sailboat with little effort. After lunch, *Schurr Thing* sailed back across the bay, this time on a starboard tack. The 7-mile reach to her home marina was just as enjoyable as the earlier sail. As we entered the marina, all eyes turned to appreciate the Pearson 365's graceful lines.

### Conclusion

Don and Lindsey have plans to sail south, and they have chosen a boat that's well suited to their ambitions. Anyone interested in the Pearson 365 can find support and information at the Pearson 365/367 Yacht Club at <a href="http://pearson365.com/forum">http://pearson365.com/forum</a>. Since more than 400 were built, there are usually a number of 365s for sale at any given time. Prices range from about \$25,000 to \$35,000 depending on equipment and condition.

Dick Dixon, a freelance writer, photographer, and avid sailor, lives in Mobile, Alabama. He sails his Beneteau 42s7, Shutter Speed, along the northern Gulf Coast where he enjoys marine and wildlife photography. He can be reached at ddixon3121@aol.com.

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### A single digit now does a two-person job

t's slightly more than 8 feet from the water to the head of the davits on the raised aft deck of my Down East 45 schooner, *Britannia*. Hauling the dinghy up, even with its multi-part tackles, required two people, was hard on our hands, and took a long time, while the dinghy sometimes swung wildly on the tackles.

Running the lines to our sheet winches didn't improve the situation at all because it still meant two people had to wind and hoisting was even slower. I considered mounting two hand-operated trailer winches, one on each davit, but the result would be the same: winding the dinghy up evenly would involve two people and, because of the high gearing of the winches, would have been slower than pulling the tackles.

I had watched people at boat ramps hauling speed-boats onto their trailers with the help of electric winches mounted on their vehicles. I found a 12-volt drum winch (Superwinch LT2000) with a 2,000-pound pull rating and a wired waterproof remote

up-and-down button at Northern Tool for \$106. They had one with a wireless remote, but I liked the direct wire connection so I wouldn't have to worry about batteries going flat when the dinghy was halfway up. We are talking about boats, after all.

This winch now effortlessly hauls my 100-pound dinghy and a 55-pound outboard to the head of the davits

Manually hoisting the dinghy and outboard motor with a combined weight of about 160 pounds in the davits, at top, was laborious and time-consuming. By adapting an electric winch to wind two lines simultaneously, above, Roger made the task a one-finger exercise.

BY ROGER HUGHES

in 28 seconds. The down button lowers the boat slightly quicker and could be operated by a child. It is now really that effortless.

When I tested the new setup with the outboard still attached to the dinghy, the winch never even hesitated. I was so astonished and excited by the ease of the lift, the outboard nearly hit the davit. We don't hoist them together

when making passage, we bolt the outboard to its bracket on the stern rail, but we often lift them together at night when at anchor, mainly to prevent theft. Judging by the power of this winch, I believe the model I bought should handle almost any size dinghy and outboard.

I made all the parts for the adaptation myself, using only hand tools that most do-it-yourselfers have. It was not difficult and it is certainly one of my better inventions. My wife and I agree it has been a most worthwhile addition to our boat.

### Adapting the winch

Normally, a winch only handles one line, but this

adaptation enables a single winch to handle the lines from both davits simultaneously.

The lines, which are the two ends of a continuous rope that feeds onto the winch drum from opposite directions, lead from the winch, through blocks to the ends of the davits, and down to the lifting attachments on the dinghy. How many blocks are needed depends on the type of davits and the route the lifting line must take.

To prevent the lines from overlapping and tangling on the winch drum, I divided the drum in half with a circular aluminum collar bolted in the middle.

I made the collar of %-inch-thick aluminum plate and the same diameter as the outside of the winch's winding drum. For the LT2000 winch that I used, the collar is  $3\frac{1}{2}$  inches in diameter, and it needed to be in two halves so I could clamp it around the winding drum.

First, I marked the center of the plate, then sawed it in half. I used a miter saw fitted with a 10-inch-diameter, 60-teeth-per-inch carbide-tipped blade. This cut through the ¾-inch-thick aluminum like butter, but a hacksaw would also work.

I cut the plate in half first, because if I had cut a circular hole while it was in one piece and then sawed it in half, the hole would not have been circular due to the material taken out by the cut. The diameter of the winding drum on the LT2000 is 11/32 inches, or just 1/32 of an inch less than 11/4 inches.

I clamped the two halves of the plate together and scribed a 1½-inch-diameter circle with a compass. Then, using a 1½-inch hole cutter in my bench press, I carefully cut a hole in the middle of the plate to make the initial hole. I shaped it to the exact diameter using drum disks on a Dremel tool. Great accuracy can be achieved by repeatedly offering the two halves to the winding drum and grinding a little bit at a time wherever needed.



The lifting line leads from the winch and up the davit arm through a series of blocks, above. The divider on the winch drum allows the lines from both davit arms to wind or unwind simultaneously, below.



The two halves of the dividing collar now had to be fastened to the winch drum. Unfortunately, a steel shaft runs through the middle of the drum on the LT2000 and prevents bolting the halves of the collar straight through the drum. That made it necessary to fasten each half separately by drilling and tapping a thread into each side of the drum.

By clamping each half of the divider collar vertically in my bench press vice, I carefully drilled a ¾6-inch hole down the center of each collar to carry the fasteners. These do not have to be symmetrical since each half is held in place separately.

I held one half collar in place in the middle of the winding drum and, using the ¾6-inch drill as a pilot through the hole previously drilled, I made an indentation in the winding drum. This ensured the tapping drill was dead centered in the hole. I then drilled a ⅓2-inch hole into the winding drum, threaded it with a ¾6-inch tap, and bolted the divider half in place using a 1¼-inch machine screw. I repeated the operation with the other half of the collar. I put a drop of Locktite on these fasteners to prevent them from coming loose over time.

An alternative to tapping a threaded hole in the winding drum would be to drill a suitable-size hole and secure each collar half with a  $\frac{3}{16}$ -inch self-tapping screw. The collar carries little load when in use, it just separates the two sides of the lifting lines.

Before bolting the second half collar in place, I drilled a ¼-inch hole (the diameter of my lifting line) near the edge of the inside of the collar. This hole allows the lifting line to be continuous, as it can pass from one side of the collar to the other. I then secured the other half collar to form a completely round divider.

#### Setting up the lines

I tried to use the ½-inch flexible wire rope that came with the winch, but it was far too stiff and would not wind evenly in both directions off the drum. Braided line was much more suitable and, with a breaking strength of more than 1,400 pounds, it is considerably stronger than the weight of my dinghy and the outboard combined.

I centered my winch motor between both davits and bolted it through the deck, but it doesn't have to be located





Roger built a teak box to contain the winch and the control unit to protect them from the elements, at left. It is sturdy enough to use as a step. Wire strops clip onto the davit and dinghy to provide extra support, at right. The black strop lowers the stern so the boat will drain.

at a center point. If it is more convenient to install the winch to one side, it is only necessary to run a longer line on one side of the drum than the other. Both will still wind in and out at the same rate.

I threaded the lifting line through the hole in the divider collar until it was of

### **Parts and tools**

- The winch (I used an LT2000 by Superwinch, Model #1220210), along with bolts to secure it to the deck.
- A piece of %-inch aluminum flat plate big enough to make the circular winding-drum divider collar.
- A jigsaw with a metal-cutting blade to shape the dividing collar
- A 1½-inch hole cutter to make the initial hole in the center of the divider collar.
- A suitable length of lifting line.
   (I used ¼-inch braided rope).
- Blocks to route the lifting line to the head of the davits.
- Eye straps and rivets to hold the blocks.
- Two machine or self-tapping screws to fasten the divider collar to the winch drum.
- Two lead fishing weights to weight the lifting lines.
- Two carabiner hooks or snap shackles to attach the lifting lines to the dinghy.
- A bench drill press with bits.

an equal length on each side. Then, by operating the winch, I could wind or unwind the line around both halves of the drum according to the rotation of the winch. If the lines are long enough that, when they are fully extended, a few wraps remain on the drum, it's not necessary to tie knots in the line where it passes through the divider collar. The wraps prevent it from slipping.

The method of routing the lifting lines will depend on how a particular boat is configured and the design of the davits. My installation was very simple. I used ¾6-inch stainless-steel pop (blind) rivets to attach stainless-steel eye straps to my tubular aluminum davits, then shackled ¼-inch blocks to the eye straps to ensure a clean lead for the lines to the heads of the davits.

Since the single line leading down to the dinghy in the water below did not have the weight of a multi-part block and tackle, it was necessary to weight the lines so they would self-feed off the winch. I drilled out the center holes in two fishing weights and half-hitched one to each lifting line. These easily weighted them down to the water.

### Finishing touches

I'm sure that, left exposed to the elements on the stern of my boat, the winch would not have looked good for very long, so I encased it, along with its remote control, in a nice teak box with a sturdy removable lid. Slots in the sides of the box allow the lifting lines to pass in and out.

I swaged two short stainless-steel wire strops with thimbles and snap

shackles and attached them to the ends of the davits. These are for hooking to the attachment rings on the dinghy as a second safety measure when the dinghy is fully hoisted. The winch can then be backed off slightly to take the load off the lifting lines.

I also fitted an additional snap shackle on a longer line to the davit that supports the stern of the dinghy. This enables the stern to be angled lower when rain is expected or when the boat is unattended for an extended period so rainwater will run out the aft drain.

What if the power fails or the winch breaks? I kept the original blocks and tackles. These can be shackled to the

### **Notes**

A number of electric winches of varying sizes and power ratings are available from different hardware stores and online. These may have different winding-drum diameters, and the divider collar should, of course, be made to suit the particular winch.

Dinghy weights vary. For a really heavy dinghy — like a RIB with a large outboard — the lifting line might need to be stronger than the ¼-inch braided line I used.

The method of connecting the winch motor to a power source will also vary from boat to boat, along with the length and thickness of the cable needed to connect to a suitable battery and circuit breaker.



Installing the winch motor has transformed the way Roger uses the davits. Raising and lowering the dinghy is now a sit-down task for one person — in the right conditions.

davits as before to haul the dinghy up or down by hand. But until that happens, we definitely have one less struggle and the dinghy can now be hoisted effortlessly by just one person.

Raising the dinghy is another job my wife can now do on her own, one that

always catches the interest of onlookers and fellow yachtsmen. Apart from the winch, the only material cost was for the electrical cable, lifting line, a small aluminum plate, pulleys, and eye straps. The total cost was about \$250 — and worth every penny.

Roger Hughes has been sailing for nearly half a century as a professional skipper, charterer, restorer, and occasional imbiber aboard lots of boats, including square-riggers. His latest project is refurbishing Britannia, a once rundown Down East 45, and re-rigging it as a brigantine schooner with a unique roller-furling square sail on the foremast and other "inventions," like his over-the-top blocks (see January 2015) and a hot tub in the owner's head. Roger's website is: www.schooner-britannia.com.









## Knotmeter conundrum

Why does cleaning it require taking a bath?

BY KEN RINGLE

ow that we have mapped the human genome, it's time to tackle the real technological challenge of the 21st century — foul-proofing that little paddlewheel at the bottom of the knotmeter.

Admittedly, this is no small task. No sooner is my knotmeter tidy and reinstalled than every molecule of marine life in the seven seas promptly moves in and takes up residence. There they date, mate, and multiply in a frenzy of biological ecstasy, rapidly reducing my knotmeter to an inoperative something that looks like the herb garden of Jabba the Hutt. I may be granted a day or two of weed-free knotmetering, but rarely more. In the tropics, I get little barnacle hitchhikers on the wheel; in northern waters, I get clams; in the Gulf Stream, itsy biospheres of gulfweed halt the rotation. Then it's into the cabin for that always-suspenseful operation requiring 11 fingers and an eyeball on a string.

It is, of course, a two-step process. Whatever the joys of actually cleaning the wheel, they pale beside the suspense of getting to the darned thing. No boatwright has ever made the knotmeter easily accessible. Since its little wheel is turned by water flowing past the hull, it is always located under a lot of stuff: cabinets, cabin soles, the de-inflated dinghy, the

case of beer there's not room for in the fridge. In the case of *Whisper*, my 40-year-old Tancook Whaler, it's on the port side just forward of the mainmast under a bunk piled high with mattresses, sailcovers, and the odd gearbag. Once I clear them away, I can reach into that cloacal portion of the bilge among those pigs of lead ballast from Adelaide, Australia. Then comes the real thrill: opening a hole in the hull below the waterline.

I remember my alarm at first learning how this is done. I was crewing for an impressively profane sailing mentor named David who explained that the excreting and fornicating knotmeter had to be cleaned before we could get under way. I asked to be instructed in this process.

"Actually, I'll need you," he said, soberly. "It's dangerous work."

We cleared away the requisite boat bags, opened the proper cupboard, and pushed various wires aside. By this time, naturally, we were crammed into a space too small for two sets of shoulders and barely large enough for four hands. He handed me the dummy plug and began unscrewing the sending unit. A trickle of water began leaking into the bilge.

"Now," he said, "When I say 'Go,' I'll pull the unit out and you stuff the plug in the hole."

"Wait a minute," I said. "We're below the waterline. When you pull out the unit the whole damn Chesapeake Bay will try to come in through that hole."

"That's right."

"The Chesapeake empties into the Atlantic, which is connected to the Pacific, the Arctic Ocean, and all the oceans of the world."

"That's right."

"They're all gonna try to pour in here!"

"That's why you have to work fast. If you don't, we sink."

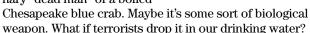
He repeated the instructions slowly, emphasizing my role and raising the suspense. Then he shouted "Now!" and pulled the unit.

The wrist-thick geyser of water that shot into the boat was at least a foot high. I didn't move. What froze me was not the water, but the light. I was looking right out into the sunlit submarine waters of all the oceans in the world. And they were coming to get me. But they didn't look menacing. They looked kind of, well, pretty.

"Put the goddam plug in!" David shouted, immune to undersea aesthetics.

I shoved valiantly against the stream, eventually blocking the inflow. Several gallons of water were now slopping around the cabin. Cursing eloquently, David scraped frantically at the paddlewheel. I seem to remember he used some girlfriend's bobby pin, but he may have used his rigging knife. These days on *Whisper*, I use a toothbrush I keep in the bilge, but my de-fouling *pièce de résistance* is the oyster fork on my Leatherman supertool. It's just slender enough to get between the paddlewheel and the side of the sender to attack the ichthyological goo around the paddlewheel axle. (What? You don't have an oyster fork on your Leatherman? And you call yourself a *sailor*?)

What continues to awe me, however, is the growth on the wheel itself. It's neither animal nor vegetable, but somehow both.
Impervious to the
antifouling paint on
the surrounding hull,
it rapidly morphs into
something bulbous, leafy,
and crunchy, with a texture
reminiscent of the pulmonary "dead man" of a boiled



I don't remember reinstalling the sanitized sender during that first knotmeter cleaning. All I had to do at that point was reopen the hole into the watery world, not close it. But the operation has never lost its aura of adventure, whether performed in a shallow creek or the fathomless Tongue of the Ocean.

The real tongue of the ocean, I always know, is the one that comes in through that hole in the hull.

Some will say I make too much of all this. These sterile souls rattle on about GPS readouts, speed over ground, and the relative unimportance in these digital days of any device propelled by the same principle of physics that drove a gristmill in 12th century Spain.

But what do they know of determination, daring, and the view through Neptune's porthole?

The other day my 16-year-old daughter asked to learn how to clean the knotmeter.

"Wait a minute," she said when I explained the process.

"As soon as we pull the sender out, the whole Chesapeake
Bay is going to come through that hole!"

"Not if you work fast," I said. "If you don't, we sink."  $\Delta$ 

Ken Ringle, a longtime Washington Post writer,
is master and commander emeritus of the
schooner Whisper, which he sailed
out of Galesville, Maryland.



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ost of the time it is dark and hot inside during the summer months. It's late July and for the past nine months I have lived in an old wooden barn on a back road in northern Wisconsin. I'm not complaining, as this is the best I've had it for quite some time. My wonderful new owner, Joel, stops by as often as he can. When he does, he opens the north and south doors, giving me fresh air, light, and a breeze. He climbs the ladder and his dog, Jack, rummages around in my belongings on the floor of the barn. Joel can only stay several hours

at a time in the summer, as he owns a popular restaurant down the road that leads to the bay. In fact, he bought this barn and the farm it sits on just for me.

My name is *Finisterre*. No, not *that Finisterre*, but I'm a classic sailboat nonetheless. The name is French for land's end, I think, and I have lived and sailed within a 10-mile radius of this barn for the last 30 years.

I come from a prestigious family lineage, Cheoy Lee, and was designed by the famous L. Francis Herreshoff. My birth certificate shows that I'm an Offshore 31, built in 1969 in Hong Kong, which was then a British

Crown Colony but is now a Special Administrative District of the People's Republic of China. Cheoy Lee, which has been building boats in Hong Kong for almost 150 years, was an early adopter of fiberglass technology in boat construction in the early 1960s. Eventually, wooden hulls were phased out, but many of us continued to feature the lavish use of Burma teak in our decks, cabin houses, and interior cabinetry. Many of our metal fittings were hand-wrought.

After having been neglected for a few years, *Finisterre*, a Cheoy Lee Offshore 31, now has a barn to call her own and the chance of a future full of love.

Sailors all over the world were amazed at the unsparing attention to detail and the overall craftsmanship that were visible in all of Cheov Lee's boats. The shipyard is located on the bustling Hong Kong waterfront, where labor rates were lower than in Europe or the U.S., so it was possible for the company to keep construction costs down without cutting corners in the overall quality. A boat built in the U.S. at the time I was and to the same level of quality would have been sold at more than double my price.

### My first home

My enthusiastic original owner journeved all the way from San Francisco to see me being built. Once I arrived at my nice comfy slip in Sausalito, he and his family enjoyed sailing with me for seven years on San Francisco Bay with occasional cruises up into the Delta. That was rigorous sailing for a young boat, let me tell you. Tidal flows up to 5 knots, wind regularly in the 20-knot range, fog, and even cold weather tested my endurance right from the start. My ketch rig was greatly appreciated by the crew as they could shorten sail easily by dousing the main and using the jib and jigger to balance the helm. After seven years as an essential part of this sailing family, I was shocked to hear that I would have to leave by truck for a new home in Chicago.

I was skeptical of my new sailing grounds . . . an inland lake? Really, for a boat of my stamina? When I came down the Chicago River for the first time though, I was amazed by the towering skyscrapers, the endless opening bridges, and even a lock to pass through to gain access to Lake Michigan.

Well, as we sailed out in a fresh southwest breeze past Navy Pier, I was delighted. I couldn't even see the other side of the lake and was taken aback by huge freighters, tugboats, barges, and weekend warriors as far as the horizon. My new owner was delighted at our sprightly pace. Before I was launched, he had treated me to a full

spa treatment of polish, new varnish, re-stitched sails, and even a deck sanding. I was looking terrific for my first sail in sweet fresh water.

I couldn't imagine a better place for a ketch like me to cruise than Lake Michigan. We made many lake crossings, usually on a reach (my favorite point of sail). Once we were across on the Michigan shore we hopscotched north from one delightful port to the next, each within an easy day's sail.

After seven seasons, I overheard my owner quietly discussing the amount of money he was lavishing on my care and feeding. All my wooden spars, my teak decks, and my varnished rails need to be tended to, after all. "I'm worth it," I thought. Many came and admired me but none made an offer. Just as I had about given up hope, Bill Clancy decided to buy me and take me to Door County. It was about a 200-mile sail to the small town of Ephraim on Green Bay at the north end of Lake Michigan.

### A little pampering

Bill was a caring owner and each fall took me to the main Palmer Johnson yard in Sturgeon Bay for a few winter projects. As a mature boat, now almost 20 years old, I was still going strong, but my sails were sagging, my engine was wheezing, my winches were getting sore, and I needed a facelift.

Bill Clancy sold me to Bill Clay, who was determined to make me the prettiest boat in Fish Creek Harbor. He dressed me in a brand-new suit of sails and had Palmer Johnson do a transplant in the engine room, installing a new Volvo Penta diesel. He compounded and polished my fiberglass hull, stripped my varnish, sanded my decks, and replaced most of my rigging. The following spring I was absolutely dazzling. Every day, the first rays of the rising sun highlighted my



Finisterre's interior, top two photos, has acquired what might be called a patina of gentle aging. A few hours with sandpaper and a varnish brush would restore the Cheoy Lee teak to its original luster. After 44 years of weather and use, her teak deck, above, is missing a few bungs.



freshly varnished spruce spars against the background of dark green cedars surrounding the harbor. Early each morning that first summer, a young boy rode his bicycle down the dock just to stand and stare at me. I was so proud.

After about five years, Bill stopped coming down to the harbor regularly. I learned he was having health problems. The following summer, I met my new owner, Merv Massey. He had owned a number of smaller boats but wanted a boat that could take him anywhere in any weather. He was aware of the Cheoy Lee quality and that I had been constructed to meet Lloyd's offshore specifications. He had not owned a split rig before but soon found out how effectively my sails on two masts handled heavy weather. He put me in Eagle Harbor, where he was the harbormaster, so he could check on me almost every day.

For the next six seasons, Merv and his wife, Bev, sailed me to all my familiar haunts on Green Bay and also to places I had not visited before. Eventually, Merv had me hauled and trucked up to his house in the country. He covered me with an aluminum frame and hefty fabric tarp, but a fierce winter storm blew in and tore the tarp to shreds. Merv had gone south to escape

the cold that year, so I sat out in the open all winter. My varnish peeled and my wooden decks dried and cracked. Water seeped in through deck leaks, portholes, and cabin sides and accumulated over my floorboards. I began to think the end was near.

One sunny March day, a young man drove into the driveway. He looked me over and knocked on Merv's door and introduced himself as Joel Bremer. He explained that as a boy he had admired the boat called *Finisterre* frequently when riding his bicycle near Fish Creek. Merv, with tears in his eyes, accepted Joel's offer and they closed the deal with a handshake. A few weeks later, Joel had me trucked to a farm he had purchased a few miles away.

#### Hopes for the future

This is my second year in the barn. I'm hopeful that Joel will have the time to get me back in the water soon. He's young, extremely handy, and has a great deal of energy. He even built his own house a short distance from the farm.

I'm sure we share some concern about what comes next. To begin with, I am now about 44 years old, have been with five previous owners, have not had any serious work done in more than 20 years, have sailed in both salt

water and fresh, and most recently suffered from exposure to the worst kind of weather a Midwest winter can throw at you. No doubt I'm showing my age, but is that so bad? Other than the finish on most of my woodwork, wear and tear on some of my systems (electrical, plumbing, and engine), I could probably be vacuumed out, dusted off, scraped, varnished, and launched.

Joel has an interest in old things kept pretty much in their original condition. "Patina" he calls it. This barn, the original farmhouse, the toolshed, and even Joel's ancient bus are nearby. These things are not pristine, restored, or glorified, but taken together the whole scene smolders of comfort, beauty, and a casual, rustic way of life. I hope to fit into the picture, not only here at the barn, but also back in the clear blue waters of Green Bay with Joel, Lauren, and their children Finn and Margaret, and of course Jack, enjoying a family sail.

So my guess is that my life going forward as a good old boat will not shout, "Hey, look at me and how beautiful I am." As a mature sailboat, my patina will be my calling card.

Bill Jacobs' biography can be found on page 13.

## Boat-bike saddlebags

## Hand-sewn cargo boosters that stow flat

pair of saddlebags, or panniers as they are often called in the biking world, add capacity and convenience when we make shopping trips on our bicycles. We designed and made our own bags. Our goals were to make them soft, quickly removable, and collapsible so they could be stowed easily.

These saddlebags can be sewn together by hand without the need for a sewing machine, and making them requires no special sewing skills. They don't have to look pretty; they just have to be functional. The techniques used to sew them can be found in Emiliano Marino's *The Sailmaker's Apprentice*.

We used 7-ounce cotton duck, although any medium-to heavyweight material could be substituted. We cut the material to size allowing for a ½-inch seam allowance and a 1½- or 2-inch double-folded hem at the top. Although the choices of materials and dimensions are flexible, the one non-flexible aspect of these saddlebags is that they must be sized so that, when they are installed on the bike, they don't interfere with the pedals or the rider.

We sewed our pieces of material together with a hefty needle (#16 sail needle or heavy sewing needle) and 7-ply sail twine. Just about any other thread could be used. If it's too light, the thread can be doubled or tripled in the needle. Avoid thread, such as cotton, that rots easily when exposed to UV.

We installed three ½-inch grommets, or sewn eyelets, evenly spaced in the hem of each pannier along the edge that abuts the bicycle.

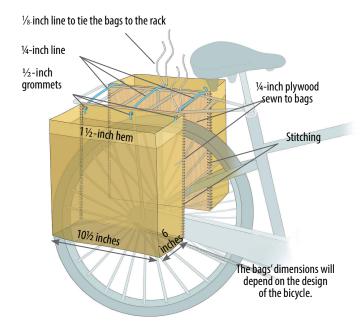
Then we cut two pieces of ¼-inch plywood, sized to match the back side of the pannier. We drilled ⅓-inch holes around the perimeter of the plywood, spaced approximately every half inch and approximately ¾ inch in from the edges. Using a hefty needle, we then sewed each pannier to its plywood backing. We used 7-ply sail twine, although the #9 nylon twine often found in hardware stores or home-improvement centers is a good substitute. A sewing palm and needle-nose pliers are useful tools for this job.

Finally, using ¼-inch rope, we tied the two panniers together with the line lying over the bike's luggage rack. The plywood backs lie against the bike and protect the canvas against chafe. Smaller line, perhaps ⅓-inch, can be used in addition to tie the panniers to the luggage rack.

Our final step was to coat the entire ensemble with a water repellent. Some fabrics might not need this, but since our panniers were made from 7-ounce cotton duck, we used a locally available brush-on repellent.  $\triangle$ 

Rudy and Jill Sechez have lived aboard and cruised for 17 years on boats they built themselves. Currently on Briney Bug, a 34-foot sail-assisted wooden trawler they designed, they like to keep things simple and enjoy sharing their experiences with others. Reach them at rudyandjill@yahoo.com.







Saddlebags add to the carrying capacity of a bicycle, at top, and are easy to make with hand tools and sewing needles, center.

They are supported by and tied to the bike's luggage rack, above.

# Securing solar deck lights

## Clever clamps made of rubber hose

BY JIM SHELL

like my boat to be visible in a dark anchorage, but I prefer to use cockpit and deck lighting that doesn't use precious stored energy. Solar-powered pathway lights, commonly found in hardware stores, are ideal for this purpose but are difficult to attach to pulpits and stanchions. After trying several attachment methods without success — the lights were either wobbly and insecure or difficult to remove for storage — I discovered that white, 1-inch (ID) Trident sanitation hose (available from most marine chandlers) makes an ideal clamp.

My favorite lights are Solar Metal Path Lights from Ace Hardware. They have a stainless-steel stem, stay lit all night, and can be attached to the hose with a rivet.

To make a clamp out of rubber hose (a hose clamp?), cut a ¾-inch-wide longitudinal section from the side of a 3- to 4-inch length of the hose, then drill a hole for an aluminum pop rivet in the middle of the hose opposite the cutout. Drill another hole in the stem of the solar light where the clamp should be attached. (Place a wooden dowel inside the tube while drilling to prevent it from collapsing.)

Once the hose and solar-light stem are riveted together, the hose is tight against the tube but can be swiveled to orient the solar light to a vertical position regardless of the angle of the rail. If desired, the spike used for sticking the light in the ground can be stored inside the tube so the light can also be used ashore.





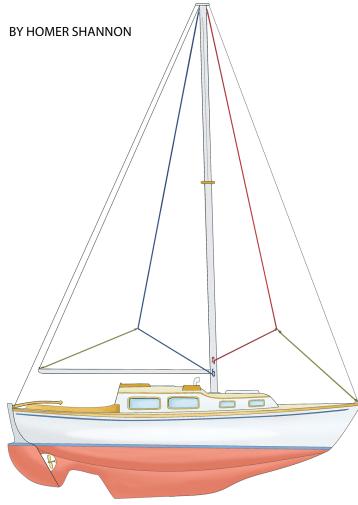
If the light has a plastic stem, fit a wooden dowel inside the stem and secure the hose through the stem and into the dowel with a screw and washer (this may interfere with storing the ground spike inside the tube).

This mounting system is easy to use. The rubberized hose does not slip on the stainless-steel rails and stanchions, and the lights can be easily moved to locations where they are most useful or removed for storage.

Trident sanitation hose is available for approximately \$3 a foot. Ace Hardware has solar landscape lights of several types at prices between \$3 and \$6.  $\triangle$ 

Jim Shell has been sailing and restoring good old boats since 1981 — a Venture 17, Catalina 22, Coronado 25, Cal 29, and his current Pearson 365 ketch, Phantom. He and his wife, Barbara, enjoy cruising the Texas Gulf Coast between Port Arthur and Corpus Christi.

## Silence those halyards Tie 'em fore and aft



If you have external halyards on your boat, no doubt you've been awakened at night by the annoying clanging of a loose halyard rapping against the mast. Try as you might to tie things off, if the wind shifts or increases, what was once a well-silenced rig starts drumming, banging, tapping, and clanging ... making sleep impossible.

Preventing this noise requires that you stop all lines from hitting the mast. You can tighten them, pull them out to the shrouds, or wrap one around the mast to secure the others, but invariably one or more will get loose and start tapping. The only way to silence your rig is to move the lines so they cannot possibly come in contact with the mast. After trying all the techniques noted, I adopted a method that's easy to rig and actually works.

First, move the halyards that can be conveniently moved. Clip the the mainsail-halyard shackle to the end of the boom. (One down!)

### Resources

To see an animated demonstration of how to tie a rolling hitch, go to www.animatedknots.com and look under "Boating."

If you have a hanked-on jib, clip the halyard shackle to something at the bow or way forward on a lifeline. (Two down!)

If you have a furling jib, you probably won't want to move the halyard return, but you'll need to loosen it so you have about 2 feet of extra line.

Find or make up a line that's about 3 feet longer than your boom. Tie a loose bowline around all the halyards that are aft of the spreaders (working and return ends as well as the topping-lift return) and take the other end of this line to the end of the boom. Adjust the halyards so they all have enough slack to stretch out 2 or 3 feet from the mast. Pull them all taut with the line and secure the end of the line to the end of the boom. (Half the rest done!)

Take a second line about the length from your mast to the bow and tie a loose bowline around all the halyards forward of the spreaders. Tie the forward end of this line onto one of your jibsheets with a rolling hitch. Leave enough room on the sheet so you can slide the hitch forward to pull the halyards away from the mast. If you have a hanked-on jib, tie the line onto the forestay with a rolling hitch and slide it down the forestay to tighten it. (All are now secured!)

Use a boathook to push the bowlines as high up as practical. This will pull the halyards farther from the mast and reduce any chance of their slapping. Adjust the tension in the securing lines and halyards as necessary. (Silence!)

Takedown is ultra-easy. Untie the knots or hitches at the ends of the two tensioning lines and the bowline ends will drop down to where you can easily untie them. Re-tension your halyards as necessary and you're done.

Once you do this a couple of times and get a sense of how much each line needs to be tensioned, you can set the system up in a few minutes. If you have two lines to dedicate to this job, keep them handy in a locker so you can find them when you need them.

This system works, does not look too odd, and is easy to do. Silence is golden!  $\Delta$ 

Homer Shannon has been sailing the New England coast since his youth in Hingham and Manchester-by-the-Sea, Massachusetts. He presently sails a Bristol 29.9 out of the American Yacht Club in Newburyport, Massachusetts.

Homer silences his halyards by hauling them forward from the jibsheets or aft from the end of the boom.





Calling all sailing clubs! The gauntlet has been thrown down and it's now your chance to match the St. Lucie Sailing Club with their photo of this cluster of good old boats — a Seafarer 34, Sabre 30, Ranger 33, Cal 34, and Tartan 37 - just after the start of a St. Lucie Sailing Club regatta in Stuart, Florida, December 2014. Send your high-resolution sailboat photos to istearns@goodoldboat.com and we'll post them on our website. If we publish yours here, we'll send you a Good Old Boat T-shirt or cap. If the photo is of boats from your club, we'll also send you two one-year gift subscriptions to Good Old Boat magazine to share with your members.

### continued from page 9

### **Mixing elbows**

Ed Zacko's excellent article on his mixing elbow mishap ("Dead in the Water," January 2015) brought back some not-so-wonderful memories of my own mixing elbow education. In spite of the fact that my first diesel engine was installed by myself — A to Z — into a boat that had only an outboard previously, I had no intimate knowledge of what a mixing elbow was or did prior to about two years ago.

My wife, her cousin, and I were motoring my 1981 Morgan 321 back up the Anclote River in Florida to her berth on a fair January afternoon after a great sail in the Gulf. My wife ducked below, only to reappear almost immediately and calmly inform me that something below was on fire. I handed the helm over to her cousin (an experienced boater) and dashed below, eventually to find the mixing elbow had simply fallen off the back of the exhaust manifold.

In addition to the cabin being filled with smoke, the bilge was quickly filling with the cooling water that was no longer being discharged astern. For some unknown (at the time) reason, the electric bilge pump was running, but not discharging any water and, with a good half hour or more yet to go, I realized I would have to stay below and manually pump the seawater out of the bilge and into the galley sink while the ladies stayed topside guiding us home. I had to pump constantly just to keep up.

Once we were home, my inspection revealed the mixing elbow was badly rusted. The bolts holding it in place had rusted through and one was so far gone it could not be removed. Drilling and tapping a new hole proved fruitless. I realized the only option was to remove the exhaust manifold and send it out for reconditioning and machining — costly, but the only option as I couldn't find a good used or new one at the time. I asked the machinist to install studs, instead of just drilling and tapping new holes. This allows for one-handed installation of the mixing elbow in a part of the boat where it's difficult to have two hands free, and will not only facilitate future servicing, but also make emergency replacement much easier while under way.

As the third owner of this boat, I'm not sure of the past history of servicing this item. The previous owner (who had her for just about a year) provided a long list of items he addressed. The mixing elbow was not on it and I'm certain, judging by its rusty condition, he could not have replaced it. But I am certain it was replaced at least once as the one that fell off was a Perkins part, not the one the Yanmar 2QM20 came with.

Once the engine was back together and started, the steady volume of cooling water it subsequently discharged was easily an order of magnitude greater than I had ever seen exiting the transom. This got me thinking about what else this 30-plus-year-old engine might require in the way of preventive maintenance. The freshwater cooling came immediately to mind and led to another significant project involving much more than originally expected.

-Bill Cheadle, Safety Harbor, Fla.

### Thanks for the better Pusser's Dirk

Thank you for bringing the Spyderco Tusk sailing knife to my attention in the November 2014 issue Product Launchings column. The company is not quite as well known in Britain.

Many of us who began sailing in the 1950s or '60s will remember with mixed feelings the ubiquitous Pusser's Dirk, so-called because in the Royal Navy it was issued by the purser ("pusser" in the vernacular). It was the standard-issue jackknife with a spike and rigger's blade. Sturdy enough but, non-locking and non-stainless, it would rust with enthusiasm, was impossible to open with wet hands, yet paradoxically would close like a rat trap on the fingers. I still have a scar, which is an "identifiable feature" registered on my passport, as do many others who sailed in those heady days.

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

There have been improvements, but I would suggest none so striking as the Tusk I spotted in the November issue. I have reviewed many high-end hunting knives for publication so I called Spyderco, where a representative was friendly, informative, and helpful. Within days a Tusk arrived at my door in the UK.

For such a radical design, it seems this is not a new one but was created a quarter century ago and shelved until production technology caught up with the concept. This knife is compact and exquisitely machined from optimal materials with the transition of parts as near perfect as I could detect through a lens (old habits of a knife reviewer).

The blade lock is similar to that on the Chris Reeve Sebenza, arguably a folding hunter by which others are judged. Spyderco acknowledges this source

in the accompanying brochure. The curious ceramic ball lock for the spike is new to me but functions very nicely on my knife. The open design is easy to clean, the feel of the knife in the hand is secure and positive, and one-handed opening is smooth and effortless. The blade has the trademark Spyderco "ring-pull."

The notional dynamic centerline of the blade, and also of the spike with its integral shackle key, is offset from the grip, allowing a good purchase on the blade for a sawing action and good torque on the spike for working into a stubborn knot.

Anyone who resorts routinely to using a knife on a boat might benefit from a good seamanship manual. Theoretically, the jackknife should be carried and never used. But we are not perfect and this Pussers Dirk will, I'm sure, be a blessing on my lanyard when needed.

I could write more, all good. I am absolutely delighted with this knife, which without *Good Old Boat* I might never have discovered.

Congratulations on a fine "century" (100th issue). Please keep it up for another hundred.

-Geoffrey Toye, Pembrokeshire, UK

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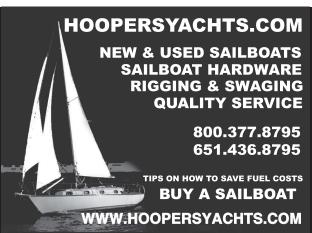
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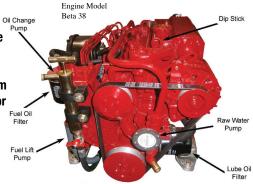
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Carol Faber faberrc@comcast.net http://flic.kr/s/aHsjHKcdrh



### Alberg 37

1979, hull #207. Second owner with over \$30,000 spent in the last 3 years on improvements and upgrading including new Yanmar diesel w/255 hrs, full cockpit enclosure, navigator compass, wheel cover, Icom AIS, starting and house batts, Raymarine C95 multi-function display, Nova Kool 12V fridge system, and a new RF genoa UV cover. Fully equipped for cruising and in sailaway cond. Full inventory list available. Sunshine Coast, BC, Canada. \$59,000 CND.

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#### Ranger 33

1978. Second owner since '79. All years on Lake Superior. New rig, drainage system, head, keel step, depth, cushions, and companion door. Rebuilt mast and engine drivetrain. Atomic 4 in exc cond. Restored teak interior and original gelcoat hull in beautiful cond. On Madeline Island, Lake Superior. Madeline Island Yacht Club membership may be negotiated as part of sale. \$26,000.

Joe O'Brien 763-234-1031 joe@callta.com



### Legnos Mystic 10-3

1977. 26'7" gaff cutter w/varnished wood spars. Tanbark sails by Jasper & Bailey. Green Awlgrip '11. New standing rigging and roller furling '11. New dodger '12. Edson worm gear rebuilt '13. Interior cushions '13. New 16-hp Beta Marine diesel installed '09, 516 hrs on engine. GPS, VHF, D/S, Kenyon stove, Raritan head, holding tank, shower, fridge, LED lights. Old Saybrook, CT. \$45,900.

Peter Jenkin 203-606-5028 203-234-7794 Ladybug.Peter@gmail.com



### Lightning 19

1998 cruiser. Dodger and full tent-like cockpit cover with vent by Topside Canvas. Full foam flotation. 3.3-hp '06 Mercury OB, trailer. Bottom and CB painted w/bottom paint. Not set up for racing. Standard main and jib and self-tending jib. Good to exc cond. Madison, CT. \$3,300.

> John Connery 203-421-3897 matsconn@gmail.com



#### Peanut sailing dinghy

1965. 10' sailing dinghy, cold molded mahogany hull w/5 x 1mm plys, solid mahogany daggerboard and rudder, spruce spars, simple good-cond nylon sail, Peanut class, manufactured near Oslo, Norway. Exterior needs refinishing. Title available. Central NC. \$1,500.

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#### Pearson 35

1981 CB sloop. Classic Bill Shaw design: long shoal keel w/attached protected rudder. Draft 3'9" w/ CB up for go-anywhere capability. Draft 7'6" w/CB down allows the boat to go upwind properly. Long cockpit for comfortable seating or sleeping areas under removable full canvas enclosure. Wheel is forward and protected by the dodger allowing helmsman to easily reach the sheets. Professionally maintained. Sodus Point, NY. \$29,900.

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Most of our classified ads appear on the GOOD OLD BOAT

website: www.goodoldboat.com/resources for sailors/sailing classifieds/

### Boats for Sale, cont



### O'Day 37

1979 center cockpit. Featured in the Jan/Feb 2013 issue of *Good Old Boat*. Great sailing boat, formerly owned by Annapolis Sailing School. Currently on the hard at Herrington Harbour North in Deale, MD, just south of Annapolis. For sale through Midcoast Yachts, Tom Aga. \$27,500.

Philipp Theune 303-832-1150 philipp.theune@gmail.com



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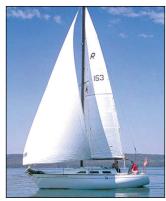
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### **Bristol 29**

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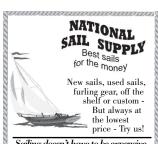
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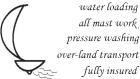
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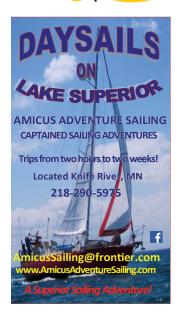


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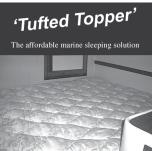
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s I sit here writing this in my shed a million miles from the ocean, I gaze longingly at the chart on the wall. The winter rain gently pattering on the roof sounds, to me at least, a little like the swish of the bow wave that had been a constant companion for 34 days on a voyage a lifetime ago.

A mere 27 inches wide, that Cape Town to Rio de Janeiro chart represents an unfathomably large ocean, a bygone challenge, and a memory of a 3,500-nautical-mile voyage across the South Atlantic. I feel that memory fading, dying. It unsettles me. I want it refreshed.

Yes, I still recall how at the end of that voyage I swore off blue-ocean sailing. At the time, it was an immensely strong conviction of "Never again!" A small, miserably wet 30-foot boat, an incompatible crew, a worried family back home, and stress over the cost of all the unpaid leave needed to deliver a raceboat back across the South Atlantic to Cape Town — all aspects made the voyage of a lifetime seem less than ideal, certainly not something worth repeating. Or so I thought at the time.

That was eight years ago. Now, as I wear the "Been-there-done-that" T-shirt and sit looking at the expanse of ocean represented by the chart, I have but one burning desire: to do it again! And I have to ask, "Why?"

Sailing is not just something I've tried or dabble in every now and again. It's an integral part of my life. More than that, it's a compulsion, an addiction. I cannot get it out of my system. I cannot, no matter what, swear off the feel of a hard-pressed yacht on a beat in a 20-knot breeze.

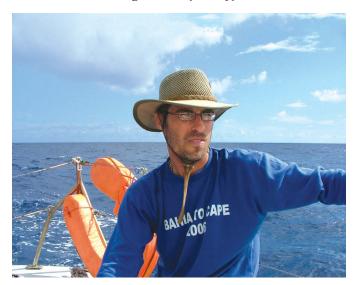
As I reflect on that long-ago voyage, some things spring to mind that I wouldn't wish to repeat. Indeed, *will* not repeat should there be any choice. A small, wet 30-foot Royal Cape One Design (RCOD) is not the boat for a comfortable crossing. Sailing with an unknown, never-sailed-before crew is certainly no better than doing the crossing singlehanded. A tight deadline is not conducive to relaxed sailing.

Next time, the boat will need self-steering, to be dry, to have a light on the compass, to have the capacity to carry enough water in proper tanks plumbed into the galley.

And so, as I sit here listening to the fading rain of a Highveld winter, I am resolved to give it another go, to take my Miura 31, *Ocean Blue*, an infinitely better boat for the trip than an RCOD, back to her spiritual home in the waters of the South Atlantic, back to sea.

Will I once again cross the South Atlantic to St. Helena and Brazil? I honestly don't know. But the need, the burning desire to return *Ocean Blue* to the False Bay waters of the South Atlantic, there where she belongs, burns deep and strong in my soul.

At the very least,  $Ocean\ Blue$ 's hull will once again feel the salty waters of False Bay. And who knows? Maybe another South Atlantic crossing is in her (and my) future.  $\Delta$ 



David Marx assumed the role of caretaker and skipper of Ocean Blue in late 2012. She's a late 1970s 31-foot Miura built in Hout Bay, South Africa, and originally moored at False Bay Yacht Club in Simon's Town. David is getting to know her, upgrading her, and preparing for a return to False Bay in the not-too-distant future.

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