

GOOD OLD BOAT

Still sailing after all these years!



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ISSUE 13

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VIXEN

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About the cover...



One foggy morning in Maine, Dick and Judy Kilroy suspended this gull in time with a click of a shutter. Their boat, *Vixen*, a Morgan 38, was the feature boat in the May 2000 issue of *Good Old Boat*.

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Note: Like everyone else, it seems, we have a new area code (763).

Voices from everywhere

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The view from here

Attitude

It was quiet in the marina. I was up the mast attending to a recalcitrant anchor light. A U.S. Coast Guard boat with two large outboards idled into the entrance and up and down the lines of docked boats. I knew enough to keep an eye on the big red RIB as I worked. It is well known that young men occasionally do foolish things. Being in uniform will not prevent this, although rigorous training and discipline will help. I knew all that. I had been a young man in uniform, responsible for other young men in uniform, in fact. It had been an imperfect experience.

When the Coast Guard boat had completed its tour, the coxswain dropped his hand to the shift levers. I stopped working on the light and wrapped both arms and legs around the stick. The coxswain dropped one engine in reverse and left one ahead, advanced the throttles smartly, and left the now-turbulent marina in a manner that would please young boys everywhere. *Mystic* did perhaps a dozen heavy rolls, aggravated by my weight at the masthead.

When I finally regained the deck, another sailor in the marina made reference to the Coast Guardsmen as “children with guns.” Fair enough in this case. The sailor offering this comment was himself a law-enforcement officer, and the two lads in the overpowered RIB were certainly in need of some adult supervision.

It is not always like that. We had been boarded by a competent petty officer two years before, while we were docked in the same slip. He was dressed in body armor and carried a sidearm. I don't think body armor and a sidearm have been particularly useful to anyone in our locale since the French and English tried to fight it out to the last Indian for control of North America. While I did not fear his sidearm, I was a little worried about his clipboard. In his manner and in his inspection, however, he was professional, knowledgeable, and reasonable.

These days, even the U.S. Coast Guard admits they are underfunded and poorly equipped for their mission.

They have retention problems and the associated lack of training and experience that go with that.

Maybe there is something wrong with the mission. I see that the Coast Guard has been gathering opinions again to see if there should be a mandatory life jacket law that they would, quite naturally, enforce. They are also being criticized for not being able to rescue a group of recreational sailors who died tragically.

Maybe as a nation and a culture we have the wrong attitude toward all this. But I'm in favor of wearing life jackets. We always wear them when underway. I'm not in favor of laws requiring that we and other sailors do so. There is, in the fabric of our culture, the idea

that if we make enough laws the world will be a better and safer place. Will enough laws prevent all loss of life at sea? Will anybody *want* to go to sea for recreation if there are that many laws? Do you want an OSHA-approved sailboat? Should the Coast Guard, which admits they already have more missions than they have resources for, be expected to save the lives of all recreational boaters who get into trouble?

In my opinion the answer to all of these is no. We have only to look at the state of general aviation in our country to see what happens when we regulate and litigate a recreational activity until it becomes too expensive. We can't afford to make boating absolutely safe by force of legislation. Certainly, we can't afford to make boating safe for the unwilling and the unskilled.

In the end we, the recreational boaters, need to take care of ourselves and our fellow boaters. We should not expect to be taken care of by regulations and rescued by the Coast Guard every time we make a mistake. They can't do it every time. When we dial 911 on shore, as when we call Mayday on the water, we have done one thing that may improve our odds. Once we have done that, however, we should immediately look for what else we can do to help ourselves. The attitude we need is self-sufficiency.



by Jerry Powlas

Forewarned is forearmed

Many folks who use LPG for a fuel may not be aware of the new requirement for LPG cylinder valves. This applies to all cylinders – steel and aluminum, 4-40# – and not just aboard boats.

In a nutshell, the traditional valve (POL style) must be changed to an Overfill Protection Device (OPD style) valve by April 2002. For the short term everyone should be OK.

LPG cylinders have a date stamped on them that gives them DOT approval for 12 years when they're new and 5 years after that. If your certification expires, propane filling stations will not fill your cylinder. The next step is to get it re-certified. But from now on, they will not re-certify a cylinder unless it is equipped with an OPD valve.

Most boats use expensive aluminum cylinders, so it is probably cost-effective to replace the valve rather than buy new cylinders. The good news: the new valve will accept your existing hose fitting. A full-service propane company can change the valves. I urge propane users to check the date stamped on the cylinder and make plans to comply with the new requirements. It certainly would spoil a summer cruise if your cylinder were refused for filling! Those interested in more information can surf to <http://www.lpg.com/opd.html>.

Art Hall
Pownal, Maine

Legendary green flash?

Bill Sandifer writes about the green flash (*January 2000*). I remember watching for it many times with my dad. He thought it was caused by a refraction of the sunlight under certain atmospheric conditions at the moment of sunset. All those years I never saw it with him, but I saw something a few times at sea after staring fixedly at the setting sun and also after sitting in the car, looking a long time at a road flare.

I saw what might be considered a green flash, but I suspect it was a matter of retinal fatigue. This is a phenomenon occurring when one stares steadily at a bright-colored spot source and then looks away. The color persists in the vision, for a few moments, but as the reverse color. That is, a bright yellow light seems to give a blue flash, a red or orange light gives a green flash. Maybe some of our good old ophthalmologists or optometrists might have an opinion on this. The legendary green flash might be all in our heads.

Ike Harter
Brooklyn Center, Minn.

Thanks for the memories

Reese Palley's article (*May 2000 issue*) about my experiences with Valiant portrays my enthusiasm and commitment to producing a good boat. While most of the details of the events are accurate, one point needs clarification: my good friend Bob Perry is not given enough credit for his superior design work.

Bob and I met while working together at a small boatbuilding operation in Seattle where we sailed together and became friends. When I decided to build the Valiants, I went to the person I believed to be the most talented and capable yacht designer, Bob Perry.

I talked with Bob and described the size and general features the boat should have. Bob did all the design work and, with minor revisions, the Valiant 40 design was finalized. My belief in Bob's talents has been proven. His many designs and prominent reputation in yacht design continue to confirm his extraordinary talent and abilities.

The creation of the Valiant was one of those wonderful experiences in life, and its success was a result of many people's efforts. I had a great time with and I am grateful to those who helped make it happen.

Great magazine; keep up the good work.

Nathan Rothman
Mercer Island, Wash.

Memories are made of this

I read with interest the article on the Valiant 40. It was nice to see Nathan get some ink. He put everything he owned on the line when the Valiant was launched. I just sharpened my pencil, hung on to his coattails, and went along for the ride.

It's been a long ride. Nathan and I remain the closest of friends. Nathan has two beautiful children now and stays extremely busy in the world on international business. We enjoy golfing together and retelling the old stories of the early Valiant days.

Bob Perry
Seattle, Wash.

Oops!

We pretty much botched it with Edey & Duff in the May

issue of *Good Old Boat* in our article about dinghies. Seems we couldn't spell Edey. And their phone number is 508-758-2743. Still, we're hoping they'll advertise those marvelous Fatty Knees dinghies. Think they'll forgive us?

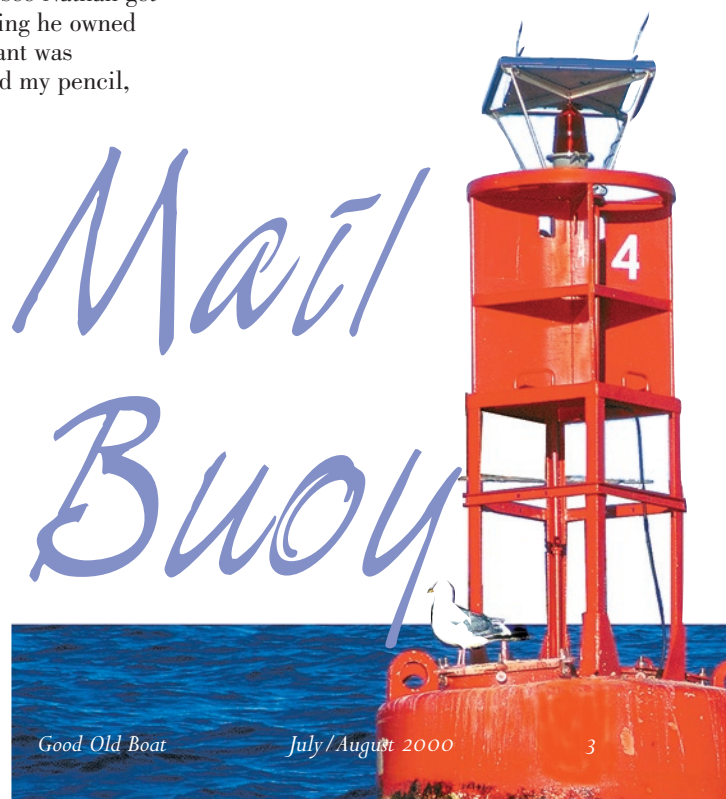
Oops II

David Telles is the author of the piece on Roger Winiarski and Bristol Bronze in the May issue. His byline ended up hidden behind a photo or something in the layout, so his article ran, umm, more or less anonymously.

Speaking of bronze

Concerning the article on Bristol Bronze (*May 2000*), according to Nigel Warren's *Metal Corrosion in Boats* (considered the standard work on the subject), manganese "bronze" is a brass, as it contains zinc. Silicon and aluminum bronzes are the real McCoys. As far as the EPA making passivating enormously expensive, the news hasn't as yet reached Brooklyn, since there is a firm there where I had my 316 chainplates passivated three years ago. Besides, there is now a firm that advertises citric acid as a passivating agent (Citrisurf) because it is biodegradable. You could actually do your own passivation with salt water: just put your stainless-steel fitting in a plastic bucket full of salt water, connect it to the positive electrode of a battery

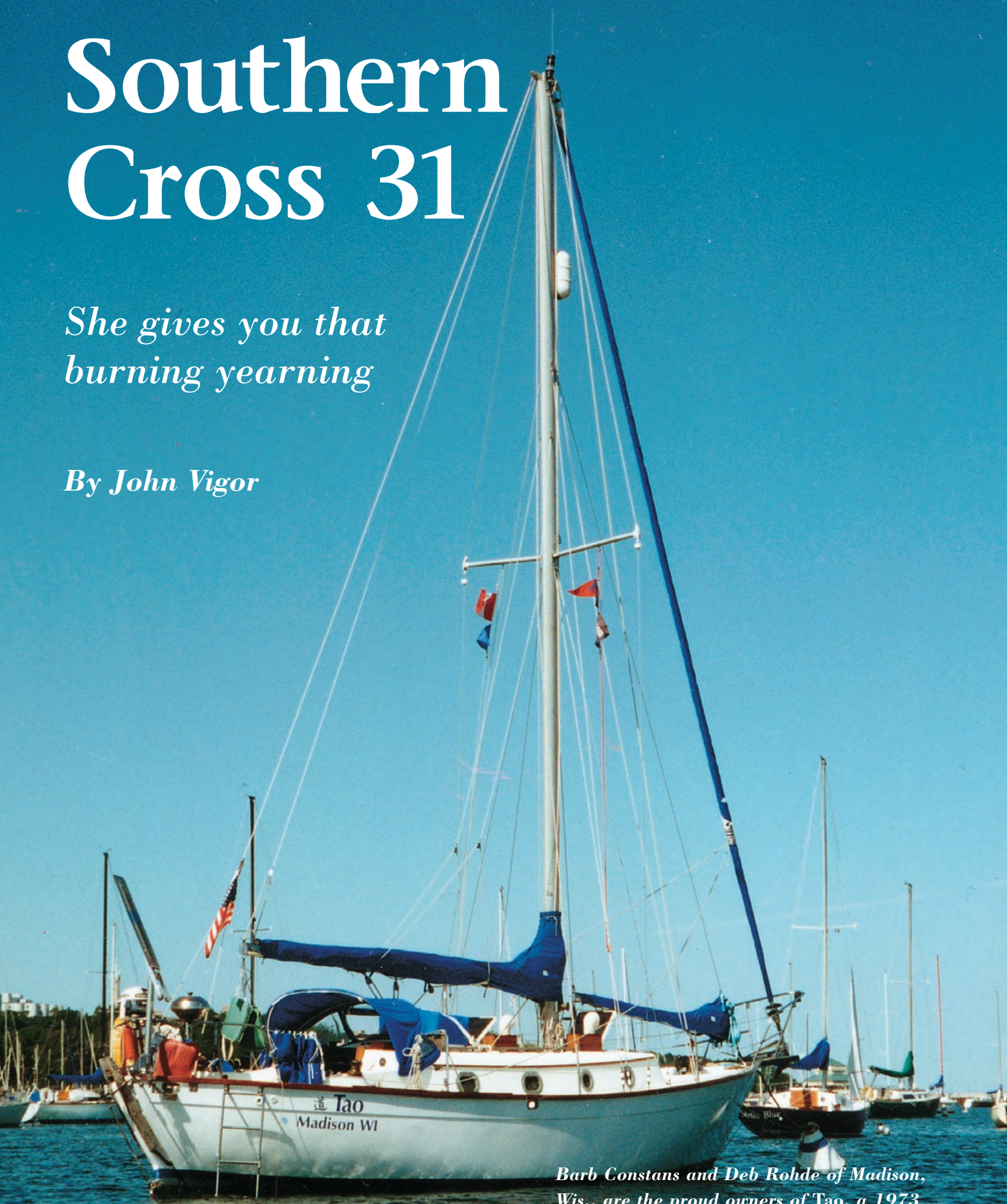
Continued on 64



Southern Cross 31

*She gives you that
burning yearning*

By John Vigor



Barb Constans and Deb Rohde of Madison, Wis., are the proud owners of Tao, a 1973 SC31 finished by Bill Knowles of Texas. Tao sails on Lake Michigan out of Milwaukee, Wis.

IF YOU'VE EVER STOOD ON A DOCK alongside a Southern Cross 31 you'll know the meaning of the word yearning. It's that deep and anxious longing or desire you feel as you run your eyes over her deck and rigging.

The desire hits you on two levels. The first longing is for the boat herself, this pretty little creature with the delicate sheerline and the cheeky little bowsprit. The second, almost simultaneous, longing is for the exotic places she can take you, places where the constellation after which she's named hangs high in the southern sky. Suddenly your nostrils tingle with the hot spicy scent of a tropical island. And what's that on deck just forward of the cockpit? Could it be white coral sand from somebody's bare feet? Ah yes, this is truly a boat to yearn over, a beautiful boat just longing to visit the earth's beautiful places.

Colin Archer, the famous Scotsman who lived in Norway and produced designs of sail-powered sea-rescue boats, would have approved of the Southern Cross 31. She has much the same sort of underwater body as Archer's much-revered designs, a full keel with a long flat section at the bottom, and not much of a cutaway forward. She also has an outboard rudder and the famous pointed stern that was said to make the Colin Archers so seaworthy in heavy following seas.

From 1975 to 1987, more than 130 fiberglass SC31s were built by C. E. Ryder in Newport, Rhode Island, and about half of them were sold as uncompleted hulls to do-it-yourselfers. For this reason, although they all look similar on deck, you never know what you'll find below on this boat. The factory-finished boats have a standard interior layout, but home-builders always have their own ideas, and they're inevitably better than the designer's ideas — or so the meddlers think. Mostly, in fact, they're not, but there may be a few that will surprise you.

The price of a used SC31 varies according to the design and finish of her interior, too. You might find an early one being offered for somewhere around \$35,000 to \$40,000; later models finished professionally will cost

proportionately more. But if you can afford it, it's a relatively cheap ride to paradise.

Basic design

Thomas Gillmer, the designer of the Southern Cross 31, is much admired for seaworthy cruisers constructed in a robust traditional manner. His credentials are impressive. He was professor of naval architecture and headed the design department at the U.S. Naval Academy in Annapolis.

The SC31, interestingly enough, is actually a close cousin of another famous boat that came off his drawing board — the Seawind, built by Allied, which was the first sailboat built of

ations. She has a little more beam, a little more internal volume, and her displacement has gone up half a ton.

One of this boat's claims to fame is that her hull is cored with Airex foam. That makes her more buoyant in case of a bad leak, and it also insulates the interior against cold and noise. The condensation so often found inside fiberglass hulls in cold waters is almost non-existent in this boat, and the thudding of waves against the topsides is far more muted than it is in solid fiberglass boats.

No material is perfect, however, and some critics express concern about the strength of a cored hull — not its mechanical strength or rigidity, which is probably far greater than that of a solid fiberglass layup, but its ability to resist punctures. The critics maintain that two thin skins of brittle fiberglass with a thick soft core in the middle are not as safe as one thick skin of fiberglass. Their worries stem from the fact that the outer skin is more easily penetrated by a sharp object in the water, a deadhead hit at speed, or a rock pinnacle that the boat has run up on. It's rather like a balloon that, blown up too tightly, can be exploded with the slightest prick of a pin. On the SC31, it's a question of impact resistance, of course, and some people believe the SC31 is lacking in this respect, at least in theory.

Those of us who have no way of discovering whether this is a real problem, or merely a hypothesis propounded by nautical naysayers, console ourselves with the thought that even if the outside skin is punctured, there is another skin inside, plus that extra thickness of plastic foam. We can hardly believe it would be more dangerous than a single solid skin cracked right through.

Because foam is reputed to be adversely affected by the sun's heat, the fiberglass decks and cabinroof are cored with edge-grain balsa, which is more forgiving. It's also standard practice in most production boats. In areas of stress, or where fittings are likely to be bolted right through the deck, solid plywood is substituted for balsa.



Don Sannes, of Austin, Texas, sails Reliant, a 1980 SC31, on the Texas coast off Corpus Christi.

fiberglass to circumnavigate the world. The Seawind was the forerunner of the Seawind II, another ocean-proven design to be profiled in this series. The SC31 is really a Seawind with the aft end changed from a transom stern to a double-ender and a few other alter-

Reliant, shown here and below, shows the full keel, outboard rudder, and lovely canoe-style stern of the Southern Cross 31.



The boat's underwater profile, as we've already seen, is old-fashioned, well tested, and therefore greatly comforting to conservative cruisers. The outboard rudder is efficient and easy to get to if anything goes wrong.

It's the modern fashion to cut away more of the keel's forefoot than Gillmer did on the SC31, and this helps in two ways: first, it reduces the surface area of the underwater hull and, therefore, the resistance it produces. Second, it makes the hull more maneuverable, at very slight cost to its ability to keep tracking in a straight line. It also, incidentally, moves the center of lateral resistance aft, which helps resist a boat's tendency to gripe or bore into the wind — the phenomenon known to practical sailors as weather helm.



But the old-timers gave their boats deep forefeet for good reasons. That amount of grip on the water, so far forward, helps a boat heave to quietly and mind her own business when you leave her under reefed sails with the helm lashed to leeward slightly. The old working boats from which this design sprang had to endure many hours of gales at sea with their heads tucked under their wings in this fashion. The downside of a deep forefoot is that a boat running with too much canvas in a capful of wind and large swells may tend to trip over her keel and broach to. But with reasonable caution and ordinary care, this situation should never arise; and, in any case, we're talking here of mere degrees of risk. There is no implication here that a boat with a deep forefoot is inherently unseaworthy. An overcanvased fin keeler is far more likely to broach to under those conditions than is any boat with a traditional keel. All boats have strong points and weak points; the best sailors know which is which, and act accordingly.

The SC31's coachroof is low and streamlined. Her topsides are low, too, so she presents little top hamper to the wind. Her sidedecks are reasonably wide for easy movement fore and aft, and she has bulwarks to delight the hearts of those of us who habitually drop the pin of every shackle we open and live in fear of the "ping-splash" that signifies its loss forever. The bulwarks are also very comforting when you have to walk along a leeward sidedeck that's under water, of course.

The cockpit is small. That is to say, it's the right size for sea work. It won't accommodate the whole family, complete with grandparents and kids, for Thanksgiving dinner, but it does provide a safe haven for a lonely watchkeeper or two in the wee hours of the morning. It also has that most desirable feature in an ocean-going boat, a nice strong bridgedeck.

The weighted keel is a lead casting encapsulated within the hull. It weighs about 4,400 pounds, which is about 32 percent of the boat's displacement, just about the right amount to give her an easy motion at sea.

Given the high number of home-finished boats, the auxiliary engine could be almost anything, but most of them will have a 22-hp diesel squeezed under the companionway steps. That's plenty for a 6-tonner, and should give her a range of 250 miles or more, thanks to the 34-gallon fuel tank.

Accommodations

For a boat displacing more than 6 tons, there is not a lot of room down below on the SC31, but she will accommodate two adults, maybe three, in reasonable comfort on long passages, and more for shorter coastal trips. The forward cabin has the usual V-berth arrangement, which is awkward to scramble into and out of at the best of times. At sea, it's mostly unusable

and becomes ad hoc storage for everything from the deflated rubber dinghy to the spare stormsail. It would be far more useful on a long-distance cruising yacht to convert this cabin into a workshop with a bench and generous storage areas, but on production yachts it's almost always crammed with sleeping places because a plenitude of berths is what the builder's sales department wants.

Aft of the fo'c's'le there's a head compartment to starboard and hanging space opposite. The main saloon on factory-finished models is very straightforward: two settee berths with a galley aft to port and a chart table aft to starboard. A quarterberth was an option, but it meant a foldaway chart table instead of a fixed one, which a proper cruiser really needs quite badly. Nice as it is, the quarterberth won't be missed at sea if the number of crewmembers is kept down to one or two.

The galley, it must be admitted, is small and inadequate — but then, on a 31-footer it usually is, and the SC31's galley is no smaller nor more inadequate than any other in its class. Yacht designers all seem to chant the same mantra in this connection: seagoing cooks must suffer. And they do. Over the years of production, the galley did receive a little more attention, however, and the single sink became two sinks in a projecting peninsula, presumably to enable the cook to do twice the amount of washing up or to finish the normal amount in half the time.

The standard of finish supplied by C.E. Ryder was commendably high. For example, there are eight ports in the coachroof sides, and they all can be opened. And if that's not enough in the way of ventilation, there are also two large opening hatches overhead.

The rig

Tom Gillmer gave the SC31 a modern masthead cutter rig with a jib set from a short bowsprit and a staysail set from the stemhead. The total working sail area is just under 450 square feet, so the rig is easy for one person to handle.

This is yet another boat with an aluminum, deck-stepped mast, but it does at least have a wooden compression post to transfer the thrust directly to the keel. One wonders why so many designers shy away from keel-stepped masts, especially on pure cruisers, which are not so likely to be hauled and have the stick removed every winter. Mast partners add valuable strength and stiffness to a keel-stepped mast.

The original design featured a club on the foot of the staysail, but some owners will probably have discarded it in favor of a loose-footed sail because the cutter rig is already cluttered on a boat of this size. Besides, you really need a self-tending staysail only when you're contemplating frequent tacking, and that's something a deepsea cruiser shouldn't have to do.

Performance

While the SC31 is no round-the-buoys racer, her long waterline helps her maintain respectable average speeds on long passages. Her modest draft of 4 feet 7 inches, combined with a low-aspect-ratio keel, means she's not going to pass any fin-keeled racer/cruisers on the beat, but she's capable of showing them a thing or two on a close reach in choppy head seas and, of course, she really comes into her own on beam and broad reaches.

Some critics, bent on gainsaying Professor Gillmer, wonder whether the SC31 is ballasted enough. Her design displacement is 13,600 pounds, of which about 32 percent (4,400 pounds) is a lead casting in the keel cavity. In the good



Accommodations on Tao, at top, include a bulkhead-mounted heater, caned panels on cupboards for ventilation, and a substantial bookshelf. The bottom two photos show Reliant's galley (a newer model with the double sink) and engine (a Yanmar 2QM20H).

professor's defense, it can be said that this was regarded as a perfectly acceptable ratio for working boats of this type, which carried their engines, fuel, water, and sometimes internal trimming ballast, low down in the hull. In those days, too, perhaps people showed more common sense about stowing heavy gear, books, and provisions as low as possible in the boat and about keeping all these things in place so they wouldn't shift during a rollover.

Known weaknesses

- Although balsa-cored decks are standard among production boats, many suffer over the years from water intrusion, which leads to delamination and great loss of strength. If you're buying an old SC31, check her decks and cabintop for hollow sounds and flexing.
- Check the outer skin of the hull carefully for punctures or cracks. Water won't necessarily penetrate the inner skin or even spread through the plastic foam core, so this kind of damage is easy to overlook.
- Most factory-finished boats were supplied with alcohol



Tao's cabin is more spacious, of course, without the table, but the stowable table turns the saloon into a comfortable dining area.

stoves. They're not the best choice for ocean cruisers, who mostly prefer propane, kerosene, or even diesel cookers.

Owner's opinion

Bob and Judy Boudrot sail their 1980 factory-finished Southern Cross 31, *Second Wind*, out of Manchester-by-the-Sea, Mass. Bob, past commodore of the Southern Cross Owners' Association, calls her a go-anywhere boat in any weather. "I feel very confident that I could take her anywhere in the world," he says. "She's a salty-looking boat that always draws looks and comments in a new harbor," he adds.

Second Wind is very well-found and carries extensive instrumentation and safety equipment. "But I'd add a steering vane, single-sideband radio, and an EPIRB for extended offshore work," he says.

As far as performance under sail goes, "she roars on a reach, but struggles upwind in light air. In 12 knots or better, she'll do 5 to 6 knots at 35 degrees apparent wind."

If the wind increases while she's sailing to windward, Bob first reefs the mainsail, then rolls up the genoa progressively. "Over 25 knots, we're down to two small headsails, or perhaps the club-footed staysail alone, and if she develops weather helm we ease the reefed main."

Under power, her two-cylinder Yanmar pushes the boat at 5.8 to 6 knots, using about half a gallon of fuel per hour. "It's noisy and bouncy but reliable," he notes. "I think she may be a little over-propped, since I can only get up to 2,600 rpm at full throttle."

Major upgrades to *Second Wind* since her launching have been an Edson wheel and binnacle, autopilot, engine instrumentation pod on the companionway bulkhead, a Max-Prop, radar, a laptop and navigation software, a separate starting battery, a holding tank, two anchors on the bow ready to run (35-pound CQR and 12H Danforth) a CD/FM player, and a zip-on Bimini extension to the dodger.

"I'm also planning to add a second manual bilge pump, mechanical refrigeration, and to move the split backstay to the aft end of the hull because it crowds the helm in its current location," Bob adds.

If you're planning to buy a SC31 for offshore work, Bob strongly advises you to have the stainless steel pintles and gudgeons on the rudder replaced with bronze ones, as he did. Also, have the deck tapped (to locate a waterlogged core and possible delamination), and check for a watertight hull-deck joint.


On ocean passages, Bob suggests the SC31 could carry a 6-gallon jerry jug of diesel on deck or in the port cockpit locker to provide 10 hours of emergency running time. You can also catch extra fresh water on deck during rain squalls, he maintains. "The SC31 has a high toerail, and I've read where people gather rain through a freshwater fill pipe on deck."

Bob judges the accommodations to be comfortable for two people for extended offshore work, "although a third person could fit in, considering that there are two sea berths in the main cabin with lee cloths."

Conclusion

Owning a Southern Cross is like being a member of an exclusive club. There is, in fact, an owners' association with its own extensive Web site on the Internet designed and maintained by *Second Wind's* first mate, Judy Boudrot. It maintains crew and owner lists, advertises boats and equipment for sale, and features pictures of SCs in action. The association also publishes newsletters and organizes an annual get-together in Newport, Rhode Island.

Two SC31s were being offered for sale on the owners' Web site in late 1998. Hull number 85, launched in 1979, was being offered in New York state for \$27,500. She had a 20-hp Yanmar engine, Aires self-steering vane gear, a dodger, various electronic instruments, and a dinghy. A sistership, called *Badger*, hull number 51, was going for \$33,500 down in the U.S. Virgin Islands. She had a Monitor self-steering vane gear, a 10-foot fiberglass sailing dinghy, upgraded standing rigging, and a wide range of electronics, including ham radio. There was no mention in the advertisement of what kind of engine she had.

At prices like these — less than those of many luxury cars — the SC31 represents a bargain buy for the ocean voyager who prefers a solidly-built, highly conservative hull in the Colin Archer tradition. 

John Vigor is a professional journalist. The author of The Practical Mariner's Book of Knowledge, The Sailor's Assistant, and The Seaworthy Offshore Sailboat, he has worked for major newspapers around the world and is a frequent contributor to leading sailing magazines. He has sailed for more than 40 years in boats 11 to 40 feet in length and logged some 15,000 miles of ocean voyaging. In 1987 he and his wife, June, and their 17-year-old-son sailed their 31-foot sloop from South Africa to the U.S. This series of boat reviews is based on articles from John's book: Twenty Small Sailboats to Take You Anywhere, which is available from The Good Old Bookshelf (see Page 62 for more information).



Resources for Southern Cross sailors

Southern Cross Owners' Association

Bill and Debbie Duggan
115 Upland Road
Concord, MA 01742
601-442-1630
duggan@matrix-one.com
<<http://southern-cross.org>>
<<http://www.geocities.com/~southerncrossow/>>

Pat and Colleen DeGroodt

Pat and Colleen left on a round-the-world cruise in August, 1998, in their SC35. They have been sharing their voyage through their Web site at <<http://www.digwave.com/simmer/simmer.htm>>

Pat Henry

The first American woman to sail around the world singlehandedly, Pat started and finished her cruise in Acapulco. She now lives aboard her SC31 in Puerto Vallarta, Mexico, where she paints and is part of the artistic community there. Her Web site is at <<http://www.wrightprinting.com/pathenry/main.html>>

SC Rendezvous

A Southern Cross rendezvous is planned for Aug. 12 at the Wickford Marina, in Wickford, R.I., a picturesque seaside village within Narragansett Bay. People interested in more information about the rendezvous should contact Steve Bliven at 508-997-3826 or bliven@massed.net.

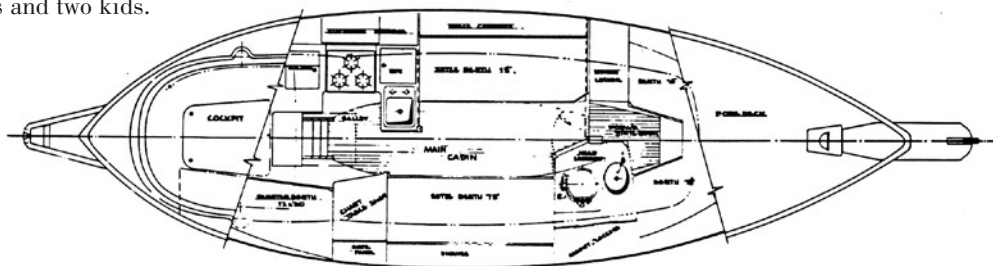
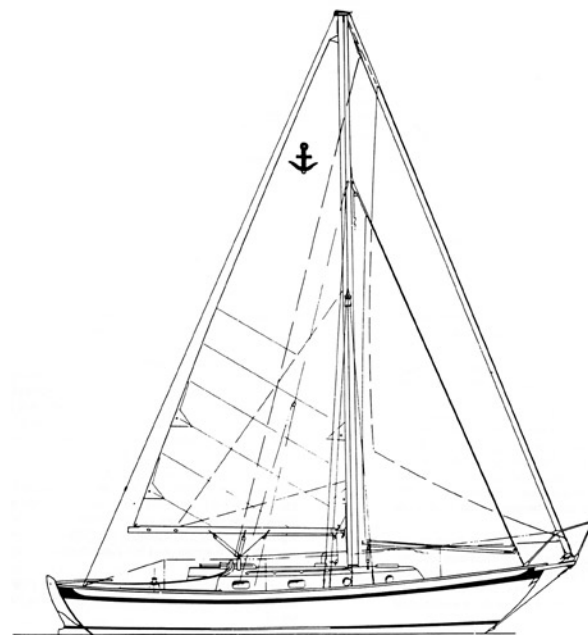
In short

Southern Cross 31

Designer: Tom Gillmer (1976)
LOA: 31 feet 0 inches
LWL: 25 feet 0 inches
Beam: 9 feet 6 inches
Draft: 4 feet 7 inches
Displacement: 13,600 pounds
Sail area: 447 square feet
Ballast: Encapsulated lead, 4,400 pounds
Spars: Aluminum
Auxiliary: 22-hp diesel
Designed as: Conservative bluewater cruiser

In comparison

- **Safety-at-sea factor:** 8 (Rated out of 10, with 10 being the safest.)
- **Speed rating:** No sluggard. Prototype boat came in third in her class in the Marion-to-Bermuda Race in 1977.
- **Ocean comfort level:** Two or three adults in comfort; or two adults and two kids.



Conserving water aboard

How to drink, shower, and wash the dishes on about a gallon a day

DEPENDING ON THE SOURCE YOU QUOTE, THE AVERAGE landlubber uses between 70 and 120 gallons of fresh water a day. The average sailor could cross an ocean on that amount of water. Conserving fresh water is a major concern for all boaters, whether you have a watermaker or not. But, for those who cruise away from ports without a watermaker, it's a way of life.

Aboard *Lindsay Christine*, our 30-foot Mercator Offshore sloop, we have turned water conservation into a game. The four of us — my husband and I and our two children — try to make each tankful of fresh water last the longest time. We all get involved in saving drips and dribbles. The children come up with interesting ways to reuse water left over from any activity . . . like the time when Alex decided to add the water from one of his science projects to a sauce cooking on the stove. I wouldn't say the taste of vinegar and baking soda was terrible in our spaghetti that night, but . . .

After living this way, particularly while on passages, it is a wondrous sight to see fresh water pouring from a hose or spigot into our jerry jugs. We feel almost like kings receiving gold and precious jewels. And the feeling of knowing that our water tank is full again is no less wondrous. We start to think of leaving port immediately so we can get the optimum distance or time for that priceless tankful.

Aboard *Lindsay Christine*, we have a built-in 35-gallon fiberglass tank for our fresh water. When we set off for a trip, we usually carry an extra 15 gallons of water in three jerry jugs, and a full 1-gallon insecticide sprayer for freshwater showers. One of those 5-gallon jerry jugs is set aside for showering. One jug we add to the tank as we use our water. The last jug we always keep around. We add it to the tank only when we are about to fill our tank again. It is

our emergency jug, available if our pump breaks or our tank becomes contaminated.

Including showers

So, how long does that amount last us? If we are sailing in remote areas with little chance of refills, our water can last 40 days for the four of us. This includes three freshwater showers for each of us. And, we would still have our 5-gallon emergency jug full of water when we came ashore to fill up our tank. Of course, we would have a large pile of clothes to wash as well.

But that's not how it always was. There was a time when our 35-gallon tank had to be filled every three or four days. A time when we didn't bring any extra water jugs filled for an emergency. A time when a shower for one consisted of using several gallons instead of the half gallon that we each use now. We were naive back then — babies in the game of water conservation. It has been three years since we left to go cruising.

How do you get 46 gallons of water to last an average of 40 days for a family of four? Rather than approaching conservation as a problem of scarcity, we like to see our conservation as a form of cherishing a beautiful and useful gift. It is one gift that we have to use, so we might as well rejoice in its use.

The following rules are what we have learned from our own cruising and from other sailors.

Editor's note: *Theresa explains how her family lives on about a quart of water a day per person which, as she says, is about the amount each person needs to consume to stay healthy. This achievement is all the more remarkable when compared with the normal planning figure of one gallon per day per person, with a 50-percent reserve. This second figure may be a better planning figure if you're going offshore*



A cruising friend once said, “If you can’t see your hand in a basin of gray water, you know you’ve reused it enough.”

by Theresa Fort

where rainwater will be your only source of resupply, and you cannot accurately predict how long your voyage will take.

Golden rules of water usage:

- Don’t restrict your drinking
- Make every drop count
- Reuse it until you can’t ever use it again
- Use sea water whenever possible
- Enjoy it!

Water is too important for your body, especially when you are actively sailing, to restrict your drinking. In order to stay healthy, each person aboard should consume 32 ounces (1 quart) of water a day from any source by eating or drinking. Only in dire circumstances should drinking water be rationed. Daily, the four of us do drink a quart of fresh water each. Sometimes our consumption is less when water comes from other sources like fresh fruits and vegetables, juices we have brought, milk from tetra packs, or other foods.

Here are some ideas on how to conserve water in the galley, a main location of freshwater use and conservation.

Install a hand pump for your fresh water (*See photo, this page*). Controlling the amount of water coming out of your faucet is one of the most important ways to conserve water. Foot pumps and pressurized faucets are more difficult to regulate than an old-fashioned hand pump.

A saltwater pump is wonderful to have aboard for water conservation. Rinsing the sink, your hands, your cans before opening them, or the countertops with sea water can save an enormous amount of fresh water.

Catch the dribbles

Keep a clean cup under your hand pump to catch any

dribbles or over-filled cups. Always have it nearby so that more water can be added or withdrawn when measuring, cooking, or drinking.

Potatoes can be boiled in sea water. Pour the hot salt water into your wash basin, and you’ll have hot water for dishes that night. Give the potatoes a light rinse with fresh water, and they’re ready to use.

Pouring off water you just cooked spaghetti in? Pour it into a basin to be used again. Incidentally, only use fresh water to cook pasta. It becomes a sticky, slimy mess when cooked in salt water.

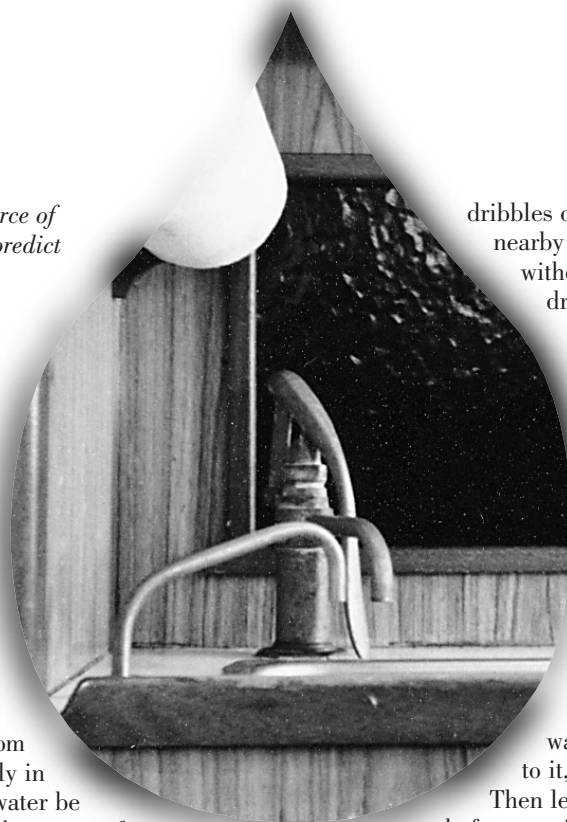
Wash fruits and vegetables in sea water that has a tiny bit of bleach added to it, instead of using your fresh water.

Then let them dry thoroughly in the sun before stowing.

Reuse the water in canned foods whenever possible. If you’ll be cooking rice, you can add your canned-vegetable or canned-meat water to the water for the rice. It will flavor the rice and save you some fresh water.

When using your pressure cooker to bake bread or to cook rice or puddings, some recipes suggest you put your mixture in a separate bowl inside a pressure cooker atop a few inches of water. Substitute salt water for that outside water.

Washing dishes can be one of the most water-expensive chores aboard a boat. In warm climates we wash and rinse dishes in sea water. If we dry our dishes immediately with a towel, the salt buildup is not noticeable. The warm air seems to help finish the drying. In cooler climates, washing and rinsing in sea water doesn’t work for us as well. At those times, we wash in sea water and rinse in a little fresh water. Warming sea water on the stovetop in one of the pots from our meal with the addition of a little detergent helps begin the cleaning process. When it comes to rinsing the dishes, we pump a little fresh water into the sink, then use a clean cup to



“Controlling the amount of water coming out of your faucet is one of the most important ways

to conserve water.

Foot pumps and pressurized faucets are more difficult to regulate than an old-fashioned hand pump.”

scoop and pour over the larger dishes to rinse them.

Seawater wash

Away from a water supply, we usually bathe with sea water. If the water is unsafe to swim in, or when we are underway, we use a bucket of sea water to get us wet. We lather up with an inexpensive shampoo — bar soap doesn't lather in salt water. Then we rinse with a few buckets more. My daughter and I, with our thick hair, used an amazing amount of fresh water when we washed and rinsed our hair in the old days. Now we wash and condition our hair with buckets of sea water. We then quickly rinse our hair with a little fresh water from our portable shower — this helps prevent the terrible affliction of stiff, unmanageable hair we call “Barbie Hair.”

After our bath, we towel off immediately to keep the salt water from building up on our skin. We keep a few towels aboard just for saltwater use and wash them whenever we get to a port. If the towels get to be too cardboard-like, we bring out a few new ones. Then on a windy day, we hang the old towels up in the rigging. The wind will beat out most of their stiffness.

But, after a week of daily seawater baths, we start to yearn to be freshwater clean. That's when we bring out our portable shower. We use an insecticide sprayer for our shower. By buying it new, we were sure that it had never carried any chemicals. Pumping up the pressure allows us to get a pressurized shower while using very little fresh water. When we are conserving fully, we only use the fresh water to rinse off. It feels wonderful! Especially after an overnight passage. Warming up the water a little on the stove before filling the shower allows us to enjoy a hot shower. Also, painting the spray bottle black allows you to warm your water on deck on a sunny day.

Twelve showers

As mentioned earlier, we keep a 5-gallon jerry jug of water for freshwater showers. If we are very careful, we can get 12 showers out of the 5 gallons, plus what the sprayer holds.


Our laundry is usually done when we are in a port, close to a water supply. We wash our clothes when we are away from a port only if we have extra fresh water and our tanks are full. This often happens when we catch rainwater. We have tried several times to wash our clothes in sea water and rinse in fresh. When it came to rinsing the clothes, it seemed as though we were using more fresh water to rinse out the salt residue than if we used all fresh water for the whole process. So now we wash and rinse in fresh and reuse whatever we can.

The first bucket of soapy wash water gets reused right away. Then the first rinse becomes the wash water for a second load. The second bucket of wash water gets reused. Then the second rinse water becomes the wash water for another load. We continue this until our wash is done or until we can't spare the water.

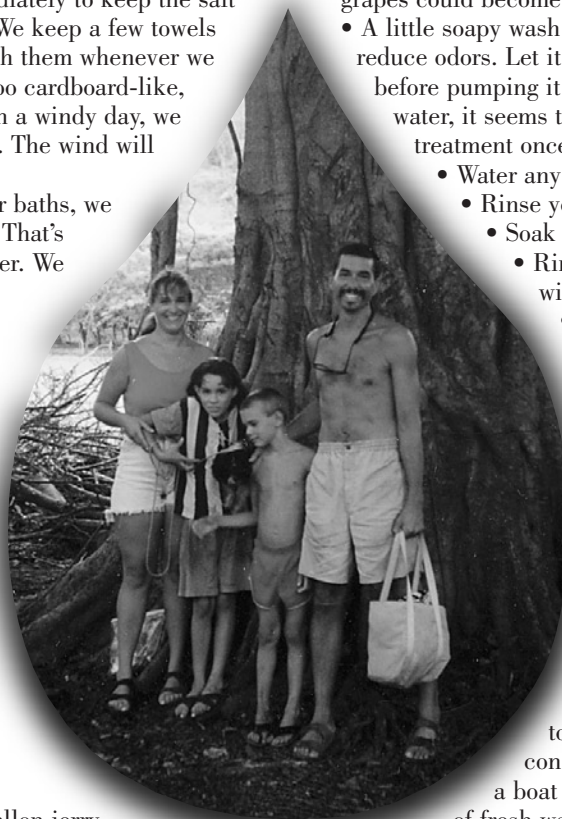
Now that you have saved all of that extra gray water, what do you do with it?

- Wash down the decks with your water to get the salt buildup off your boat.
- Pour soapy wash water into the bilge to help keep it smelling fresher. Pump it out after an hour or so of soaking. Make sure to use water without any debris. We once got a grape lodged inside one of our bilge pumps. I never knew grapes could become such deadly projectiles.
- A little soapy wash water can also be used in the head to reduce odors. Let it sit in your pipes for an hour or so before pumping it completely out. When cruising in sea water, it seems to help the head to get a freshwater treatment once in a while.
- Water any plants you have with it.
- Rinse yourselves with it.
- Soak stained clothes in it.
- Rinse the salt buildup on your stanchions with it.
- Rinse the salt buildup on the standing rigging with it.
- Wash your dishes in it.

A cruising friend once said, “If you can't see your hand in a basin of gray water, you know you've reused it enough.”

Conserving fresh water has become very important these days even on land. We hear the call to conserve in every news medium. Many states have severe shortages of water at certain times of the year or even all year long. Maybe the way to teach our society about water conservation is to put each person aboard a boat provisioned for a week with 10 gallons of fresh water and no hope for a refill until the week is over. Living aboard a boat for even short periods can quickly teach conservation of all kinds: space conservation, tool conservation, storage conservation, and especially water conservation. Think of the changes that could take place if we all thought about the loss of each drop or dribble of sweet fresh water down the drain. 

As a family of four, the Forts have sailed more than 10,000 miles aboard Lindsay Christine, their Mercator Offshore 30 sloop. Their cruising has taken them along the West Coast of the U.S. (including Alaska), Mexico, and Central America as well as the western Caribbean. They currently sail part-time on the east coast of Florida.



Keel design: What's best?



The Fisher series, above, shows the full keel typical of Scottish fishing boats. The highly stylized shark fin, at left, has extreme rake and a sloping tip chord.

Ted Brewer reviews the ins and outs and ups and downs of keel design

The purpose of a keel, fin, or centerboard is to provide resistance to making leeway; in effect, to keep the yacht from sliding sideways through the water due to wind pressure on the sails. Various shapes of underwater plane have been in and out of style over the past 150 years.

The basic full-keel shape had the longest run, as it was the standard for bluewater sailing craft from pre-Roman times to the earliest days of yachting. The deep, full keel was supplemented in the mid-1800s, for the shoalwater areas of Britain and North America, by centerboard craft. These cover such working types as the sharpies, Cape Cod catboats, and Chesapeake Bay oyster skiffs, to mention a few.

The first truly modern keel yacht, with a cutaway forefoot and highly raked rudder post, was designed by Capt. Nathanael Herreshoff with his *Gloriana* design of 1891. But it did not catch on for bluewater sailing. Until the late 1920s, the typical offshore yacht, whether cruiser or ocean racer, resembled a sailing fishing craft in the shape of its lateral plane: a long, full keel with deep forefoot and fairly vertical sternpost.

Such a shape has the benefits of good directional stability, ease of steering, and the ability to heave to in heavy weather, all desirable traits for a boat. However, its faults may include slowness in stays, excess wetted surface — making it slower in all types of air — and an inefficient lateral plane shape that has excess leeway, considering its relatively large area. Typical small yachts of this type are seen today in the Colin Archer types and the Tahiti ketch and its copies, while replicas of traditional sailing craft such as Bristol Channel Cutters, Friendship sloops, fishing and pilot schooners, and similar lovely vessels still appear in our waters. Fortunately, many of

these workboat types have been developed to the point where the ills of the true full keel have been greatly reduced. Then the result is a handsome cruiser that sails quite well and attracts a great deal of attention wherever she drops her hook.

Successful keel

The cutaway keel was revived for ocean racing by Olin Stephens in the late 1920s, with his lovely yawl, *Dorade*, still sailing and winning classic yacht races more than 70 years after her launching. Her offshore racing successes finally proved that the full keel was not essential to seaworthiness, and it definitely detracted from speed and weatherliness. As a result of its improved performance and handiness, the

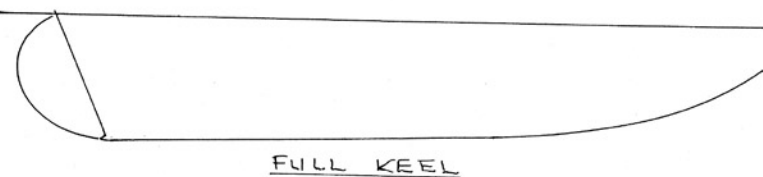
“modified full keel” form caught on quickly once *Dorade* showed the way and became the standard for the next 35 years. This type of lateral plane is still sailing in many popular older designs such as the Alberss, the

Folkboat, the Luders 33, the Whitby 42, and even some newer yachts.

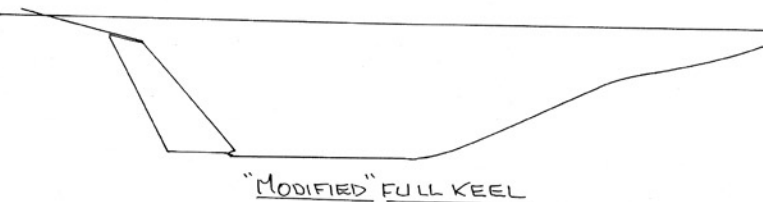
The modified full-keel form features generally good handling and directional stability plus reduced wetted surface, compared to her true full-keel sister. The yachts can perform well in all conditions and, as they are generally of heavier displacement than contemporary ballasted-fin boats, they do not give away much in light air, despite the added wetted area. A yacht with a modified full keel can sail right up with the best of them if she is given sail area commensurate with her typically heavier displacement.

In my own work, I developed a modified full keel, with the rudder set aft and vertically in the contemporary fashion, in order to improve directional stability and handiness. Then, to

by Ted Brewer

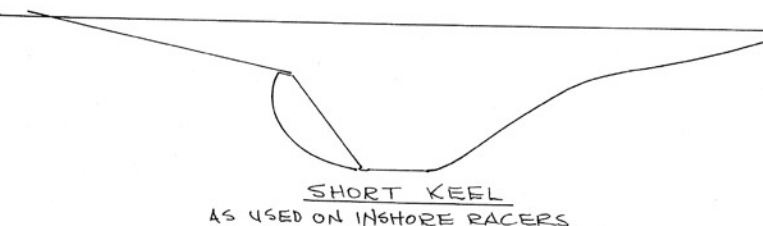


FULL KEEL

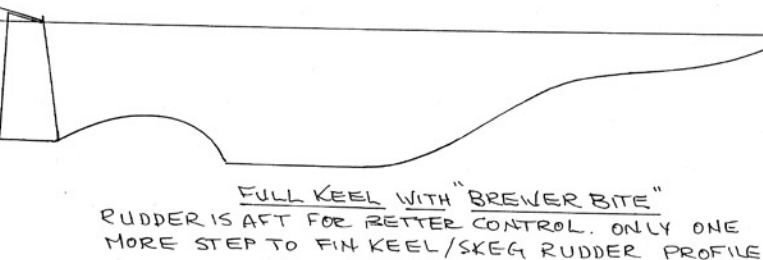


"MODIFIED" FULL KEEL

FULL KEEL VARIATIONS



SHORT KEEL
AS USED ON INSHORE RACERS



FULL KEEL WITH "BREWER BITE"

RUDDER IS AFT FOR BETTER CONTROL. ONLY ONE MORE STEP TO FIN KEEL/SKEG RUDDER PROFILE

reduce wetted area, the lateral plane is substantially cut away ahead of the rudder in what some have termed "the Brewer bite." The Cabot 36 and Quickstep 24 of my design were early examples of this form. The size of the cutout depends to a large degree on how insistent my client is on having a "full keel," and I try to make the cutout as large as I can decently get away with. I don't claim to have originated the shape, though, as the late L. Francis Herreshoff used a not dissimilar profile many years earlier in the design of the lovely 57-foot ketch, *Bounty*.

Taken to extremes

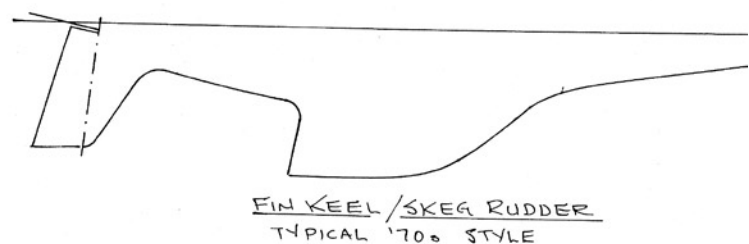
Like all good things, the modified full keel was cut away more and more for bluewater and inshore racers in an attempt to reduce wetted area until, finally, some designers took it to extremes. This reduced directional stability and produced craft that were almost impossible to steer in breezy conditions, broaching with monotonous regularity. I can recall working on the design of many short-keel 5.5-Meter yachts in the 1960s, and we always said they were three-man boats with six-man spinnakers! It's hard to believe none of them were knocked down and sunk, as they were extremely difficult to control on a reach or run, and the hulls were pure leadmines, with 3,500 pounds of ballast in their very short keel and only 1,000 pounds of wood and rig above it!

Olin Stephen's genius began another fad in the mid 1950s, the keel-centerboard design. After *Finisterre* showed the way,

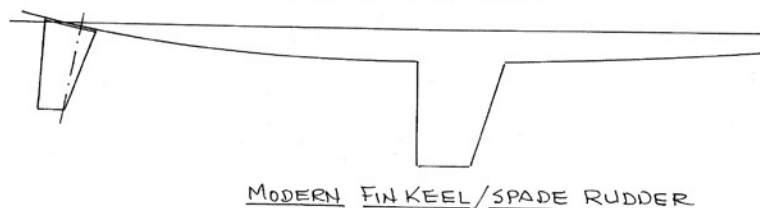
keel-centerboard yawls were built in sizes from 24-foot midget ocean racers, to the largest offshore yachts, in order to take advantage of favorable ratings under the CCA rule and emulate *Finisterre's* record of wins. The keel-centerboard hull has gone out of fashion now, but the type still has merit where a stable, beamy, shoal-draft yacht is desired with little sacrifice of weatherliness or seaworthiness. Indeed, the Bill Tripp-designed Block Island 40 and Bermuda 40 are keel-centerboard ocean racers from the old school and have been in production for more than 30 years now. These classic yachts have made many long ocean voyages, including several world circumnavigations and are first-class bluewater cruisers in every respect.

Here to stay

The fin shape is not new either, as ballasted fin yachts were pioneered by Herreshoff at the turn of the century for inshore racing. Then, due to excesses and bad design, the shape died out, except for a few one-design classes, until Bill Lapworth dropped a bomb on the ocean-racing scene in the mid-1960s with his Cal 40 design. The Cal 40s made believers out of many yachtsmen who could not believe that a ballasted-fin/spade-rudder yacht was a serious bluewater ocean racer. After wins in the Trans-Pac, many East Coast races, and the 1966 Bermuda Race, it became evident that the fin was here to stay for ocean-going and coastal cruising yachts. Please note that I do not use the term "fin keel" anymore, as I feel it is a

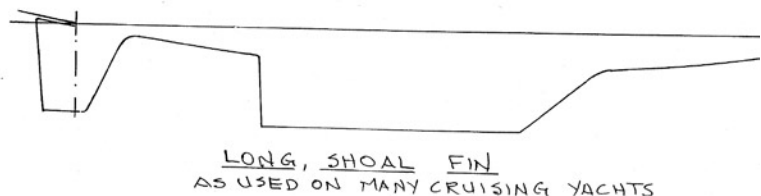


FIN KEEL/SKEG RUDDER
TYPICAL '70s STYLE

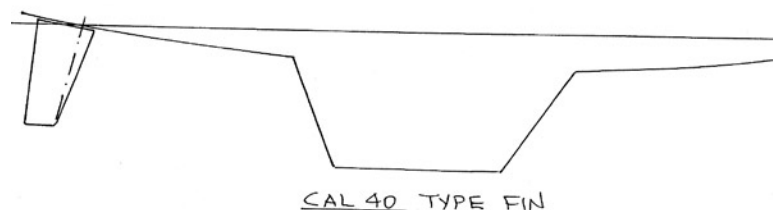


MODERN FIN KEEL/SPADE RUDDER

FIN KEEL VARIATIONS



LONG, SHOAL FIN
AS USED ON MANY CRUISING YACHTS



CAL 40 TYPE FIN

misnomer. The keel is the structural backbone of the vessel, and the fin hangs from it. Fish have both backbones and fins; so do yachts.

A well-designed fin, in conjunction with a skeg-hung rudder, can provide excellent directional stability, handiness, reduced wetted area and improved weatherliness. The fin/spade rudder combination reduces wetted surface even more. It may have a little (or a lot) more sensitive helm than a fin/skeg rudder yacht, but it has one big advantage over it and all other forms of lateral plane: it can be steered in reverse under power. This can make life a great deal easier in today's crowded marinas, as many have discovered.

These are some of the reasons that we see fins on the great majority of our new yachts today; they are not simply a fad. There are good fins and bad fins, of course, and it is not always easy to tell them apart. The shape of fins over the years has been limited only by the designer's imagination. Fins have been set at every angle from the vertical to highly raked aft. They have been deep and narrow, shoal and long, resembling a shark's fin or whale's tail, or boxy fins similar to the original Cal 40 design.

Major problem

A very deep, narrow fin can be a problem to haul on a marine railway, so the cruising skipper should consider haulout ease when boat shopping. A crane or travel lift is the best method for hauling yachts with extreme fins, but may not always be available in out-of-the-way areas. There is also the danger of damage to the shaft or strut if slings are improperly positioned. Still, the major problem of the high-aspect-ratio fin is structural strength, as it can impose extreme loads at the point of attachment to the keel. Indeed, some years ago I was an "expert witness" in a court case concerning three men who drowned when their yacht sank as a result of its fin tearing off when the vessel ran aground.

The cruising skipper would do well to avoid yachts with extreme fins, both for considerations of haulout ease and structural strength. Fortunately, the heavier, deeper hull and generally shoaler draft of the typical cruising yacht mean there is less height available between the bottom of the hull and the point of maximum draft. So, a longer, lower-aspect-ratio fin is the only solution. On the other hand, the racing sailor will want a fin with an aspect ratio as high as the draft rule will allow. Such a fin is more efficient per square foot, so the area can be smaller and the wetted surface reduced. In *Aero-Hydrodynamics of Sailing*, C.A.



At top, a rather squared-off fin, not unlike the Cal 40 keel. In center, a less extreme fin than the one pictured on Page 13, with a more parallel tip. At bottom, a contemporary bulb fin with winglets.

Marchaj recommends about 4 percent of the sail area as a good guide for fin area, and I feel the cruiser should err on the high side, as a small increase in resistance is preferable to increased leeway. On the other hand, I have used as low as 1.75 percent area with good results on an extreme racer with a fin of 2.75 aspect ratio.

Aspect ratios

This "aspect ratio" is the ratio of the span (depth) squared to the fin area; that is, my extreme fin had an 11-foot span and 44 square feet of area, so its aspect ratio was $121/44$, or 2.75. If it had a 4-foot span with 44 square feet of area, not uncommon proportions for a cruising yacht, its aspect ratio would be $16/44$, or a low 0.3636.

The aspect ratio can also be described as the span divided by the mean chord, the average fore-and-aft length of the fin, and this gives the same result.

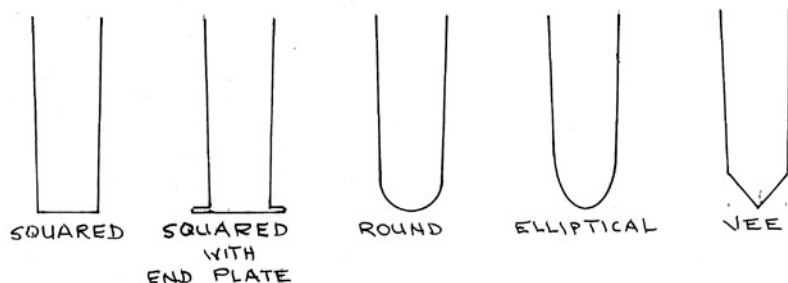
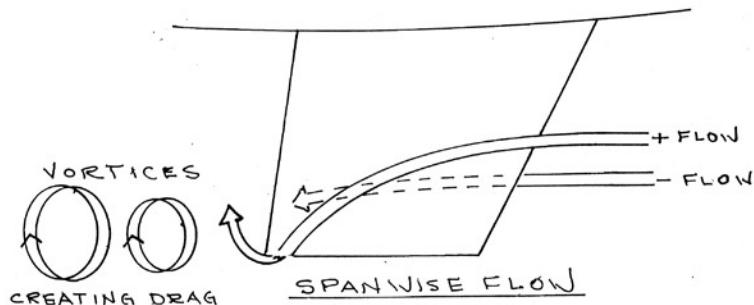
A large part of the resistance of a keel is created by the vortices, similar to miniature whirlpools that form when the water flows across the bottom of the keel from the high-pressure (leeward) side to the low-pressure (windward) side. It requires energy to form those vortices and that energy is then not available to propel the boat forward. Obviously, the shorter the keel or fin tip, the smaller and weaker those vortices will be, and that translates to reduced resistance. This is one reason that racing yachts usually feature high-aspect-ratio fins with short tip chords.

However, the formation of vortices can be greatly reduced by using end plates, or wings, to change the flow direction and eliminate crossflow. My own preference, for a fin of average span, is for an end plate that is but a few inches wider than the maximum width of the fin bottom. We tested an actual yacht with such an end plate on one side only and noted a substantial improvement in performance when she was heeled so that the end plate was on the leeward side. Where the draft is shoal and the fin span is on the small side, then a wider end plate, or even a wing, might prove beneficial. However, a wide wing can be a structural weakness, particularly if the boat goes hard aground and has to be towed off, or pounds on the rocks for any length of time.

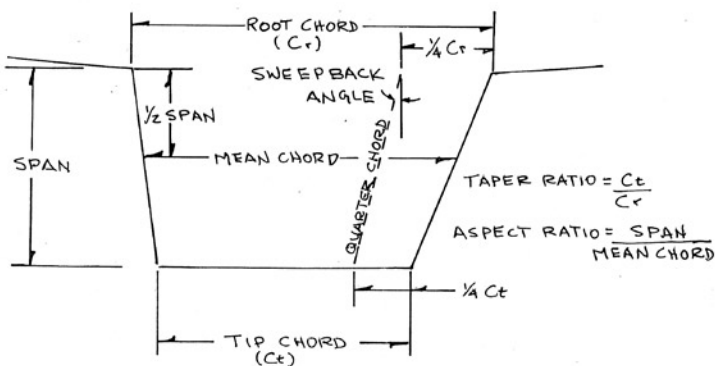
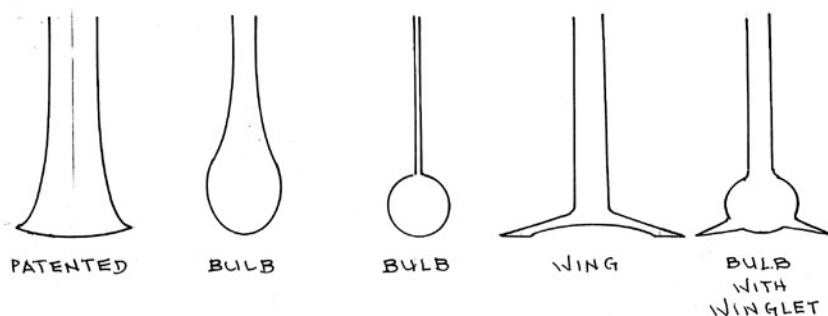
Sweepback angles

In the 1970s, I saw more than one very-high-aspect-ratio fin with tremendous sweepback angle. This certainly gives an impression of speed but, as Marchaj pointed out, tank tests have shown that the sweepback angle can be related to the aspect ratio: the higher the aspect ratio, the more vertical the fin should be. Indeed, the very-high-aspect-ratio fin on my BOC racer was set absolutely plumb until a hard grounding set the tip back a quarter inch or so, the result of taking a yacht with a 13-foot draft through a channel dredged to 11 feet! Most cruising-yacht fins are of low aspect ratio, of course, so should have substantial sweepback, up to 57 degrees, with an aspect ratio of 0.5, according to Marchaj. Although most designers try, it is unfortunate that obtaining the perfect sweepback angle is secondary to locating the fin to balance the sailplan, as well as fitting the ballast at the correct spot for proper fore and aft trim.

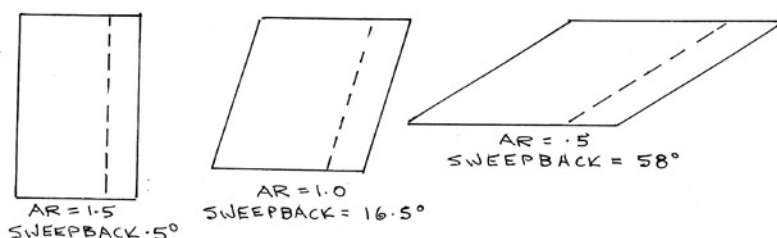
The taper ratio (tip chord length/root chord length) also deserves consideration. Tests on one series of fins showed that a fin with 0.32 taper ratio was 1 percent more efficient than an untapered fin



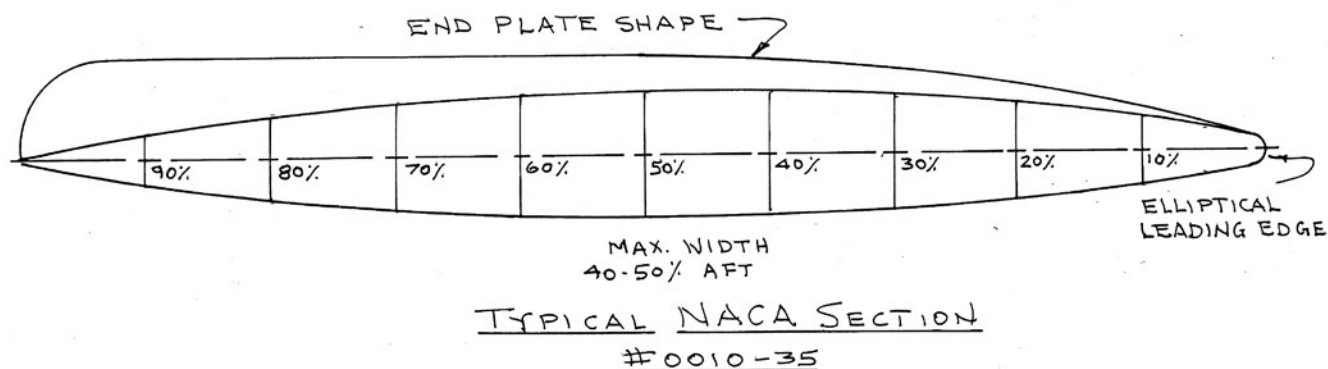
TIP TYPES



FIN NOMENCLATURE



SHOWING CORRECT SWEEPBACK FOR
FINS OF DIFFERENT ASPECT RATIOS



and had very slightly less resistance. This is a small difference but cannot be ignored by the racing skipper. Again, the reduction in drag may be due to reduced vortices from the shorter tip chord. Marchaj also states that the taper ratio should be reduced as the sweepback angle increases. However, the very-low-taper-ratio fins may not be the best solution for a cruising yacht. The tip chord should be long enough so the vessel can be hauled on a marine railway with no major problems. Too, on a moderate-draft cruising yacht, a short tip chord forces the ballast higher, so stability can suffer.

Lower ballast

Another consideration in the fin profile is whether the tip chord is sloped down aft or parallel to the waterline. The parallel tip chord makes good sense. It allows the ballast to be lower for added stability, it eases blocking up the boat when hauling and, fortunately, tests have shown that it is also superior to the sloped tip chord in other ways. Having the aft edge of the tip chord deeper than the leading edge has no practical effect on aspect ratio, and such a fin develops less lift and more drag than one with a parallel tip.

The National Advisory Committee for Aeronautics (NACA) tested a large variety of streamlined shapes for lift and resistance and the information on these is available in a book, *Theory of Wing Sections*, by Abbot and Von Doenhoff. These are the shapes that designers refer to when they say their new magic fin has an NACA section. Generally, the shape selected will be similar to NACA 0010-34 or 0010-64 series. The leading edge will be elliptical, as a blunted nose increases resistance while a pointed leading edge promotes stalling. The maximum width will be about 40 to 50 percent aft, and the shape will be streamlined to a fairly sharp (but not razor-sharp) trailing edge. The thickness ratio will be 0.8 to 0.12 of the chord length, although this may be increased to 0.15 to 0.16 at the tip chord. There are advantages to having an increase in thickness ratio at the tip chord, including being able to fit the ballast lower. This need not mean that the fin is bulbed, though. For example, a fin that is 8 feet long at the root and 5 feet long at the tip may have a 0.10 thickness (0.8 feet) at the root and 0.15 thickness (0.75 feet) at the tip. The fin is still slightly thinner at the bottom than at the top, but the thickness ratio has increased.


Increased resistance

It is not uncommon to see fins wider than 10 to 12 percent of their length, as the designer may need to fatten the fin in order to locate the ballast in the correct spot for proper trim. Very

shoal-draft boats may require fatter keels or fins in order to get the ballast as low as possible for stability. Still, extra width does increase resistance so there is a tradeoff; added stability increases performance while a thicker fin reduces performance. Thirty-five years ago, when I worked for Bill Luders, we tank-tested dozens of 5.5-Meter models. These very short-keeled 30-foot sloops had a minimum keel width of 4 inches under the rule, and whenever we tried a model with a wider keel in order to get the ballast lower, we found that overall performance suffered.

We also tested a number of bulb keels on the 5.5 models but they never proved out in the tank, either, although several different shapes were tried. Then, in the late 1970s, I tank-tested the model of the new Morgan 38 at Stevens Institute, first with a fairly fat NACA fin in order to maintain the desired 5-foot draft, and then with a patented bulb fin that we let its designer draw up, with no stipulation on draft. The bulb saved only 2 inches of draft but showed so poorly against the NACA fin that the 38 was put into production with the more conventional shape.

The tip shape, viewed from ahead, may be flat, round, elliptical, or bulbed. Tests show that the flat, squared-off tip develops a bit more lift to windward and that the round or elliptical tip has less drag on a run. The differences are slight but, today, I favor the squared-off tip with an end plate for yachts of average draft. A vee tip was tried in the 1960s on a few yachts, but never became popular. Bulbs and wings, often in combination, are fairly common on contemporary production boats. Usually they are an attempt to produce a very shoal-draft yacht for use in waters where the bottom is close to the top and, in those cases, they may make sense.

There is a never-ending variety of fin shapes and, to be honest, I'm not sure which is best. Generally, I prefer a fin similar to the old Cal 40, a little shorter perhaps, and fitted with an end plate. Such a fin provides a desirable combination of good performance, ease of haulout, and structural strength, all very important factors for the cruising skipper. 

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



I've got the **New sail**

*Happiness is finding
a sailmaker who understands*

Talk about confused! I've never been offered so many contradictory opinions in answer to one question. All I wanted was a new sail.

The boat I purchased recently came with a brand new mainsail and three headsails of different shapes. One was about a 150-percent genoa, very long on the foot with a leech that swept up to the head in a long curve.

Next was an 80-percent working jib that was notable for its high-cut clew. Last was a really small Yankee of unknown age. All of the headsails were old and in need of washing and repair. The Yankee was mottled with numerous rust stains. Its sailmaker has been out of business for more than 20 years, so the sail was at least that old.

After flying all three sails, it was apparent that not one was really usable for everyday use. They were either too large or too small. What I needed was a good, roller furling 125-percent cross-cut genoa. I had come to rely on the Schaefer 1000 roller furling on my previous boat and wanted the same level of safety and ease of handling on this new, larger boat. Adding impetus to the project was my wife's reaction to the 150 genoa the first time we flew it: "Get rid of it!"

My wife's a good sailor, but this sail, with its strange shape and long foot, was more than she wished to deal with. We decided to buy a new roller furling system and a new 125-percent genoa.

I called sail lofts. They supplied quotes based on their recommendation for sailcloth and weight. But here is where it gets complex.

Not so plain

Each loft uses a trade name and a weight for the cloth it proposes to use. We're not talking about exotic cloth

here, just plain Dacron. But it turns out not to be so plain after all.

All sailcloth in the U.S. is manufactured by one of five companies: Challenge Sailcloth, Contender Sailcloth, Dimension Sailcloth, Performance Textiles, and Bainbridge-Aquabatten. All except Performance Textiles and Dimension Sailcloth originated from a single parent, Howe and Bainbridge Company, of Boston, which was the biggest original purveyor of sailcloth. People left Howe and Bainbridge to form their own companies.

Dimension has a Dutch connection and Performance Textiles a Spanish one.

There are other overseas companies making sailcloth, and it varies in quality and type. To limit my confusion, I stuck to the U.S. suppliers. Given the fixed dimension of my rig and my preference for a 125-percent genoa, the dimensions

*"Given the fixed dimension of my rig
and my preference for a 125-percent genoa,
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were quickly determined to be about
300 square feet, plus or minus 10 percent.
After that, nothing was easy."*

of the sail and its area were determined to be about 300 square feet, plus or minus 10 percent. After that, nothing was easy.

The sail lofts quoted Dacron cloth weights between 6.30 and 7.62 ounces with a 6.77 thrown in for good measure. Various cloths were offered: a 4800 Cruise from North, a Sails 5400 NorDac, a Challenge High Modulus, a

Challenge High Aspect, a Marblehead and more. What is the difference and what does it all mean?

First, the weight of the sailcloth will vary, from lot to lot, as much as half an ounce, so you might be quoted a 7.3-ounce Challenge High Modulus and actually get a cloth that weighs 6.8 ounces. Half an ounce is about as close to the designed weight as the manufacturer can make it. Second, weight within a range is a relative factor. True, a 5.4-ounce Challenge High Modulus will be lighter than a 7.3-ounce Challenge High Modulus, but a 6.77-ounce Marblehead may serve as well or better for a particular sail than the 7.3 Challenge. It may also set better and feel softer.

More expensive

High Modulus cloth is used for headsails and mains. High Aspect is used for mains, roller mains, and high aspect jibs. It's more expensive than High Modulus but serves better in particular sail designs. Marblehead cloth is more expensive still, but it serves well for gaff mains and miter-cut genoas because it has a softer "hand." To further confuse the issue, there are laminated cloths made for racing and performance cruising, but we will not consider them here.

Usually, a cruiser wants a durable, softer sail that will hold its shape and last a long time. The racer will want a faster sail with a smoother, harder surface even if it will not be long-lasting. The answer to sail life lies in

blues

material itself and the way the sail is designed and built.

Sailcloth may be woven as balanced or unbalanced. In balanced cloth, the yarn is close to the same denier (a measure of density or weight) in the lengthwise (warp) and crosswise (fill) width. The warp yarns run in the direction that the cloth runs through the loom. Because the yarns are so long (the length of the roll of cloth), it is more difficult to control the tension of the warp yarns, so warp strength is lower for a given yarn size. The fill yarns are shorter (only the width of the loom) thus it is easier to control their tension. It may seem confusing, but by using fewer heavier yarns in the warp, which is not generally as highly tensioned, it is possible to make unbalanced cloth that has more nearly equal strength properties in both directions.

To increase warp strength it is normal to decrease the count and increase the size of the warp yarns. This cloth is often used to take greater loads which radiate up from the clew along the leech, and it is often used for radial cuts. Cloth with opposite characteristics may be called high-aspect fabric. High-aspect jibs and mains need this strength. High-aspect cloth is often selected when the sails are of cross-cut design. The manner in which the sail is designed dictates the way in which the loads will be distributed within a sail. Sail lofts now use computers to design sails, but there is still a bit of art in knowing how to apply the computer results to building a good sail. The choice of sail cut and appropriate material is part of this process.

The standard cross-cut sail is the simplest and lowest cost sail to build. With the proper material selection it is a very satisfactory sail indeed. The miter-cut sail is really only a valid

Recommended cloth weight

Boat length in feet	Cloth weight in ounces
<11	3
12-15	4
16-20	5
21-26	6
27-31	7
32-38	8
39-48	9

alternative when the buyer wants a certain “look” on older boats and replicas. The cut served a purpose once in the history of sail design and manufacture, but it is no longer an appropriate choice for best use of modern fabrics. The radial-cut sail is a more difficult sail to build, and when it is made from modern laminates, it may offer some performance advantages. It is argued by at least some sailmakers that the radial cut offers little advantage in cruising sails made from woven Dacron. Pick your expert, take your choice.

In detail

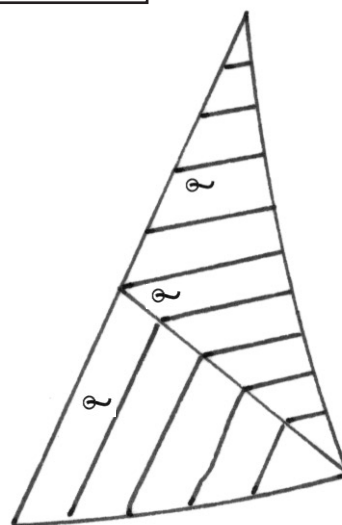
What, then, does all this mean? It means you can purchase exactly the sail you need only if you communicate in detail with the sail lofts.

The first important question to answer is what use you wish to make of the sail. Is it for day-sailing, club racing, coastal cruising, or bluewater sailing?

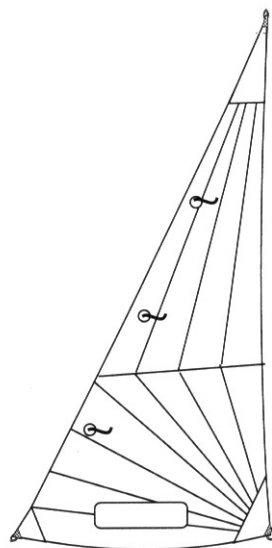
Approximate recommended sail weights for boat length are shown on the table as a guide to start a discussion with your sailmaker, but it is only a guide. The table is useful if you want a lightweight sail, and the sailmaker suggests a 9-ounce cloth for a 30-foot boat. You will be able to challenge his choice and maybe consider another sailmaker.

The value of the table is to allow you to talk sensibly to a loft. In my case, I am now able to say I’m seeking a 7-ounce genoa for bluewater sailing for my 31-foot boat.

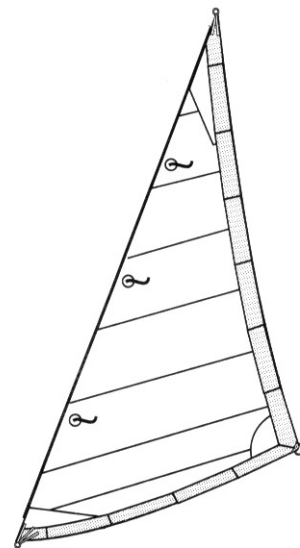
The next question concerns my expectations for the sail. Is it long life, low price, speed, UV resistance, roller furling, and/or finally, size? Do I want a 150-percent genoa, a 125-percent



Miter cut



Radial cut



Cross cut

Vendor experiences

Loft	Size	Material	Delivery	Price	Comments
A	135%	6.3-oz Dacron	3-4 wks	\$1,653	Unknown loft, foam luff, Sunbrella
B	130%	7.62 HA	5-6 wks	\$1,583	Excellent discussion from the loft, foam luff, Sunbrella
C	125%	7.62 HA	3-5 wks	\$1,552	Foam luff, Sunbrella
D	125%	6.77 Marblehead	6 wks	\$1,612	Miter cut, foam luff, Sunbrella
E	130%	4800 Cruise	3-4 wks	\$1,733	Cross cut, foam luff, Sunbrella
F	120%	6.53 HM	3-5 wks	\$1,459	
G	125%	Hayward 7-oz English cloth	6-10 wks	\$1,800	Foam luff, Sunbrella

genoa, a blade jib, a light air spinnaker, or drifter? My own requirements are for a long-lived, UV-resistant, roller furling, 125-percent genoa.

Once I had defined my needs and communicated them to the sail lofts, I asked them for quotes. It's up to the sailmaker to make a recommendation to meet my requirements. The second table shows the wide variety of sails offered in response to my inquiry.

Price ranges

The prices ranged from \$1,190 to \$1,800, with an average price of \$1,495. Out of eight lofts quoting, three were near the average price. If I excluded the highest and lowest price, the average price became \$1,598 which left five lofts to consider (A, B, C, D, and F). I eliminated the lowest-priced sail based on the experience of a fellow sailor who had used the loft's services in the past and was not pleased. I also eliminated the highest-priced sail based on price. It did not offer anything the others didn't offer and was just plain expensive. The loft was full, I guess.

Now here's the tough part. Of the five, one was quoted through a discount house and the actual loft building the sail was unknown (A); one sail was smaller than 125 percent (F); one was a miter-cut sail that I decided I did not

want (D). This left B and C as finalists. Both offered 7.62 High Aspect cloth, cross cut with a foam luff and Sunbrella UV protection on the foot and leech. One loft was six hours away, and one was two hours away. In addition, the nearer loft spent considerable time on the phone discussing my requirements and explaining their approach to building a sail. A fellow sailor who does lots of offshore racing also recommended them. I placed my order with loft B.

You may ask: "Why didn't you just go to this loft in the first place?" I have greater confidence in my choice of sail. I know the price was fair, and the sailmaker understood my needs and will be available if I have a problem.

No discussion

The discount lofts were only a little cheaper than the selected loft, did not offer detailed discussions of my sail, and seemed to say, "Here — buy it."

An interesting note is that another of the unsuccessful lofts, even nearer to my home port, quoted a lower-grade cloth for a higher price with little or no discussion. It is a well-known loft, but I got the feeling my order was "small potatoes" and did not merit much effort.

Mine may not be the large order craved by a large loft, but **my** sail is very important to **me**. The selected loft treated me as if my sail was also very important to **them**.

I know I did not select the cheapest, fanciest, or most expensive. I selected the sail and the loft that best suited my requirements, and this gives me confidence that the finished sail will provide weeks and months of good service in the years to come. As I was writing this, I received a call from the selected sailmaker saying he will be near my marina this weekend and would like to stop by my boat to check all of my sails and answer any questions. This was an unsolicited, but welcome, call and reflects the level of service I expected but had not requested. I believe I'll have a satisfactory relationship with this loft for all of my sail needs.

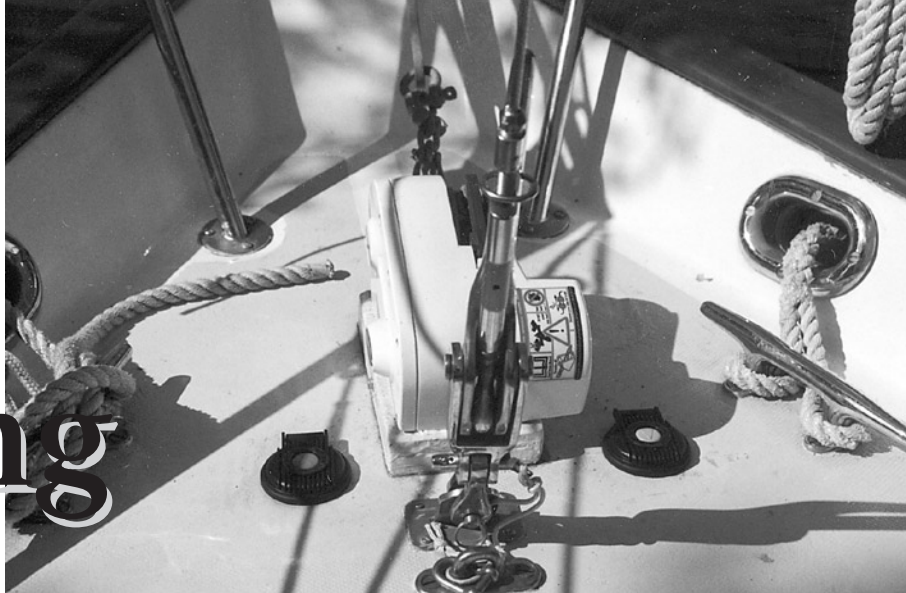
Yes, the time I invested to gather information and quotes on my new sail was worth it.



Bill is a marine surveyor/boatbuilder who's been living, eating, and sleeping boats since he assisted at Pete Layton's Boat Shop in the '50s. He's worked for Charlie Morgan (Heritage) and Don Arnow (Cigarette). And he's owned a commercial fiberglass boatbuilding company (Tugboats).



Painless anchoring



It's strange how much difficulty we owners of older boats have in finding \$500 to \$1,000 to replace an old kitchen appliance or to provide new furniture for the den . . . and how little difficulty we have spending it on new stuff for the boat . . . especially when priorities change.

Thus it was with our *Bluebonnet*, a 20-year-old Valiant 32. An anchor windlass was something we had mentioned in passing several times, but it wasn't even considered when we upgraded her. We had never owned a boat with a windlass and had always raised our anchor by hand (or rather, by back) on previous boats. Once our 30-something-year-old son remarked after breaking loose and raising our 35-pound Delta: "Boy, that was set well, I really had to grunt to get it up." But such comments sailed over my head until last fall.

We were involved in a household painting project. When I bent over to pick up a gallon of paint, it felt as if someone hit me with a baseball bat across my kidneys. A trip to the doctor revealed that I had a sprain. I was told that my back showed my age, and I should take care of it with exercise and common sense.

Suddenly the windlass went to the top of *Bluebonnet's* list . . . above the autopilot that was previously on top. My wife, Jeanette, and I are planning several cruises. As our plans call for living on the hook much of the time, our anchoring equipment was re-evaluated. After all, if I couldn't get the anchor up, it would have to stay down. In most sailing skills, Jeanette is my equal except where significant upper-body strength is required.

*When your good old back's
not up to it anymore,
let a windlass do the donkey work*

Many questions

The research started. What kind? Electric or manual? Horizontal or vertical? How big? The results were as expected: there is no "right" windlass. As with everything on a boat, it's a compromise.

The first choice was between manual and electric. The cost of a manual windlass was comparable to an electric windlass of the same capacity. A "Waldenese" approach to sailing had always appealed to me, thus the simplicity of a manual windlass had much to offer. Installation is much simpler: no heavy expensive wiring to run nor solenoids and foot switches to buy and install. The cost of these items can add hundreds of dollars to the cost of the windlass itself. Battery capacity has to be re-assessed and possibly increased, too.

Cruising classics (by Hiscock, Pardey, Roth, and others) extolled the advantages of the manual windlass. Against these arguments was the obvious ease of operation of an electric windlass. Many electric windlasses can be operated manually in an emergency. In most cases, the engine will be running when you're raising or lowering the anchor, and the battery drain is compensated for by the alternator output. The added safety factor of an electric windlass is that it's much quicker to re-anchor if winds shift.

What confirmed my decision to go with an electric windlass was a statement in a book by a well-known and respected cruising writer who said that on his boat, comparable in size to ours, he had used his manual windlass only twice in eight years. He found the manual windlass to be so slow he just pulled it up by hand. I thought: "So why have it?"

Easier answer

The question of horizontal or vertical gypsy windlass was easier. As the stem of a Valiant 32 is about 8 inches higher than the foredeck where the windlass would be installed, a vertical windlass would need be mounted on a fairly high pedestal to get the proper angle of lead to the bow

roller. With a horizontal windlass, this problem is not as critical and can be solved much more easily. The top of the gypsy, where the rode leads off a horizontal windlass, is already several inches higher than on a vertical windlass.

In many applications, a vertical windlass has several advantages. It takes up less space on the foredeck, although the below-decks motor does intrude into the anchor locker. Some horizontal windlasses also have their motors mounted beneath the deck. These are usually of a "worm and gear"

by Norman Ralph

construction, which has considerably more internal friction and a much higher current drain. After considering all factors, a horizontal windlass was the choice.

Size was a difficult decision. As a do-it-yourselfer, I tend to overbuild things, so my choices are frequently overkill. Offshore cruisers advocate heavy ground tackle. As the first line of protection for their home and possessions, this is a logical and proper approach. The manufacturer of the Maxwell windlass recommends that the windlass have the reserve capacity to handle three times the weight of the anchor and rode. If I were preparing for an extended cruise to the Caribbean, I would have heavier ground tackle than I presently have, which is a 35-pound Delta and a 25-pound CQR as primary bow anchors. I might also go to all-chain rode instead of a mixed rode of chain and three-strand nylon.

What size?

So should I buy a windlass to fit the ground tackle we have now and our present cruising plans? Or should I get one that would be adequate for any future far-flung dreams? Three times the weight of an anchor and rode for offshore cruising would be in the 1,000-pound range. Some 300 feet of 1/4-inch high-test chain at 0.74 pounds per foot weighs 222 pounds. Add 45 pounds for a bigger anchor, and the result is 267 pounds. Three times that is 801 pounds. (*We've seen windlasses in catalogs with a maximum load rating of 3,500 pounds. Make sure your deck is strong enough to handle the load of your windlass, or reinforce it. -Ed.*)

While I was trying to reach a sensible decision, a flyer came from a discount marine store. It featured a new Simpson-Lawrence horizontal windlass, the Horizon 600. It's a larger version of their popular Horizon 500. It features a much larger permanent magnet motor of 550 watts compared with 150 watts, and an increased pull of 625 pounds vs. 500 pounds. It came with a 50-amp breaker and an up-and-down toggle switch. All this at a price that was \$120 cheaper than the Horizon 500. This caused me to re-evaluate my windlass needs.

The lifting capacity of the Horizon 600 is only 625 pounds. Using my existing anchors (which are more than adequate for our boat even in storm conditions) and if I went to 250 feet of 1/4-inch high-test chain, I would have a



For easy access from the cockpit, the 50-amp circuit breaker and up/down toggle switch is mounted inside the companionway, adjacent to the controls for starting and stopping the engine.

total weight of 220 pounds. Three times that is 660 pounds — close to the capacity of the Horizon 600. As I intended to use a mixed rode, the total load would actually be much less. These factors, along with the reality of the checkbook, made the Horizon 600 the final choice. Not the perfect choice but the best one for us, all things considered.

Small footprint

When the windlass arrived I was impressed with its small footprint on the foredeck. I decided to mount it on a 1 1/2-inch pedestal. This would give a better angle of lead for the rode to the bow roller. And it would prevent water on deck from going down into the anchor locker through the chain-pipe hole. I made this pedestal from two thicknesses of 3/4-inch exterior-grade plywood. I cut two pieces of plywood in the desired rectangular shape and epoxied them together, smooth sides out. I then cut the holes in the pedestal for the chain-pipe hole and for the wire and mounting studs, using the template provided with the windlass. Then I gave the pedestal several coats of epoxy to seal it from moisture. I painted it white to match the paint on the topsides and made a Sunbrella cover for it which was attached to the pedestal with snaps.

Using the template furnished with the windlass, I marked the deck for the holes for the mounting studs, wires, and the chain pipe. I drilled the holes and then cut the chain-pipe hole with a hole

saw and saber saw. I covered the holes from below with duct tape. I mixed a small amount of epoxy resin and filled the holes with it. I liberally painted the edges of the chain-pipe hole with this mixture. After allowing the mixture time to thoroughly saturate the edges of the holes, I removed the duct tape and caught the excess mixture in a disposable cup. This is to ensure that moisture won't get into the core of the deck, saturate it, and cause delamination. I positioned the pedestal and windlass over the holes to make sure everything lined up correctly with the studs and wires through the holes. I placed strips of masking tape on the deck around the pedestal.

Final mounting

Then I removed the pedestal and windlass and applied a bead of non-adhesive caulking around the perimeter and holes in the areas under them. I mounted the windlass and pedestal on the deck. Using large backing plates, I attached locknuts to the studs from below in the anchor locker. Back on deck, I cleaned the area around the pedestal of excess caulking and removed the masking tape. The windlass was ready to be wired.

A 50-amp circuit breaker and an up/down toggle switch was included with the windlass. The toggle switch would be fine for installation at the helm of a powerboat where clear observation of the foredeck and

windlass is possible. However, on a sailboat you need to be on the foredeck during anchoring and to have some means to operate the windlass from there. The most common method is to have foot switches on the foredeck and a reversing relay mounted in a dry accessible place aft. After surveying all possibilities, I mounted the circuit breaker just inside the companionway, adjacent to the controls for starting and stopping the engine. This would offer easy access from the cockpit. This location has access from the rear in a locker that is high and dry and also has room for mounting the reversing relay. I mounted the foot switches on the foredeck on opposite sides of, but adjacent to, the windlass. Once again, I coated the holes with epoxy when mounting the switches.

According to the instructions, the size of the wire needed depended on the current draw and the distance from the windlass to the battery. After measuring several times, I decided that the most direct route for the wiring wound up being between 40 and 45 feet. As the current flow is from the battery to the windlass and return, this length must be doubled. For lengths of 90 feet, the recommend size wire is #4 AWG.

Range of prices

In checking several catalogs for tinned battery cable of this size, I found a wide variance in prices. West Marine listed the wire at \$2.39 per foot. Jamestown Distributors in Jamestown, R.I., (800-423-0030, <<http://www.jamestowndistributors.com>>) had the same wire at \$1.03 per foot. They also had the wire in 50-foot rolls for \$43.09. Because I needed 90 feet, and at \$1.03 it would cost \$92.70 for 90 feet, I purchased two 50-foot rolls, one of black and one of red, for a total cost of

\$86.18. This would give me a margin of error in my calculations and a savings in price as well. (*The Jamestown wire quoted is SAE wire, while the West Marine wire is AWG. The SAE wire has less copper and a lower theoretical ampacity for a given length. This must be considered in any calculations but may be quite acceptable depending upon actual requirements. -Ed.*)

I also purchased some #4 copper terminals to be swaged on the cable for connecting to the battery and other terminals. I swaged these with my Nicopress tool and heated them with a propane torch until rosin-core solder flowed into each terminal. Then I covered each terminal with a piece of heat-shrink tubing.

I ran and connected the shorter lengths of cable: a red cable from the positive battery post to the circuit breaker and then to the reversing relay, and the black negative cable to the engine block and to the reversing relay. It could have been connected to the negative post of the engine-starting battery, but that would have required an additional 6 feet of cable. The run of wire for the foot switches required a three-conductor cable of 16- to 18-gauge wire, as they only carry the current of the reversing-relay coils. I then routed the wiring from the reversing relay to the anchor locker, taking care that the wires were not damaged and stayed clear of the bilge as they were routed forward. I was able to bring the wiring from the windlass and foot switches back from the anchor locker into the V-berth area behind a panel in the overhead. This enabled the final connections to be made in a relatively dry area.

Reversed switches

I connected the heavy battery cables to the windlass wires with copper split-nut connectors.

Then I covered these with electrical tape and then with friction tape for abrasion protection and a final wrapping with plastic electrical tape. The foot-switch wires were

connected with crimped connectors and covered with heat-shrink tubing.

When it came time to turn the circuit breaker on and try the foot switches, I discovered that the switches were reversed. It was a 50-50 proposition, so I wasn't surprised. I swapped the switch wires at the reversing-relay coil connections.

I needed to splice my 1/2-inch, three-strand nylon rode to the 20 feet of 1/4-inch high-test chain I had bought to replace the 5/16-inch proof chain I had been using. Although the 1/4-inch high-test chain is smaller and lighter than the proof 5/16-inch, it is much stronger: it has a working strength of 2,600 pounds, compared with 1,900 pounds.

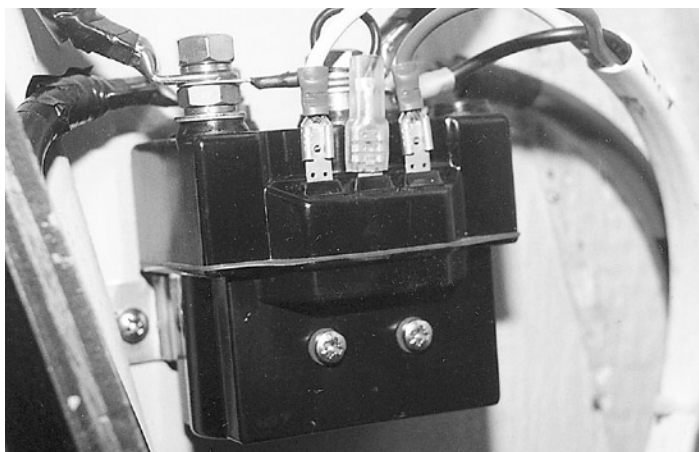
This splice was not as hard as I had imagined it. Anyone who has made "eye splices" on docklines or around thimbles will have no problem completing this splice. About a foot of the three-strand is unlaidd and two strands are fed through the last link of the chain while the third strand is fed through the same link in the opposite direction. The strands are back spliced with five tucks and then tapered for several more tucks. At the end the splice is whipped for a finished look. The splice runs through the gypsy smoothly and without hesitation. A customer service representative from Simpson-Lawrence told me that tests have shown that a splice of this type is as strong as either the chain or the three strand. However, I intend to check it frequently for signs of chafe and wear.

How does the windlass work? So far, I have been well pleased with the project and ease of operation. The anchor goes down and back up much faster than I had anticipated. I feel that it has been a very worthwhile addition to the boat. I know my back will appreciate it.

Norman Ralph and his wife, Jeanette, were late bloomers when it came to



sailing. A 1988 trip to the Gulf Coast exposed them to the concept of year-round sailing and sowed seeds that initiated early retirement and a move to Lake Pontchartrain in Louisiana.



The reversing relay is mounted high and dry in a locker near the companionway.

The birth of fiberglass

Assigning proper credit to the people behind the first fiberglass boats is difficult for several reasons. The fiberglass boat was not a discovery per se, like Alexander Graham Bell's telephone, or Jonas Salk's polio vaccine. Rather, it evolved from experiments with various glues and reinforcing materials by many different people and companies.

It is evident that a number of enterprising individuals were working simultaneously around the United States and in other countries to perfect plastics for boats. And precious few kept records that survive today. Indeed,

the lack of written documentation is an idiosyncratic shortcoming of the boatbuilding industry. Ask the president of a company when, during the 1970s, it switched from building solid fiberglass hulls to balsa-core sandwich hulls and it's not unlikely you'll hear, "Let's see, that would be 1973, 1974. You could ask Manny, the glass-shop foreman,

but he doesn't hear so good these days."

Though the yachting periodicals of the day — *Yachting* and *The Rudder* —

documented the growing industry (in particular, authors "Tony" Boughton Cobb Jr., manager of the

Reinforced Plastic Boat Division of Owens-Corning Fiberglas, and Pete

Smyth, who knew about, or interviewed, early fiberglass boatbuilders), theirs was at best a sketchy history. Beyond these minimal written sources, there are only the memories of builders, owners, and sailors, however blurred by time, to help limn the picture.

by Dan Spurr



Ray Greene built an 8-foot plastic dinghy and the 16-foot Rebel one-design daysailer (shown upper right). Once the fiberglass fabric was wetted out, the hull was covered with an electrically heated box to cure the resin at about 300°F for two hours (above). Once the resin had kicked, the homemade "oven" was removed and the hull lifted from the mold (right).



Toledo Blade

boatbuilding

The World According to GRP from Dan Spurr's new book

First attempt

By some accounts, the first attempt at building a polyester-fiberglass boat was made by a company in the Bronx borough of New York City. Basons Industries had a commission from the U.S. Navy to build some wherries, or small inshore boats. They made a mold of wood and laid up the first hull, but did not use wax or any other mold-release agent. Of course, the hull would not come out of the mold. After repeated efforts, they grew frustrated and dumped the whole mess into the river, where, presumably, it resides to this day.

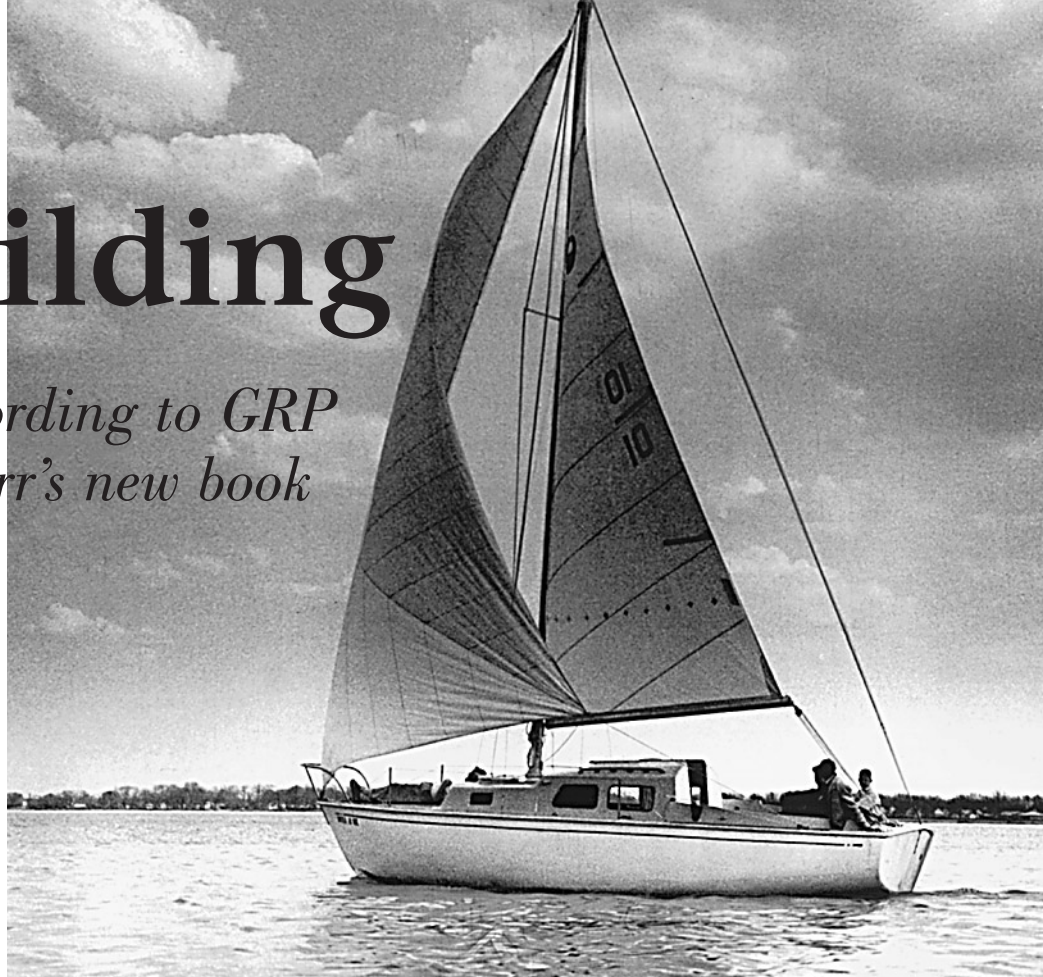
In 1960, Cobb wrote, "The earliest fiberglass boat we know about was built in 1944 by Universal Molded Products, in Bristol, Virginia." It was a 14-foot skiff, still in operation many years later. Cobb referred to it in answering the question of how long a fiberglass boat could last. While admitting that the boats really hadn't been around long enough to know with certainty, he guessed 20 to 30 years.

And there are a few other stories, none substantiated, of persons converting their wartime knowledge of plastics into boats. Plastic boats had been built since the late 1930s, but none had used glass fiber as the reinforcing agent. How polyester and glass fiber came together in the same hull is a case history of diligence and providence.

Ray Greene

Born in 1913, in Brooklyn, New York, Ray Greene was the son of a Canadian chemist. When Ray was six, his father, Herman Greene, moved the family to

Toledo Blade



***The New Horizons* cruising sloop was designed by Sparkman & Stephens in 1957. Ray was miffed at the designers for creating a similar boat for Douglas & McLeod three years later, the Tartan 27.**

Toledo, Ohio, where he became chief metallurgist and director of research for the Willys-Overland Company. "Willys," Ray recalled, "doubled his salary and gave him a year to build a research facility and come up with something they wanted."

Suffering in the Midwest from hay fever, Herman "Harry" Greene was

looking for a summer place "up north." Playing poker one night with several Willys executives, he won enough money to buy his "hay-fever haven" in

Traverse City, Michigan. Located 600 feet from beautiful Glen Lake, the home Herman bought had been owned by the foreman of an old sawmill that had burned in 1903. Hiking and swimming with their father, the Greene children relished their proximity to water, and for Ray it reinforced his lifelong love of boats.

Though he built thousands of boats in his career, Ray has always pictured himself more the inventor, like his father, whom he greatly admired. Several anecdotes from his childhood illustrate his mettle.

"For a quarter you could buy a Hire's setup to make root beer," Ray remembered. "You had to bottle it for a week. I didn't know about the expansion of gases, but I did know that frozen CO₂, dry ice, was the foam in root beer. Father had a 5-gallon thing with a gauge on it. So I filled it and put about two pounds of dry ice in. The gauge went over the top. I told Mother to run. The thing blew up and dropped the sink six inches. We had to repaper the whole kitchen."

Jugs of hooch

"Later, during Prohibition, I said, 'Pop, I'd like to make hooch.' I wasn't particularly interested in drinking it, just learning how it was made. Mother was horrified. Father said, 'I can't think of a better way for him to learn chemistry.' So I made a couple of jugs."



Ray built his first boat at age 12, but his father, disappointed in its construction, threw it out.

While still in high school, at age 16, he had formed Ray Greene & Company to build boats in the family's garage. He was nothing, if not inquisitive, bent on understanding how things work. Like many boatbuilders, he loved messing about in boats. At 18, there was no reason to forever build with the same materials and methods as generations of builders before him: in wood, piece by piece. Some thought preformed plywood panels were a big step forward from conventionally planked hulls, but Ray Greene was interested in a quantum leap. His IQ was reportedly 150, and he was determined to use it.

In 1931, Ray entered Ohio State University, building and selling 15-foot one-design Snipes to pay tuition. As he pursued degrees in mechanical and industrial engineering, his research led him to synthetic resins that then still required the heat of an autoclaving oven to cure, and pressure to remove air bubbles from the laminate.

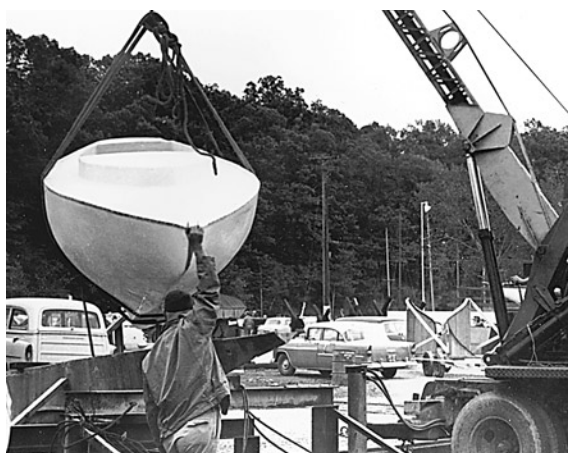
Lost letters

Herman Greene died in 1934, and Ray, the oldest of four children, was forced to pay his own tuition to finish college, even contributing to the education of the others.

"I wrote to every plastics company in the country," he said. "The letters I got back were lost in a fire, and I wish I still had them because nearly every one of them said that what I was trying to do was impossible. They'd make good reading today."

In the mid-1930s, Ray was building small boats using melamine and urea resins with ordinary cloth reinforce-

In 1956, Ray Greene built this 41-foot R-boat for Cleveland sailor Art Schulmer. It took six men 12 hours to laminate the hull. With the hull suspended from a crane, it is about to be set down on its 9,000-pound lead keel.



Ray Greene

ment. "In 1936," said Ray, "I wanted to find a new material for boats. In 1937 I wrote my mechanical thesis on choosing a plastic for boatbuilding.

"I presented a preliminary copy to Professor Moffit. He asked if this thesis was for mechanical design or naval architecture. He suggested I substitute 'large object' for 'boat.' If I did that, he said, the thesis would be OK."

The resins by themselves were brittle. The key was finding the right reinforcement to strengthen the resin. Cotton cloth worked, in a fashion, but it lacked tensile strength. Ray said, "I

"The lack of written documentation is an idiosyncratic shortcoming of the boatbuilding industry. After repeated efforts, they grew frustrated and dumped the whole mess into the river, where, presumably, it resides to this day."

tried screen wire, unbleached muslin, brown paper, and everything else you can think of. For resin, polyester was not yet available so we used urea-formaldehyde."

In 1941, Owens-Corning Fiberglas began weaving glass fibers for commercial use. Providentially, OCF was headquartered in Toledo. Greene,

who had done some experimental work with rocket tubes for the company, was permitted to buy half the initial run of glass fibers. Using urea-formaldehyde and fiberglass, he baked boat models in a three-foot-long autoclave. To make bigger boats, he constructed an "electric box with heaters and baked things that way." But he was still using resins that required heat and pressure for curing. Not surprisingly, among chemical companies the race was on to develop a thermosetting resin that would air cure in an open room without heat. By now the United States was at war, and the shortage of metals heightened the urgency of inventing alternative materials.

First polyester-fiberglass boat

"In about 1939 I had my plywood sailboat company going, so I started a small autoclave from junk parts," said Ray. This set the stage for his breakthrough.

"By all accounts," wrote chronicler Pete Smyth, "it was DuPont that broke the code that gave us the polyester resin we use today, but it was a laboratory batch from American Cyanamid that found its way, via a mutual acquaintance, to Ray Greene and into the world's first fiberglass polyester boat."

Ray said, "One of the research men at American Cyanamid sent me about a gallon of polyester cold-setting resin. He said it was half of all they made for the laboratory."

The year was 1942, according to Smyth. The boat, in all likelihood, was a dinghy, perhaps the 8-foot Tubby Dink or the 12-foot Nipper, which he had been building for some years in plywood.

Ray found his knowledge in high demand. "People always wanted to come in and gas with me about fiberglass. I put it out in the industry that I was available from 8 to 12, Saturday mornings. I met some characters. Had a farmer come down from the middle of Ohio

who wanted to build a fiberglass barn. Then there was a woman who, on inspecting one of my dinghies, said, 'Those aren't fiberglass! I can't see through them!'"

Continued on Page 28

Ray Greene remembers

Retired since 1975, Ray Greene spends winters in the Florida Keys, driving a 16-foot runabout with power steering and a 6-hp motor. He still loves to talk about boats and the industry he helped found.

“Each year, the builders of fiberglass boats for the Navy would be invited to Penn Naval Station to tell the Navy what we wanted in specs. I got a contract for 150 9-foot sailing dinghies. The contract said the boats had to pass Navy tests and weigh about four hundred pounds. I called Captain Sonnenschein, the head of the Bureau of Ships, and told him I could build the dinghies much lighter with a new woven fiberglass fiber [mat]. I said they would pass all Navy tests, and there’d be no increase in costs.

“Several months after I delivered the dinghies at 160 pounds, the contract section called me and said, ‘We note that you built 400-pound dinghies at 160 pounds. We would like to renegotiate the contract.’ I called Captain Sonnenschein, and he said he would take care of it. He did.

“Many of the original fiberglass boats weren’t worth building because they required too much resin. A properly built fiberglass boat should last a hundred years. I’ve got a 1961 New Horizons that’s in perfect shape. I can’t sell the thing for anywhere near what it’s worth because people see its age and figure it’s got to be shot. But I’ve got all the equipment, and I’ve done enough tests on it, and I can’t detect any deterioration in 25 years.

“In 1956 we built an R-boat for Lee Wilson, a wealthy man who holds patents in the steel industry; he wanted to replace his wooden one. Afterward, he gave me the molds of the 41-footer. So I built another for Art Schulmer, who won the 1956 championships. (See photos on Page 26.) Had it up in Thunder Bay, Ontario. It drew 7 feet. He got it up on the rocks and scraped 250 pounds off the bottom; it had 9,000 pounds of ballast. He called me to see if I’d come up and help him. I asked if it was leaking, and he said no — so I said, ‘Then sail it home!’

“If it was wood, it would’ve gone down, but fiberglass, jeez, you can hardly kill it.”



Toledo Blade

Ray Greene, a keen racer and member of the Toledo Yacht Club, frequently won the Rebel class in many Great Lakes events, such as the Inter-Lake Yachting Association Regatta at Put-in-Bay in August 1956. He is shown above with his wife, Joan, and at right examining a 1947 Rebel-class sailboat. The 1947 Rebel shown here was still in operation as a day charter at a Florida Keys marina in 1996. In the early 1940s, Ray Greene worked on experimental rocket tubes for the military at Wright Field using Owens-Corning Fiberglas products. It was this connection, and his proximity to OCF, that brought fiberglass fabrics into his hands before other boatbuilders’.



Continued from Page 26

Oil overhead

"One of the best was a guy who envisioned a car top made of two plastic shells with oil between them. On dark days you'd pump out the oil, and on sunny days you'd pump in a dark oil. He couldn't get anyone interested in building them. He came to me, and we weren't thinking fiberglass then, but thermoplastics, acrylics. I told him there isn't a plastic that will last more than a couple of years. He wanted to give me \$3,000 to build the first one. I said I'd make it if I thought it would work, but I didn't see how."

Ray continued his work throughout the war, serving first in the Army and later as a commissioned officer in the Navy, where he was an assistant supervisor for the building of small craft. "Art DeFever was my counterpart as a naval officer during the war," Ray said. "We were so interested in mixing things that we'd send his girl and my wife out to a show while we started mixing pots in the kitchen. After the stuff went off we couldn't clean the bowls, so we buried them in the garden. For years after, my wife would ask what happened to those bowls, but I never did tell her."

After the war: the Rebel

Returning to Toledo after the war, Ray quickly resumed his boatbuilding business. By 1947 or 1948 (Ray's recollection is unclear) he was building,



Toledo Blade

In the late 1940s, Greene believed he was the largest builder of fiberglass boats in the world. By 1962, his facility on the Maumee River in Toledo, Ohio, had produced more than 2,000 Rebels, and by 1967, more than 4,000.

on a production basis, 8-foot fiberglass dinghies (including the Tubby Dink, introduced in 1942) and the 16-foot Rebel daysailer, a one-design on which he and Alvin Youngquist, a Waite High School drafting instructor, collaborated. More than 5,000 were built, and the boat is still actively raced.

"Twenty-five years later," Ray Greene would remember, "I was at an alumni meeting when Professor Moffit stood up and said, 'I'd like to make an apology to one alumnus. Will Ray Greene stand up?' I was startled. 'In 1937 he wrote a thesis choosing a plastic for structural work. I discussed it with many of the other professors. We thought the basis of your thesis was silly, but because of your enthusiasm we let you go ahead with it. We all thought it was nuts. It turned out to be one thesis that was the beginning of an industry.'"

In the following years Ray's work diversified, as it would for the small percentage of forward-thinking builders. He built a fiberglass sports car in 1950, which produced some talk with General Motors about building the fiberglass bodies for Corvettes (which would come in 1953, but not by Greene).

Fiberglass Snipes

In the early 1950s, Ray was approached by the president of the U.S. Snipe Association, who expressed interest in building the boats out of fiberglass. He offered to pay the cost of the tooling. Ray countered that if 10 orders were

Nothing new

Proving that there's really nothing new in the world, boatbuilders of the 1940s experimented with prepregs; that is, fiberglass saturated with resin prior to layup in the hull. The panels were kept in refrigerators to inhibit curing. When needed, they were put in place, and heat was applied, commencing the curing process. Today, prepregs allow more precise control of glass-to-resin ratios, which are critical to strength and weight.

According to an early source, both Dr. Herbert Muscat and Taylor Winner were advocates of prepregs in the 1940s: "Sometimes the mats are already impregnated with resin when put in the mold. In other processes, the mats are impregnated afterward. The amount of heat and pressure required varies with the process used. Winner, for example, uses a resin that will cure by itself at room temperature. Other resins need no pressure when setting. Most manufacturers, however, find that they get the fastest results if they use resins that require some heat and pressure."

Continued on Page 30

Sheathing wooden boats

At the same time builders were perfecting the materials and techniques of boat construction with plastic resins and various reinforcements, owners of wooden boats saw in their efforts potential relief from the problems of planked construction — rot, water absorption, and much maintenance.

The practice of covering wooden boats began with the availability of fiberglass during World War II, and continues to the present. The intent is twofold: to preserve and/or restore aging wooden boats and, for new-boat construction, to protect the wood from water intrusion.

Unfortunately, many jobs turned out badly, often exacerbating dry rot and complicating future repairs. Good or bad, sheathing also adds weight. Early sheathing jobs often used just a single ply of 10-ounce boat cloth and polyester resin, which has poor adhesion to wood. A ply of mat underneath the cloth would have helped.


Some tried materials other than glass, such as linen, canvas, rayon, and Dacron. Textile-grade fabrics often were contaminated with weaving lubricants, and few were treated with coupling agents which cause the fibers to chemically bond with the resin.

In 1981, Allan Vaites published his landmark book, *Covering Wooden Boats with Fiberglass*. After many years of experimentation and numerous successful applications of his method, he felt confident enough to advocate in print the use of mat (and sometimes woven roving for large, decrepit boats), fastened to the hull with staples (galvanized, bronze, or Monel) to provide a mechanical connection to augment the admittedly mediocre polyester resin bond.

Defender Industries, of New Rochelle, New York, long promoted the use of various membrane covers, including acrylic (Dynel), polypropylene (Vectracloth), and polyester (Xynole) for hull sheathing.

Adhesion of the covering material and resin to a wooden hull is made difficult for several reasons, not the least of which is the relative difference in coefficients of expansion, which becomes an issue as materials expand and contract due to temperature changes. White oak, for example, shrinks 5.6 percent radially and 10.5

percent tangentially when drying. Conventional electrical-grade fiberglass (E glass) elongates just 3 percent when heated. Plywood, of course, expands and contracts much less than board wood, which explains why most sheathed new-boat construction has been in plywood, not planked. Epoxy has better adhesive properties than polyester, but even it elongates about 6 percent of its original size.

A number of pleasure boats were constructed new with fiberglass-sheathed plywood hulls, including the Newporter ketch, built by the Dorchester Shipbuilding Corp. in Philadelphia, Pennsylvania. Selling for \$44,800 in 1968, some of these stout vessels are still in operation. 



John Wills

Sheathing wooden boats in fiberglass was, for a time, a popular and often unsuccessful attempt to solve the problems of leaky seams and rot. This 1946 WilRo runabout was first covered with Lamitex, later with fiberglass and polyester resin.

Continued from Page 28

placed, with a \$100 deposit for each, he'd bankroll the tooling himself — which he did. After delivering the Snipes, the first ever in fiberglass, he suggested to the association that they license just three builders in the United States so there would be enough orders for each. Instead, the association licensed many more, including, said Ray, "one about 50 miles from me. I said to heck with it."

The Navy contracted him to redesign its air-sea rescue boat, and it also sent him to Vietnam in 1961 to build swimmer-support boats. And the Coast Guard had him build its pavilion for the 1964 World's Fair.

Owens-Corning and Ray Greene maintained a relationship for many years. "Owens-Corning wanted to take all the things I'd done and give them to everybody else," he said, "like making fenders for cars. I'd write a detail on how to do it [a fiberglass fabrication procedure], and they'd publish it so others could make things. I had to do it [explain the process] for the Coast Guard. Once the commandant came up to me and said, 'You wrote the most beautiful article on building boats, but you didn't tell us a damn thing.' I said, 'That was my intention.'"

Disastrous fire

The June 1950 fire at South Byrne Road, Toledo, caused by an inadvertent mixing of catalysts and promoters, destroyed Ray's office and much of the factory. Deeply in debt and only partially insured, he was devastated and never fully recovered from the loss. Like too many boatbuilders, he was a keen engineer but a lousy businessman. Again, he was an inventor at heart. "If I made a little money in the boat business," he said, "I'd devote the rest of the year to experimenting. The investment/ inventor people rarely make the money."



Toledo Blade

First produced in 1947, the Rebel was originally built with a fiberglass hull and wood deck. The hull was about 1/4-inch thick on the bottom and 3/16-inch thick at the gunwale. These photos, taken in June 1949, show a Rebel hull being laid up

over a male wooden mold. After the hull was finished, it was turned right side up and the deck installed (above). At right above, having installed the deck beams, carpenters Arthur Laytart and Robert Ellison work on the centerboard trunk. In 1954, the decks were converted to fiberglass.



Several efforts to sell the company (including one to Chris-Craft) fell through, but he hung on until he accepted a contract for his land. He retired in 1975 at the age of 62. He spends summers at his place near Glen Lake, Michigan, where his father had taken him as a youth and where he learned to love boats; he spends winters in the Florida Keys.

"Things have to grow old, get mature, and die," he said. "I made mistakes about 49 percent of the time, and 51 percent of the time I had the right answers. I survived the way I wanted to. And I sure had fun."



Dan is editor of *Practical Sailor* and a former senior editor of *Cruising World*. This article is an excerpt from his newest book, *Heart of Glass*, just published by International Marine/McGraw-Hill and available from Good Old Boat's bookshelf. (See Page 62 for information

about ordering.) This historical reference book was 12 years in the making. Dan is the author of *Spurr's Boatbook: Upgrading the Cruising Sailboat and Yacht Style*:



Design and Decor Ideas from the *World's Finest Yachts*, both available from International Marine, as well as *River of Forgotten Days* and *Steered by the Falling Stars*.



The Cheoy Lee *legend*

*Asia's largest and oldest
boatbuilder is still in business
after 130 years*

Cruise the waters of the Bahamas, the Gulf of Mexico, or Lake Michigan, and you'll find yachts built by Cheoy Lee. In the British Virgin Islands, we found Cheoy Lee Offshore 31s favored for their liveaboard comfort, cruising capabilities, and a much-desired 3-foot 9-inch draft, crucial for carefree island-hopping. But few boating enthusiasts associate this Hong Kong-based shipyard, now more than 100 years old, with the production of tugs, ferries, pilot boats, and patrol boats for a demanding commercial market. Fewer still know that the Chinese characters for Cheoy Lee translate into a "Happy and Prosperous Business."

The beginnings

Started by the Lo family in Shanghai in 1870, the Cheoy Lee Shipyard specialized in the production of wooden commercial craft and powered cargo vessels built to outrun the Japanese blockade during World War I. In 1936, when the Japanese overran China, then Cheoy Lee president, Lo To, moved the company hub to Hong Kong Harbor. Although all operations ceased for a brief period during World War II, the company resumed production at the end of the war.

It was during the prosperous 1950s that the shipyard diversified, producing teak sailboats (and motor yachts) billed as "classic bluewater sailing yachts built to Lloyd's of London standards," with the goal of making the sport of sailing attractive and affordable. But Cheoy Lee, family-owned for four generations, was already making progress in the development and testing of a then-revolutionary material called fiberglass or glass-reinforced plastic (GRP). Their studies for Lloyd's of London included numerous combinations of resin and glass and intensive strength testing until a successful mix was found. The shipyard phased out wood construction in the 1960s, becoming one of the first companies to use "glass." They also pioneered GRP/foam sandwich technology in the marine field.

By the mid-1970s, Cheoy Lee boasted a 1,200-employee shipyard on Hong Kong's waterfront. Two decades later, the bottom virtually fell out of the recreational, small-boat market,

causing Cheoy Lee to concentrate its efforts on the production of larger, semi-custom sailing yachts, transoceanic trawlers, and long-range cruisers. Over the years, close to 4,700 Cheoy Lees (sail and power) have been delivered worldwide.

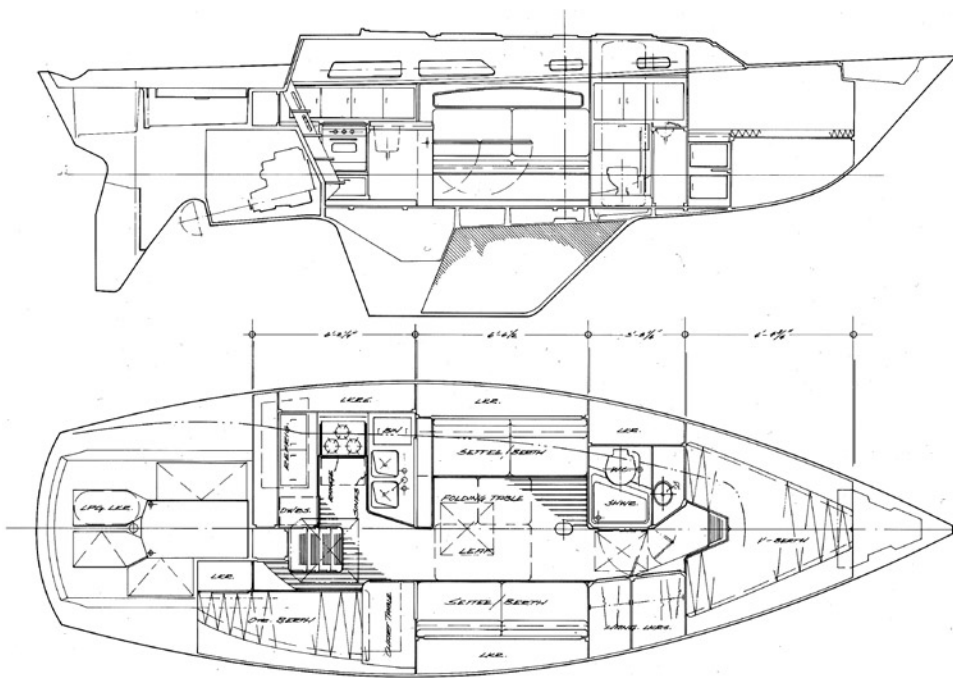
The U.S. market

Cheoy Lee's Hong Kong location, the availability of natural Burmese teak, and a cheap labor force made its entry into the American boat market an immediate success. Although Cheoy Lee had been known in this country since the 1950s, it wasn't until the following decade, with the perfection of fiberglass technology, that the company seriously introduced U.S. buyers to its Far Eastern craftsmanship — a level of workmanship that had been unheard of from U.S. yards — and prices that undercut the competition. While some Asian shipyards are noted for having the interiors completed by finish-work families who physically move aboard, the Cheoy Lee Shipyard has always operated a more sophisticated yard.

There are many stories of Cheoy Lee's early popularity in the U.S. One concerns David Toombs, of Lion Yachts. In 1960 David, a United Airlines pilot, spotted a Cheoy Lee 35-foot Lion Class sloop in California. He fell in love with the all-teak design by British naval architect Arthur Robb and imported one for himself. Then he discovered that everyone who saw the boat wanted one, so he started selling boats. After selling 25 Lions in about three months, he had the

name for his business. According to David, he set up the company's East Coast dealer organization in 1965 and was hired by Cheoy Lee to put them "on the map here." The first hull on record, imported in 1960, was #782, and about 2,000 yachts were sold up to 1990. After 80 trips to the Cheoy Lee Shipyard, David figured he spent more than a year of his life in Hong Kong. Lion Yachts, on occasion, also handled other boats, some from Holland, and others, like the Ta Shing products, from Taiwan. David, himself an avid sailor, in addition to the Lion 35, has owned a Robb 35, a Rhodes Reliant, an Alden 50, a Luders Clipper 48, and a Cheoy Lee/Perry 48. He now cruises on a Pedrick 43 sloop.

*by Kate
Godfrey-DeMay*



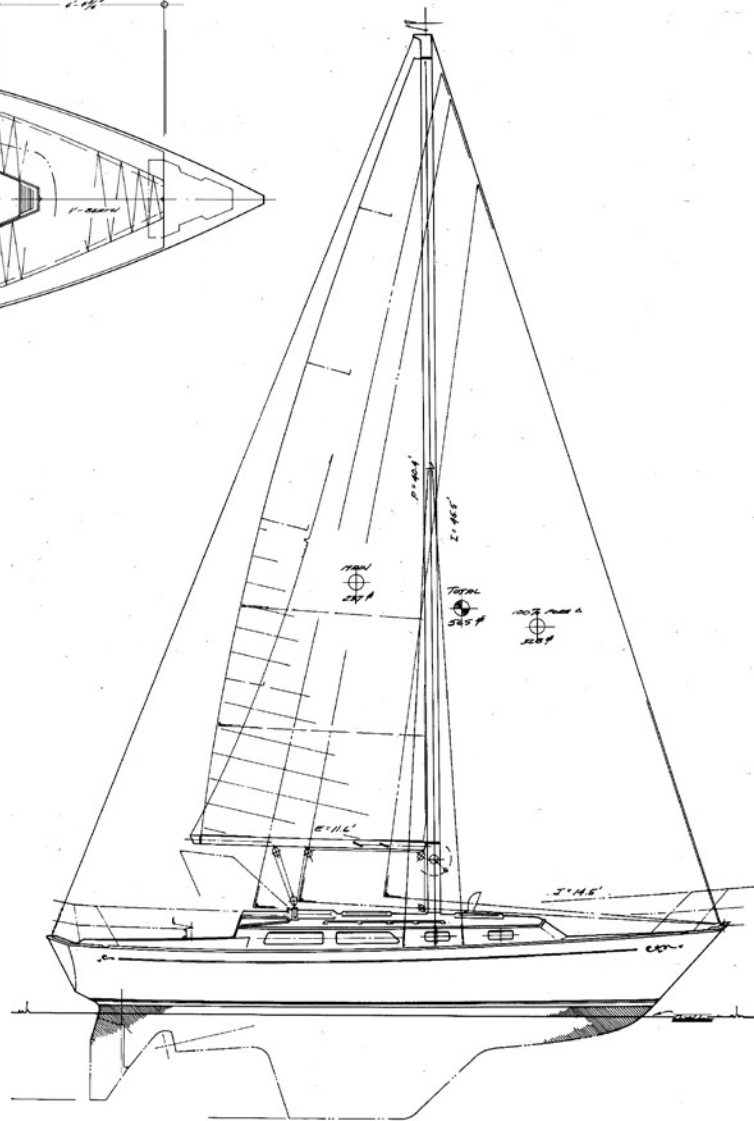
Woody-looking

Cheoy Lee owners a few decades ago were much like those who covet them today. Though they range in experience, all are cruisers — not racers — at heart, in search of a seaworthy, classic “woody-looking” boat. Cheoy Lee used teak above and below the deck to give the illusion of a wooden boat. For example, the Rhodes Reliant, constructed of fiberglass from top to bottom, sported a “teak” cabin. The basic structures, with their bulletproof fiberglass hulls, have withstood the test of time, and enthusiasts from coast to coast favor the early models for modernization and complete rebuilds. By today’s standards, the early Cheoy Lee sailing designs are relatively narrow and heavy, but they possess unusual stability and a high level of comfort.

Our Offshore 31’s 8-foot 10-inch beam is slender compared with the 10-foot-plus breadth of modern boats of comparable size. Having been an inland sailor most of my life, my own introduction to Cheoy Lee was on my husband Paul’s beloved *Clarity*, a 1967 ketch-rigged, Offshore 31. Her classic sheerline, wooden spars, and low freeboard earned her the title of “the prettiest boat on the lake.” In the midst of cleaning, painting *Clarity*’s bottom, and varnishing teak last spring, we dug out the original brochure that promoted the Offshore 31 as “a modified Herreshoff 28 design with a low wetted surface, long and stable lateral plane, fast and easy to handle with maximum rudder control. Ketch-rigged, she is excellent for offshore cruising.” From personal experience, we can attest to the standard company line that a full keel and large rudder make for stable cruising, especially on our shallow, inland lake where the wind and chop can build quickly and fiercely.

The designers

Cheoy Lee sailboats were designed by some of the world’s best-known naval architects, a roster that reads like a *Who’s Who* in ship design: John Alden, Maury Decker, Laurent Giles, Bill Luders, Taylor Newell, David Pedrick, Robert Perry, Ray Richards, Philip Rhodes, Arthur Robb, Sparkman & Stephens, and Charles Wittholz. Ted Brewer drew some of the Luders’-designed Cheoy Lees in the late 1960s and early ’70s, specifically models in the Clipper and Midshipman series.



Bob Perry’s Cheoy Lee 35

Contractual arrangements with Cheoy Lee were a bit unconventional in that the company usually bought designs outright, precluding the payment of royalties to designers. When a mold was nearing the end of its run, as was the case after 44 of the Reliant 40s, a new model and potential designer were sought. The shipyard was also fairly rigid in its approach to outsourcing its work. All structural designs were drafted by Cheoy Lee so they could use their own trained craftsmen and proven materials at the Hong Kong facility, a move that went a long way in keeping costs to a minimum and quality at a premium. The terms required by Cheoy Lee limited designers’ control over their own work. Cheoy Lee had

the ability at the time to complete and launch a new production yacht faster than almost any other builder, usually within one year of the signing of the design contract.

Designer profile

Robert Perry designed for Cheoy Lee from 1975 to 1978 and was responsible for the 35, 43 motorsailer, 44, Offshore 48, and Golden Wave 42. When I caught up with Bob Perry in Seattle, he told me he always knew he wanted to be a naval architect. In high school he sent off letters to boat companies and dealers requesting color brochures in the 20- to 80-foot range so he could practice sketching. "Thinking back on it, these boatbuilders received letters literally scratched in a kid's handwriting, and I'm certain that 99 percent of the letters were thrown away," he said. "I did receive one package from a Cheoy Lee dealer here in Washington who sent me everything he had on the company. Years later, I felt proud as an established professional, to be contacted by Cheoy Lee to design for them."

According to Bob, "it was a rather trouble-free 'marriage,' given that there was almost no communication with the company once the designs were sent in. Eight months later, I'd receive or see photos of the boat I designed sailing in Hong Kong Harbor." In 1977, Bob designed the Cheoy Lee 48 at a time when mid-40-foot boats were the rage. The 48 was very popular and made an excellent liveaboard yacht even though its size approached the upper limits of what could easily be handled by one person. He considers the 48 an excellent design and still uses it as a benchmark for other projects. Bob visited the boatyard in Hong Kong but never felt as close to the owners as he would have liked. It was a style they didn't ascribe to.

The relationship with Cheoy Lee ended when Bob Perry turned down the company's last request for a design. "Throughout the design series, I felt I was losing control. Quite frankly, I wanted to be the fountainhead of change. I was young then; we were all pretty cocky and confident."

Cheoy Lee today

Surfing the 'Net brings a variety of references to Cheoy Lee: broker listings from 27-foot sloops to 92-foot motor yachts; home pages created by skippers featuring their own prized "CL" sailing vessels; and owners' organizations and Web sites devoted to a particular "cult" Cheoy Lee design, such as the Rhodes Reliant 40 (some say the most admired and sought-after glass boat from the board of Philip Rhodes). There are motorsailers engaged in chartering, like the 63-foot Blue Eagle that cruises the Caribbean and the East Coast of the United States.



Clarity, the author's Offshore 31 at anchor.

So the legend of Cheoy Lee lives on in its older boats, but is the company still in the sailboat business? According to Cheoy Lee sales manager, Jonathan Cannon, the answer is a qualified yes. "We have not actually ceased sailboat production, although we do not build as many as we did in the past. Our line of motorsailers ranges from 53 to 78 feet, and we are also able to build the 43- to 55-foot David Pedrick designs on a semi-custom basis."

Even though the future looked unsettled for the Hong Kong-based Cheoy Lee Shipyards when the British finally handed the territory over to the Chinese, the transition has been more than successful. Under the stewardship of two of Lo To's children, Ken Lo, an engineering graduate of the University of Michigan, and But Yang, a Cornell alumnus with an MBA from Stanford, Cheoy Lee was able to expand the shipyard facilities and increase its manpower, drawing from a larger pool of highly skilled craftsmen.

On a personal note, Cheoy Lee designs are, to this day, so eye-catching, so head-turning, that even after many years of ownership, Paul and I still turn back, not once, but twice at *Clarity* when we are leaving the dock . . . to see that she is secure certainly, but also for one last look at an elegant lady of the sea.

Kate is a St. Louis-based writer whose articles have appeared in the St. Louis Post-Dispatch and several boating magazines. Kate and her husband, Paul, have sailed the waters of the Chesapeake, Lake Michigan, Florida Keys, the British Virgins, and the Abacos in the Bahamas. They can usually be found cruising the Tennessee and Cumberland rivers from their home port of Green Turtle Bay on Lake Barkley, Kentucky.



Resources for Cheoy Lee sailors

Cheoy Lee Shipyards, North America, Inc.,
954-527-0999 (phone); 954-527-4947 (fax)

Cheoy Lee Web site
<<http://www.cheoyleeassociation.com>>

Rhodes e-mail discussion group
<<http://www.sailnet.com/list/rhodes/index.htm>>

Rhodes Reliant/Offshore 40 network
<<http://nimbus.temple.edu/~bstavis/reliant.htm>>

Classics in New

Here is one definition of a good old boat: standing on a dock in Auckland, New Zealand, I asked the owner of a nearly 100-year-old classic racing yacht how many boats like his the 19th-century shipbuilders had built.

"Eight," he said proudly.

"How many are still floating?" I wondered aloud, expecting his was the surviving remnant, and he'd tell me how he'd preserved her.

He looked puzzled, then said matter-of-factly, "All eight are still active racers."

If you watched the America's Cup events carefully this past winter, you might have caught, behind the huge transparent Cup mainsails and paper-thin carbon-fiber hulls, an occasional peek at a bowsprit or gaff . . . specters of an earlier age.

Classic yacht racing in New Zealand predates even the 1851 America's Cup; New Zealand was not yet an independent country when early pioneers raced for cash prizes

in the 1830s on the Waitemata, the Auckland harbor made famous by television coverage of last February's Cup racing.

So, during a break in Cup trials, I was honored to join the classic yachts involved in the Logan Classic for three days of stiff winds and stiffer competition in Auckland. This is a land where sailing is taught in physical education class at school, and if two things can move, somebody will organize a race and others will have a punt (a bet) on the outcome.

Famous sailors

I was especially honored to crew for two famous sailors, hearty classics themselves: Lin and Larry Pardey. These prolific authors and salty world cruisers have spent more than 30 years touring the world — with no engines or electronics, in a fashion 19th-century sailors would instantly recognize.

Now New Zealand migrants and celebrity residents of Kawau Island, 90 minutes north of Auckland, the Pardeys are a particularly good fit with Kiwi

culture. It is easy to see why they feel welcome here in the land of "the #8 fencing wire solution" (fixing your old gear rather than buying new). Resourcefulness, the ability to keep things "running on the smell of an oily rag" as the locals say, is a trait Kiwis admire, and the Pardeys have made an art form of building it themselves, making do, and being determinedly self-reliant.

I first caught up with them at the Mahurangi Regatta, just off Kawau, where Larry, 60, a native of British Columbia, was asked to captain the heavy 40-foot ketch, *Spray II*. Lin, 55, originally from Michigan and later from California, sat out the race that first day. As I found out later, she had struggled in the chop with a dragging anchor on a friend's boat.

I am eager to sample the classic yachts and see how these world cruising sailors navigate the local club-racing scene. True to form, when I arrive Kiwi families were organizing foot races on the beach, racing their "littlies" (children), each other, and the "oldies" (grandparents) as well. Then come

*Good old boats, good old folks,
and the Pardeys add spice
to the America's Cup festivities!*



John Geisheker

Zealand

kayak and dinghy racing, and the main classic yachting event. (By the way, Kiwis call anything that sails a “yacht;” powered boats are just “launches.”)

Rail meat

When the Pardeys don't need crew, I volunteer to serve on a 1904 cutter whose owners reckon they can use my weight on the rail. Soon we are all busy in 30-knot winds and a fresh chop, rails nearly under, like spiders crawling over sloping decks, on vessels without lifelines, mainsail winches, or camcleats, racing the way colonial settlers here would have raced 150 years ago.

Hours later, we are all as authentically wet, exhausted, and achy as our ancestors would have been. Larry has helped the owner of *Spray II* take a prize, and the owners of my boat have taken a respectable position in the front of the fleet.

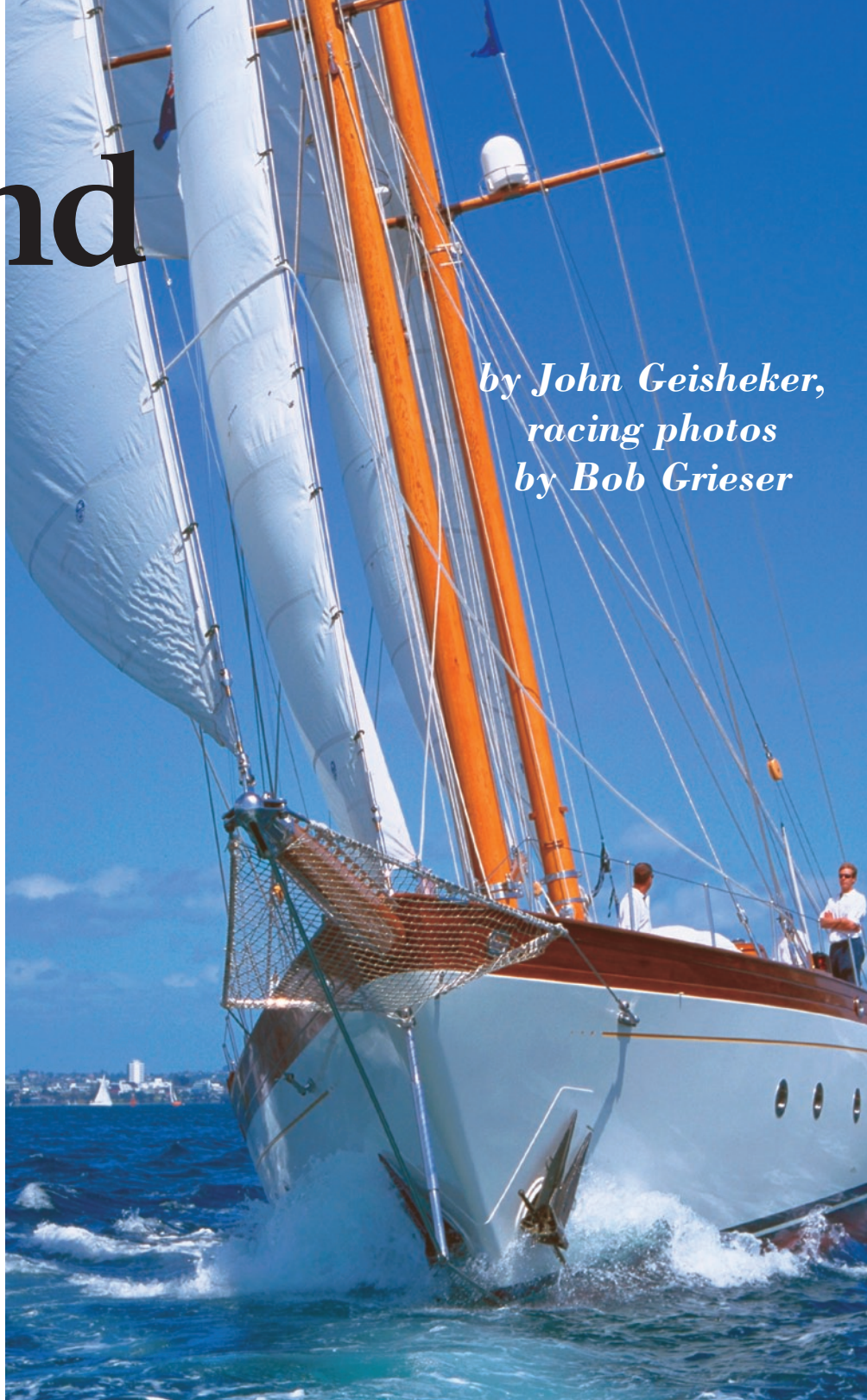
I ask Larry whether racing is useful training for a true cruiser. “Absolutely,” he says. “Racing teaches you to get the best from your boat, how to respond quickly, to measure her against others; it quickens your reflexes.” And he notes with a twinkle, “It's a great way to meet people.”

Lin agrees; she notes that when they arrived in Cowes, Isle of Wight, years ago, they joined a local race only two days later. It was a fast introduction to the area and the people, she remembers. And she says there is no reason why a boat can't be home, transport, and fun, too.

After seeing her picture dozens of times over the years and reading her lean and natural prose, Lin loomed large in my mind's eye. Imagine my surprise when this authoritative, engaging, and thoughtful voice of the cruising life turns out to be a petite 4 feet 10 inches tall. She says it's an advantage in a small boat to be small, and she has never worried that she was not up to the task.

Simple sailors

The Pardeys cheerfully confess to being the Luddites of sailing, foregoing most



*by John Geisheker,
racing photos
by Bob Grieser*

Seljm is a 95-foot Bermudan schooner designed by Anselmi Boretti of Italy in the 1940s and built by Cantieri Sangermani, of Lavagna, Italy, in 1978. She was acquired in 1995 by Patrick Monteiro de Barros and is skippered by Steve Ray.

modern equipment and even what most sailors would consider the bare minimums (engine, VHF radio) for gear they design and fix themselves. Of

radios, both Larry and Lin are quick to remind me that a radiotelephone can give you a false sense that someone will always come to your aid and can even create panic. In the



Queen's Birthday Storm off New Zealand in 1994, they argue, some owners abandoned their boats because they heard how bad the storm was, not because they were in immediate danger.

"We cruise to get away from crowds, not to take them along," Lin says, when I ask her opinion of the single-sideband "nets" and radio rendezvous many cruisers favor.

Lin points out that time spent at the radio, GPS, or SSB is time away from just "looking around." She recalls the time she nearly hit a large buoy, but was alerted by their "11-minute watch alarm" (the interval they figure it takes a large ship to reach them from a hull-down position on the horizon) and was on deck to see it. "Would we have been safer if I had stayed below and relied on a GPS?" she asks.

I asked Larry if they did their own swaging or used swageless fittings for standing rigging. He trumped the question by saying he uses eye-splices he does himself, reminding me that even do-it-yourself standing rigging costs more than \$100 a stay just for fittings.

YumYum (the name of a character in Gilbert and Sullivan's *Mikado*), is a 41-foot gaff-rigged cutter designed and built by Jack Weymouth of Auckland, New Zealand, in 1892. She has been owned by Russ Rimmington since 1992 and was restored by Lawrence Giles.

Lin writes her books longhand, and they both estimate a laptop computer has a limited life on a boat: 18 months or less. They do have kind words for photocopy/computer shops — why own a computer when you can rent one, with an office, whenever you need one?" they ask.

Not philosophical

The Pardeys feel that most cruisers load their boats with "stuff" they cannot fix themselves, so they have to get jobs to pay for the maintenance and repairs, which keeps them from cruising — a "Catch-22" situation. Larry adds that the reason *Seraffyn*, the original world cruiser they built, did not have an engine was not that they made a deep philosophical choice. "It was simply," he says, "that we figured for the cost of an engine, we could cruise Mexico for a year."

"We don't 'eschew' or abstain," Lin laughs, when I suggest as much diplomatically, "we're just cheap."

I feel a bit sinful discussing technology around the Pardeys, as one might feel giggling at a Quaker meeting. And I notice they are underwhelmed by the sight of the breadcrumb trail on my car GPS screen as we drive around Auckland ("a city, like London, of winding streets," I whimper in defense). But their nautical abstemiousness is cheerful and tolerant, not Puritan. "Things come to own you," says Larry practically, "you need to spend time to earn them, and then you can't fix them. All the while you are not building traditional skills and are wasting time you could spend sailing."

Back at the next classic boat race (the Logan Classic was named after a turn-of-the-century boatbuilding firm which has now morphed into a clothing company), I join the Pardeys for a day of racing. This time we meet at Devonport,

the Auckland harbor town that is home to the entire New Zealand Navy, all four small ships, itself a lesson in small is better. I hide my GPS under the car seat. My “brief” (task, in Kiwi parlance), the standard demand made of any green crew — is to be heavy on the weather rail, but at other times to stay small, quiet, attentive, and aerodynamic. It is a splendid honor to join these famous sailors, and I expect to learn heaps.

Glorious assembly

The Pardeys had agreed to help her owners race *Jonquil*, a gaff-rigged Herreshoff Buzzard’s Bay 25 (as Larry reminded me, actually much longer than 25 feet overall — old Nat, not market-savvy, used waterline lengths), on this third day of the Logan Classic. What a glorious assembly of antique craft join us at that start line, their many crew members typically in matching T-shirt-and-shorts livery. (T-shirts are a concession to modernity. Old photos of the same boats we sail today show the crews in mid-summer wearing three-piece vested wool suits, ties, and bowler hats.) But in all directions, as it has been for more than 100 years, there are sprits with dolphin-strikers and chain bobstays and whisker stays, long boomkins (Kiwis say “bumkins”) with gaff sails on boats 50 feet long but barely 8 feet wide, gleaming spars, graceful hatches, and spiffy brightwork.

There is a crowd on hand to cheer us at the start line, conveniently drawn close to shore between a long wharf and a nearby buoy. Overhead beat the helicopters of TVNZ and private photographers who swoop down, rotors often below mast tops, to take photos “on spec” of individual boats and crews.

Among the contestants is a giant J-class boat, *Velsheda* (pictured on Page 39), one of those 130-foot monster

Waione, is a 47.5-foot gaff-rigged cutter designed by Charles Bailey Jr. in 1907 and built by the Sutherland brothers in Devenport, Auckland, New Zealand, in 1908. John Bertenshaw and Kristy Hardy Boys have owned Waione since the early 1980s.

sloops of the America’s Cup of the 1930s, her crew of 35 in crisp white uniforms. We can sense when she closes with us — in the shade of her dark hull, high freeboard, and giant mainsail, the sky around us darkens as this behemoth

slips by at 12 knots plus.

Once on the course, I am in for a splendid surprise — again. These old designs, even the gaffers, are fast and stable. Normally we assume that an old boat is long on appendages and





Belle Aventure, in foreground, is a 94-foot cutter-rigged steel ketch, designed by William Fife and built in 1929 by Fife's, in Clyde, Scotland. Behind her looms Aschanti IV, a 103-foot Bermudan schooner designed and built by Burmeister Shipyard in Bremen, Germany, in 1954.

nostalgia but a slacker to weather. But after a couple of days spent racing on several classic boats, I am amazed to see classics regularly overhaul the modern designs

paralleling the race. Admittedly, these were all-out racing boats, then as now: sitting headroom, flush decks, narrow beams, and huge sail areas, not cruiser/racers with modern headroom.

Raw hands

Larry and Lin, owner Sarah, and her daughter Sibyl, draw *Jonquil* steadily forward, capitalizing on a good start. We hug the shore to avoid the tide and soon pull parallel with other, larger, classics required to give us time — a good sign.

True to classic form, *Jonquil's* mainsheet has not even a snubbing winch, nor any cam or jam cleat, and I wear my hands raw and shoulders to aching hauling the mutton-chop mainsail inboard onto a wooden cleat, though the jib, with winches, is easier. Free advice: before you volunteer to handle the main on a traditional design, consider you've just agreed to trim three-quarters of the sail area.

We crew spend the final downwind leg sitting on the long boom as ordered, a three-human vang, as we sweep across the finish line, first in class on corrected time. "Old Nat knew a thing or two about boat speed!" says Larry, with an Irish grin and sparkling eyes, graciously conceding our win to *Jonquil's* design.

Later, at a swank downtown Auckland hotel, we lurk in the lobby, salt-encrusted and hungry, waiting to crash, tie-less, the black-tie-only awards banquet at the exact moment to collect *Jonquil's* trophy . . . another story in itself. It seems anticlimactic and an embarrassing snub for so famous a cruising team, but Larry and Lin are mellow, and Sarah and Sibyl are glowing with the anticipation of their first trophy.

Have I learned any new sailing tricks? Well, absolutely, but not the sort I'd imagined. I was satisfied that the Pardeys tack and jibe like the rest of us (but with that hint of discipline that racing teaches). And I was impressed by how they scramble to the work with passion and enthusiasm, even after all these years. It was a treat for me to see them anticipate each other's moves but curiously, I felt more at home when they raised their voices just a tad . . . a tiny hint of fallibility.

Let it go

And what of those who deride long-distance cruising as "fixing your boat in exotic places," a way to visit a country only to tour its yacht clubs

and chandleries? Lin reminds me that she and Larry have traveled far inland many times, even going on a long safari in Africa while their boat bounced at anchor. The secret, she says, is to hire a shipkeeper to watch it and to learn to let go.

And what do they plan next? This northern summer they have returned to the U.S. to reassemble their mothballed *Taleisin*, do more research on wooden boatbuilding methods, and to cruise the U.S. East Coast, especially Chesapeake Bay. "To sail," as Lin has written before, "as long as it is fun." Adds Larry, "At our age, that also means as long as we stay healthy."

I ask them if they have any parting advice for armchair cruisers, those with grown-up lives of quiet desperation, who long for some adventure. (I sense they parry this question 30 times a week but will humor me.) "You need to figure out what you enjoy," Lin says. "If you enjoy sailing, then a smaller boat where you can really feel the sails and rudder is far more fun than a big cruiser where the feel is lost. We have had the most fun of all our trips just sailing our Fatty Knees dinghy."

Larry adds that a big boat is much more work and harder to handle. "Lin can sail our boat alone," he notes proudly, "but a 45-foot Swan, for instance, is a handful of a boat." Lin mentions that Susan Hiscock, lifetime world cruiser with husband Eric, started racing 13-foot dinghies when she was 78 and was midfleet at 84, delighted to rediscover what drew her to sail in the first place.

Larry shakes his head with mock pity and impatience at my question.

Velsheda is a steel 130-foot J-class cutter-rigged Bermudan sloop designed by Charles Nicholson and built by Camper and Nicholsons of England in 1933. She competed for the America's Cup challenge of 1934 but was beaten by Endeavour, which challenged Rainbow unsuccessfully in New York. She's a much-admired boat, but you need 34 friends to go sailing.

"Go now, go simple, go small." He shrugs his shoulders, "an old idea, but it is no harder than that. A well-built stock boat will make it, and if you wait until you have the ultimate gear and the stoutest boat, you'll never leave."



After stints in the U.S. Merchant Marine and careers as an English teacher and maritime lawyer, New Zealand native John Geisheker now directs Sailboats Inc. Sailing School, in Superior, Wis.

When he is not teaching on the Great Lakes, delivering his boats, or visiting his native land, he lives on his Westsail 32 on Lake Union in downtown Seattle and sails Puget Sound. He has sailed the Great Lakes since 1967 and has taught sailing and cruising, as the expression goes, "man and boy these 30 years."





From Lorne's perspective

Paintings by Lorne Shantz



Two passions in life for Lorne Shantz are sailing and painting, so most of his painting is marine-related. Lorne and Colleen cruise their LM, *Shaunsea*, two months each year in the Gulf Islands and beyond. The self-portrait, above, shows *Shaunsea* and Lorne at anchor in Forward Harbour. Below is Vancouver Point. Moving clockwise, this boat was an old fisheries patrol boat but now cruises as a liveaboard vessel in its retirement. At top left is Drury Inlet at sunset and to the right is a Ganges sunrise. For more information, contact Lorne: 250-537-1037, e-mail shantz@saltspring.com.



Needs

Restoration relived



I once had a Catalina 22. Nice little boat, but the emphasis has to be on *little* if you plan to do more than daysail. So when I found a really good deal on a bigger boat, I couldn't pass it up. The San Juan 24 isn't *much* bigger, but at least it has the room for a real galley and a marine head.

I found her in an ad that said she "needed a little work." At \$1,500 for the boat *and* a twin-axle trailer, I figured the ad was a bit optimistic. I was not disabused of that notion after seeing her. A 300-mile trip verified that she would still float and the twin-axle trailer had wheels. Not much more positive could be said for her condition. A little negotiation and a handshake later, I was the owner of a 1975 San Juan 24.

The first assessment was good news/bad news. The good news was that she was floating when I saw her. That meant the bottom was impervious to water. The deck, on the other hand (why is there always another hand, anyway?), was like walking on a mattress, which meant that it was not impervious to water.

The assessment was:

- The bottom was in great shape. It had a barrier coat and no blisters.
- The keel had been faired with automotive Bondo and was one solid blister.
- The deck had virtually no core and would require extensive epoxy work.
- The interior was non-existent, unless you count mildew as upholstery.
- The topsides had been painted, but the blue paint was badly faded.
- The deck had been painted so many times that the non-skid blended with the trim.

It came with two Sears outboard motors. Neither ran, and they were different models, so the parts didn't interchange.

The boat at her worst, at top; primed and ready for the finish coat, in center; ready for splash, at left.



“a little work”

Project Man Syndrome strikes again

The plan:

- Strip the exterior of all hardware — if it goes through the deck, it comes off.
- Cut the liner out of the inside of the hull where deck rot is evident: all of the foredeck and all of the cabintop.
- Replace the deck core with foam and epoxy.
- Sand the keel, let it dry for a month or more before coating with epoxy prior to a bottom job.
- Drill all through-deck holes oversize and fill with epoxy for re-drilling prior to hardware replacement.
- Strip and sand the deck, topsides, and interior prior to painting with single-part polyurethane.
- Replace the hardware, all 3,000 bolts and screws.
- Install a marine head with holding tank.
- Put her in the water and sail her while the project continues.

Once she floated, the list of goodies would include a stereo with tape player, VHF radio, knot/depth meter, cabinetry, interior lighting, upholstery, and alcohol stove.

Why do it?

By the time the project is finished, I'll have close to \$6,000 invested in material, and my labor (even at minimum wage) is worth another \$5,000. For that I could have bought a good clean 25-footer and be sailing it already. So why put myself through the pain, anguish, and expense to refit an old boat?

Obviously there is the dollar factor. I was able to buy a boat with more performance and creature comfort than my current boat offered, at a price my checkbook could cover. It will take a lot of work and a substantial investment to bring the boat up to specs, and that's a choice I make happily. But there is more to it than just cash.

Andy and Lynn, the original green-eyed lady. He writes, “The SJ24 is phenomenal in light air. It will move when nothing else on the lake will.”

For some of us, the allure of classic lines is strong. Beauty is in the eye of the beholder, and what I beheld was more than a tired old neglected boat. I saw classic lines penned by Bruce Kirby, a designer of boats both fast and beautiful. I saw a boat that would withstand the test of time, water, and wind. I saw a beautiful sea-green boat with white trim named *Green Eyed Lady* from a song popular when she was new and a pet name for the love of my life.

Without being critical of modern trends, I really prefer the boats of 15 or more years ago. The trend to water ballast, while practical in so many ways, and the move to higher freeboard for increased interior space is making many cruising boats under 28 feet look somewhat like landbound motor homes.

Other extreme

New race boats seem to go to the other extreme, reducing the boat to little more than a cockpit and sail plan. Throw in the fact that the number of boat manufacturers is shrinking, and the personality of older boats becomes even more attractive to those of us bent toward refitting.

Another piece of the puzzle over refitting is what my wife, Lynn, calls “Project Man Syndrome.” She threatens to outfit me with a cape and leotards emblazoned with a large “P” on the chest. Sailors are, by nature, tinkers. We're always messing with something on or about our boats. Perhaps this is a trait engendered by constant sail-trim adjustments or the free time we have when the wind dies and the boat isn't going anywhere soon. I'm not alone in this. There are people at marinas all over the world who take on large and not-so-large projects just for the sake of doing them and the


sense of accomplishment they offer. There is, after all, nothing quite so worthwhile as simply messing about in boats.

In the case of an extensive refit, there is also the pride of ownership.

By the time this project is over, I will have laid hands on every square inch of

Green Eyed Lady. The entire exterior, interior, wiring, standing and running rigging, decks, hardware, and accessories will be, at the very least, inspected, touched, and re-assembled. This kind of intimacy brings ownership to a completely different level. It becomes a blending of personalities.

When you refit a boat and do the work yourself, you know what she's made of and what you can expect from her. From daysailing to inland cruising to the Gulf of Mexico, I'll take *Green Eyed Lady* anywhere. Our daysails are stretching into weekends, and we have plans to do more extended cruising in nearby lakes.

Who knows? Before it's all over she may cast her green eyes on the white sands of Caribbean islands. And because I rebuilt her myself, I have no doubt she can take us there and bring us back. 

Andy is a leading-edge baby boomer who could never maintain an interest in a hobby past mastering it. He was introduced to sailing and golf by a friend, about eight years ago. He found he was a better sailor than golfer, and sailing moved from the hobby category to “a way of life.”



When to hang it up

This was written while I was confined to a hospital bed at the Cleveland Clinic following a medical emergency that occurred on the second weather leg of a sailboat race, June 12, 1993, at the Mentor Harbor Yacht Club Regatta, Mentor, Ohio. The pain resulting from this injury gave me cause to evaluate my future participation in this very vigorous sport.

Is there a time to pack up your racing sailbags for the last time and call it quits? Not an easy decision to make, considering that the past 40 years of competitive big-boat sailing have been packed full of adventure, excitement, ethereal moments, and some terror.

Some 30 or more years ago, I had a saltwater sailor scoff at the fact that I did all my sail racing on Lake Erie. During my conversation with this New Englander, he had the audacity to refer to Lake Erie as "one of those small inland lakes." This conversation took place at the bar at the Corinthian Yacht Club in Marblehead, Mass. I've not been back to the Corinthian Yacht Club, nor do I have the vaguest recollection who made this statement. Since that time, I have sailed all the Great Lakes and have found them to be as challenging as any body of water anywhere in the world.

Years of venturing forth on the waters of the Great Lakes have not found one adventure to be exactly the same as the last. It is the unpredictability that is so addictive in the sport of sailing and sailboat racing. Each occurrence is special and can be dramatically different from the last experience. I have memories of events that were one-of-a-kind.

Time to quit sailboat racing and take up gentle cruising instead

In the mid-1960s, I assisted in transporting a New York 30 called *Minx* from Cleveland to Toledo, Ohio. This overnight passage was the most perfect of my entire career and has not been duplicated. It was early June, and the owner wanted to enter *Minx* in the Mills Trophy Race out of the Toledo Yacht Club. The moon was full, the air was crisp and clear, and we had a 25- to 30-mile-an-hour offshore wind all the way. Not only was the experience visually graphic, due to the clouds in relationship to the full moon, but also at this time of the year all the fruit orchards near the lake were in full bloom and fragrance, along with the night-blooming jasmine.

Never forgotten

The grace and beauty of the Herreshoff-designed and -built New York 30 added to the mix to make this passage one not to be forgotten. The following year we tried for a repeat of the previous year's delivery. This time we were sailing a converted Six-Meter. The passage caused one of the crew never to sail again and gave me cause to ponder whether I wanted to continue to put myself in harm's way.

This time we caught the tail end of Hurricane Diane. We were being blown north to the Canadian shore and, after losing our main, we were forced to take refuge in the small fishing village located on the north shore of Pelee Island, Canada. There were three aboard when we arrived exhausted, wet, and very discouraged. We made this port at dawn and after a quick tie-up, we slept until 3 p.m. When we left port

that afternoon, there were only two on board, for one volunteer had had enough and flew back to Cleveland.

Time to reconsider

Isn't part of the formula of these grand memories being young enough to endure the circumstances? Do we want to drive on until one day comes the reality that regardless of the perfect weather conditions, the excellence of the yacht, and the romance of the moment, the fun and excitement are gone?

Here are some of the key prerequisites to making a decision to sell your boat. Obviously, drastic physical limitations will not be considered. If the following conditions now have become irritating, sell your boat!

- You can no longer stand your dock partner — sell your boat.
- Maintenance of the boat has become a chore — sell your boat.
- The visits to your boat have deteriorated from two or three times a week to once a month — sell your boat.
- Your neglect is being reflected in the appearance of your boat — sell your boat.
- Fits of short-tempered behavior come upon you while you're underway — sell your boat.
- You have a continued wish that the sail race

by Gordon Group
photo by
Jim Isbell



committee would shorten the racecourse — sell your boat.

- Spring launching now occurs in late June — sell your boat.
- You get around to laying the boat up after the first snow — sell your boat.
- You don't set foot on the boat after Labor Day — sell your boat.
- When you honestly feel that the two happiest days of a boater's life are the day he purchases his boat and the day he sells his boat — sell your boat.

The good news is that the X-rays showed there was no evidence of a fracture. The bad news is I'm no longer going to participate in sailboat racing. At 35, a broken bone, though serious, will not have the potential of being permanently disabling. At 65, complications resulting from injury are commonplace.

By removing myself from the risk which is ever-present in the sport of big-boat racing, I hope to be able to continue to pleasuresail for many years to come.



Gordon has been an avid sailing enthusiast all his life. He has participated in most of the deep-water races and owned more boats than he can

remember. He and his son, Gregory, own Great Lakes Marine Surveyors <<http://www.greatlakesmarine.com/>> which Gordon and his wife, Marguerite, founded in 1969.

Cruising memories...





A boat

Imagine having a sailboat that can float in eight inches of water . . . one you can pull up on the beach for an evening ashore . . . one with bunks long enough to stretch out on . . . one for which parts are still available . . . one you can buy used, or even new perhaps, without getting a bank loan . . . one that can travel at 75 miles an hour from one lake to the next. Think, too, how simple life would be if you could bring your good old boat home to the garage anytime you wanted to work on it.

The West Wight Potter was not selected by John Vigor as one of his *Twenty Small Sailboats to Take You Anywhere*. But no matter. This is a small sailboat that you can take anywhere, even home to the garage.

Potters, as they are known affectionately by their owners, have indeed crossed oceans and earned their share of respect.

They were designed on England's Isle of Wight to "potter about,"

gunkholing Great Britain's coastal waters.

On this side of the ocean, Potters have become something of a cult boat. U.S. Potter sailors zealously tout their virtues and gather to discuss upgrades, offer handling advice, and plan picnics, fun, and occasional races.

Tom and Kim Medin are relative newcomers to an active group of Minnesota and Ontario Potter sailors who correspond by e-mail and get together to explore Midwestern lakes. Since these boats can be trailered, the sites for these informal Potter

rendezvous are seemingly infinite. Minnesota, all by itself, is noted as the Land of 10,000 Lakes (and, as it turns out, they didn't count them all). Then there are the lakes in Wisconsin, Ontario, Iowa, North and South Dakota . . . the options should keep this group busy for years.

One of the advantages of buying a production boat which has had a good long run is that there are many other sailors out there to help get you started. They've been there and done that and are happy to help you avoid a few of the pitfalls they discovered along the way. If

the boat is still in production, so much the better.

Weyekin, Tom and Kim's 1987 19-foot model, hasn't required many replacement parts, but they have security in knowing that the parts are available, from a mast to a shackle and from a winch to a cleat, from International Marine, which is still turning out approximately 250 units a year.

In addition to the formal support available from the manufacturer, informal sites flourish on the Web. These are full of helpful advice and links to other sites. The groups of West Wight Potters on both coasts are legendary for their gatherings and clubbish devotion to each other and their boats.

Puttering in a Potter is a gunkholer's delight

Tom and Kim weren't looking for sailing get-togethers when they bought their boat. They'd sailed a few times with friends who had grown through a C-Scow, a C&C 26, a J-30, a Fantasia 35 and, most recently, a Hylas 44. With these friends, they'd chartered a Freedom 35 and explored Desolation Sound, British Columbia, for two weeks. Later they'd spent some time together on the Fantasia on one leg of a voyage which took the friends to New Zealand. Tom and Kim were along for the leg from Mexico's Mazatlán to Puerto Vallarta.

That was the turning point. Kim recalls, "There were sandy coves, palm trees, and no other boats." Tom adds, "We began thinking, 'Why can't we have a boat? We've got a lot of lakes in Minnesota.'"

The concept of a trailerable boat grew as the idea of sailing both in Minnesota and among the palm trees developed. Another seed was planted in their minds by a friend who was wild about her West Wight Potter 15. She invited them to come sail with her, but even though they were unable to schedule that sail, the seed germinated. Before long, they'd bought their used Potter 19.

"We wanted a cruising sailboat that we could stay on for up to a week at a time," Tom says. "We wanted a dagger-

by Karen Larson

for all reasons



board, so we could beach it. We wanted to be able to trailer it. There are so many lakes in Minnesota, why restrict yourself to just one?" After a pause, he adds, "We can just fit it in the garage. That's a plus. If it were two inches longer, we couldn't get it in."

Tom notes, "We bought the boat sight unseen and trailered it home to Minneapolis from Lake Isabella, near Bakersfield, Calif., approximately 2,000 miles with our 3-liter Aerostar. Not many used Potters come onto the market, so we had to go far to get ours."

Someone used to cruising on a typical keelboat of 25 to 35 feet might well ask what has to be eliminated in order to cruise on a 19-foot Potter, which can sleep four comfortably. This boat may well have bunks longer than those on that 25- to 35-footer. What gives? What gives is the head, galley, tanks, and stowage.

The head is a Porta Potti or none at all. The galley is a campstove arrangement and a sink, which Tom and Kim believe is best used for storage of lines and other miscellany which accumulates below decks. Stowage is at a minimum. But the bunks are 6 feet and more. There are two quarterberths and two bunks which meet at the V of

the bow. When just two sailors are aboard, the quarterberths on this boat, as on most boats, become catch-all compartments for fenders and gear.

Potters come with a 3-to-1 tackle for raising the daggerboard, but Tom has rerigged theirs to make it a more manageable 4-to-1 system. One Potter enthusiast and something of a Potter guru in her own right, Judy Blumhorst, commodore of the Potter Yachters of Northern California, describes the daggerboard as a "lifting centerboard keel — 99.9 percent of the time, if you go aground, it's a simple thing to unlock the keel, crank it up a few inches, and float off. It's the best of both worlds," she says. "When the

keel's locked down, it's essentially a fixed-keel boat."

The Potters have a sink cabinet to port with a hand pump. A 5-gallon freshwater tank and a 5-gallon graywater tank are housed below the sink. The tanks are soft and difficult to fill and empty, however, and are

generally left ashore, leaving the space below the sink (and the sink itself) for stowage.

New Potters have a privacy curtain and a Porta Potti under a cushion of the starboard side of the V-berth. Earlier models located the Porta Potti inside the



If the "smile factor" (a concept coined by Good Old Boat's Jerry Powlas) has any merit, Kim and Tom Medin validate the West Wight Potter with their obvious pleasure when aboard.



It takes two to raise the mast, but they're not breathing hard. A person can do it alone, in fact, with the help of a mast-raising system.



West Wight Potter resources

The Potter Yachters Club of Northern California

Greg Yu, secretary
33855 Juliet Circle
Fremont, CA 94555
<<http://www.potter-yachters.org>>
The oldest and most active Potter club in the U.S. with more than 100 active skipprs. Monthly newsletter and sailing events.

East Coast Potter Association

Lars Mulford
902 Dogwood Dr.
Seaford, DE 19973
302-628-3456
mulford@bellatlantic.net
<<http://members.tripod.com/~SpeedSailor/index.html>>

Minnesota Potters

Eric Pederson
9440 Portland Ave. S.

Bloomington, MN 55429
952-888-1677
eric@nutfarm.org
<<http://www.foad.org/~elp/>>

Northwest Potter Club

<<http://www.tx3.com/~ej/nwp.html>>

Texas/Gulf Coast Potter Club (Texas T-Pots)

Gregg Hill
ghill@hal-pc.org
<<http://www.geocities.com/SouthBeach/Docks/6517/TPotHome.htm>>

E-mail list for this group

<<http://www.egroups.com/group/tgcpa>>

Potter Club of S. California

Bill Bedoe
13333 Corby Ave.
Norwalk, CA 90650
SkipperBill@cs.com

JudyB's West Wight Potter pages

<<http://members.aol.com/jblumhorst/HomePage/index.htm>>
Judy is commodore of the Potter Yachters of Northern California. Potter sailors appreciate Judy's expertise as an excellent resource on their favorite craft. Her site offers maintenance tips and modifications. She's done a complete refit of her 1985 P19, *Redwing*.

Ed Zeiser's Web page

<<http://home.worldnet.att.net/~e.zeiser>>

Other Potter pages

<<http://www.fortunecity.com/marina/westindia/515/>>
<<http://www.skyenet.net/~groveb/>>

West Wight Potter e-mail list

<<http://www.egroups.com/group/WWPotter>>

International Marine

904 West Hyde Park Blvd.
Inglewood, CA 90302
800-433-4080
<<http://wvp.westwightpotter.com>>

British Potters

<<http://www.keffen.freemove.co.uk/>>
The only Potter being built in the United Kingdom, the E-type.

starboard cabinet, which is a bit cramped. Dissatisfied with this arrangement, Tom and Kim removed theirs altogether.

A single-burner butane stove sits on top of the starboard cabinet. Most Potter sailors do most of their cooking in the cockpit on a grill attached to the stern rail. With the addition of a leg which comes standard with the boat, the hatchboard becomes a cockpit table for two.

Jerry and I joined Tom and Kim for a daysail one warm morning in mid-September. The mast was stepped with a minimum of fuss, and the boat was launched in about 30 minutes. The mast is stepped, the forestay is reconnected

(all others remain fixed throughout the entire process), all supplies are stowed, and the boat is eased into the water. With a cooler and a lunch box aboard, our needs were few.

Judy Blumhorst says of the P19, "She's no racer, but with the 150-percent genoa, she'll move right along in light winds from 3 to 12 knots, fairly smartly for a cruiser. From 10 to 20 knots, the high-clewed 100-percent jib (the lapper) is the one to use. Over 18 to 20 knots, you want the storm jib."

Tom says the 2,000-pound (fully loaded) boat tows well when the outboard is secured to the tongue of the trailer. They learned this by first towing it with that extra weight in the cockpit, which caused a tendency to fishtail. They prefer a moderately steep ramp, he adds, "So we don't have to drive into the water." They might prefer to have a trailer that has its wheels outboard of the boat, but theirs is the more traditional-style trailer.

Their next major trip might be trailering *Weyekin* to Mexico's Sea of Cortez where sandy beaches and palm trees beckon. The fact that this is possible is what makes a trailersailer so much fun.

Karen is editor of Good Old Boat.

Inside the Potter 19. The pan of brownies, not standard equipment, does improve crew morale.



A POTTER TALE

In the winter of 1996, I became possessed by the thought of buying a sailboat. I had had limited and very messy experiences sailing a Sunfish a few times before that, so what came over me I still don't know. I wanted a trailerable boat in the 19-foot range.

After doing exhaustive research, I narrowed my choices down to the West Wight Potter 19 and the Compac 19XL. I wanted to buy new, figuring that since I knew nothing about sailboats, I'd be better off with a new one. After pricing the two boats, the Potter won out easily. Although price was a factor, so was the beachable hull with retracting daggerboard. And the built-in flotation deemed the boat "unsinkable," which seemed like a good idea. The Potter had a solid reputation as a forgiving, easy-to-sail, and dry boat, perfect for a beginner like me. Potter sailors are a terrific and knowledgeable resource. Since I needed all the help I could get, I put my order in.

Thinking it would be my first and last boat, I loaded hull #941 with options. Full instrumentation, including a windmeter, dual batteries with charger, a marine head with holding tank . . . you name it, I had it put into that little boat.

Learning to sail her on the Potomac River was a blast. The 110-percent lapper on a CDI roller reefing unit made her easy to singlehand. Running aground was a ho-hum affair, not a crisis. I trailered her up to my dad's place in Connecticut and braved Long Island Sound each summer. She was true to her reputation: a dry, easily handled, solid little cruiser.

After my second season sailing her, something happened. I realized I wanted a bigger boat, one that was decidedly low-tech. All the gizmos were fun for a while, but I yearned for something I could work on myself . . . make my own. A 1972 Pearson 26 came into my marina for sale, and I put my Potter on the block.

A nice couple from Georgia bought her and, after three hours of showing her new owner all the systems on the boat, we hooked her up to their Subaru wagon, and off she went. I still remember how I felt when she arrived

brand-new on the truck from California and also how she looked being towed away to her new home behind someone else's car.

I still subscribe to the Potter newsgroup and have nothing but respect and admiration for the solid pocket cruiser that introduced me to the joys of sailing. If you're looking for a safe micro-cruiser sailboat that won't break the bank, your back, or your car, the West Wight Potter 19 and 15 should be on your short-list.



Former Potter 19 owner, Dave Reiss, now sails his 1972 Pearson 26, Randi, on the Chesapeake Bay (the refit of that boat was published in the May 2000 issue of Good Old Boat). He still enjoys talking about West Wight Potters to anyone interested. He can be reached via the 'Net: davereiss@compuserve.com



When Ed Zeiser of West Hartford, Conn., reported that he pulled his 1971 Potter 15, Wisp, behind his Ford Escort, we said, "This we gotta' see!" And see it we did. Ed's photo tells the tale. More on his Web page (address in resources list on Page 48). At less than 2,000 pounds, even the P19 can be pulled behind a compact car. Owners towing in the mountains need a mid-sized tow vehicle.



Potter in perspective

The West Wight Potter was designed by Stanley T. Smith, a life-long sailor whose family had a long history as boatbuilders in the western region of England's Isle of Wight. Production began in the late 1950s at West Wight Plycraft, Ltd., the Smith boatbuilding firm. Built out of marine ply with a sliding gunter rig, the West Wight Potter is a mere 14 feet overall, with a small cabin and modest sail plan.

She is intended for pottering (British term for puttering — hence the name) in the rivers, estuaries, and bays of the English coast. Although she wasn't meant for bluewater cruising, Smith nevertheless wanted the Potter to be seaworthy and to perform well. He succeeded.

Famous forerunner

Stanley Smith knew something about small boats. In 1949, he and his brother, Colin, designed a 20-foot sailboat and built her in a chapel basement in Halifax, Nova Scotia. They named her *Nova Espero* (New Hope, in Esperanto). With an inverted dinghy lashed to the topsides as a cabin, the two brothers sailed the diminutive ship to England (from Dartmouth, Nova Scotia, to Dartmouth, Devon), a stormy passage that took them 44 days and put them in the national spotlight.

In 1951, after upgrading and refitting the little *Nova Espero* in England (she was given a proper cabin and altered from a sloop to a yawl rig), Smith again sailed her across the Atlantic from Dartmouth to New York, this time with his friend Charles Violet, to mark the Festival of Britain. The east-to-west crossing against the prevailing wind and current took 111 days (almost 16 weeks), including layovers in the Azores (for rudder repair) and Nova Scotia. The story of this remarkable

journey is modestly and beautifully reported in Smith and Violet's *The Wind Calls the Tune*. *Nova Espero* was one of the smallest boats to cross the Atlantic, and her sailors became heroes in a nation that treasures its rich maritime history.

From these transatlantic travels in *Nova Espero*, Stanley Smith gained valuable insight into what makes a little ship seaworthy.

He employed that knowledge and experience in

designing the Potter. Smith explained his theory behind the design:

The high shoulders forward give the boat those few important inches of freeboard just where they are needed to discourage the bow wave from getting carried up by the wind when sailing close-hauled. The lower freeboard in the waist . . . it is at this point where we most frequently get in and out of the boat, where the natural form of the surface of the sea dips down when the

boat is moving, and a green sea seldom finds its way on board here. The "kick-up" toward the transom, the greater freeboard aft, is very reassuring when contending with awkward following seas. The result is a small craft that feels bigger, more compatible, and safer than any other boat her size.

These characteristics also give the Potter its sweeping, jaunty sheerline

that is so eye-catching and full of character. The Potter's generous

beam, flattish bottom, and hard chines also give the boat a stability uncommon in one so lightly ballasted.

by Craig Anderson

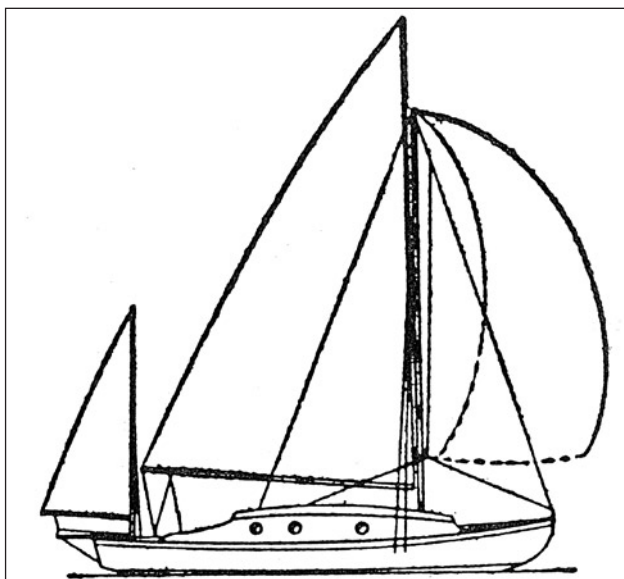
Potter comes stateside

In the mid-1960s, Herb Stewart, from southern California, saw the West Wight Potter in an English sailing magazine. He and a friend purchased one from Smith's English firm. They received permission soon after to produce the Potter in the United States at their

newly-formed HMS Marine in Inglewood, Calif. Royalties were paid to Smith until West White Plycraft, Ltd. closed its doors in 1969. Stewart then obtained the international production rights to the 14-foot Potter.

Using the wooden hull of Smith's plywood boat as the plug, HMS Marine began producing a fiberglass version of the English mini-yacht in the late 1960s. More than 3,500 West Wight Potters have been produced and sold in the United States, an impressive production run for any boatbuilder.

I visited HMS Marine in Inglewood in 1977, as I owned one of the early gunter-rigged Potters, to see the plant and talk with Stewart. If memory serves me right, the unpretentious operation was producing about two boats a week at that time.



Nova Espero, a 20-foot boat designed by Stanley and Colin Smith, crossed the Atlantic from Dartmouth to Dartmouth (Nova Scotia, Canada, to Devon, England) and set Stanley Smith's reputation as a builder of stout small craft.

In the beginning, HMS Marine constructed the Potter with wooden spars and a sliding gunter rig (like the English version). In the early 1970s, however, Herb Stewart changed to a sloop rig with an aluminum mast and boom, and a loose-footed mainsail. The Potter's slowness in light air was a frequent complaint of U.S. owners. Stewart eventually re-powered the boat by developing an ingenious simulated gaff rig with a full batten at the top, which gave the main a fuller roach. He slightly increased the size of the jib as well. These changes enlarged the total sail area by 20 percent (from 72 to 87 square feet) and gave the Potter a marked improvement in performance.

Herb Stewart sold HMS Marine to Joe Edwards in the early 1980s. In 1993, Larry Hart of International Marine bought the Potter production rights from Edwards, and introduced a number of improvements in the fittings and the manufacturing process. The company today reports an annual production of 250 Potters.

Changes

Over the years, and as different firms produced these boats, there have been other changes that have aided the boat's performance, increased safety, and made it more marketable. The weight was redistributed and reduced, positive foam flotation was added, and multi-colored sails were offered.

Not all changes have been welcomed by all Potter sailors, however. One was the elimination of the lazarette in the aft portion of the cockpit. This did away with excellent cockpit storage (for fenders, lines, and other things a sailor would prefer not to bring below) and gave the cockpit a more molded,

less traditional look. I am quite sure that sometime in the evolution of the American Potter the transom free-board was reduced a few inches, which decreased some of Smith's protection from follow-

ing seas and removed some of the spring in the sheer line. The boat, however, continues to

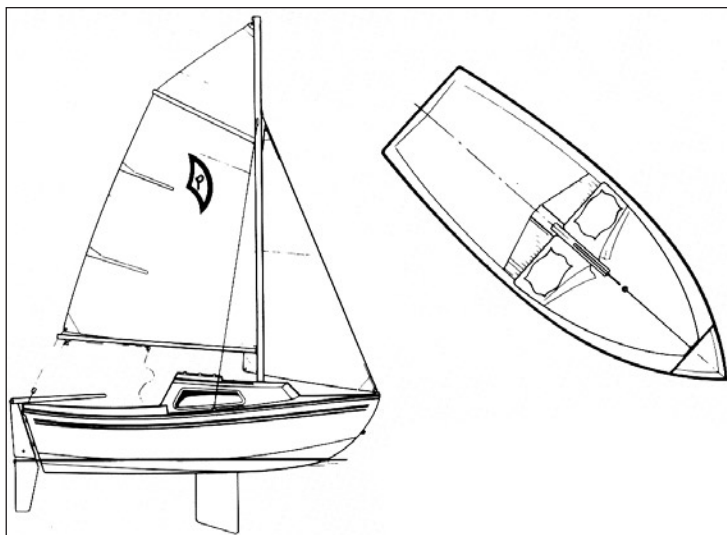
retain much of its original charm and salty appearance. In the 1980s, under Edwards' direction, the Potter 14 was

marketed as a 15-footer (factoring in the bow pulpit and transom-mounted

rudder) and called it the West Wight Potter 15, although it is still the same hull.

In 1971, Stewart began producing a sloop-rigged 18-footer of his own design, called the HMS-18. Although its lines are different from those of the Potter, it has the same full shoulders forward, the flattish bottom, and hard chine. Missing, though, is the springy sheer line that gave the little Potter its briny character.

Joe Edwards began marketing the HMS-18 as the West Wight Potter 19, hitchhiking, no



West Wight Potter 15

Designer: Stanley T. Smith

LOA: 14 feet

LWL: 11 feet 6 inches

Beam: 5 feet 6 inches

Draft up/dn: 6 inches/3 feet

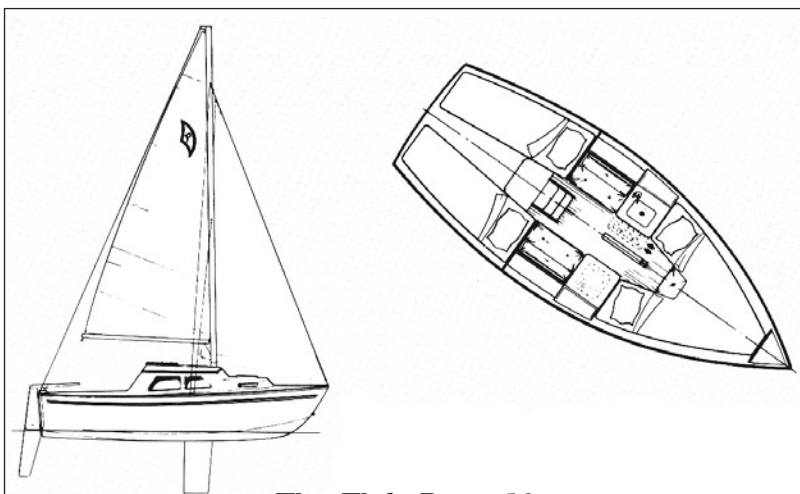
Displacement: 475

Sail area: 87

Ballast: 70 pounds

Spars: 15 feet 6 inches

Auxiliary: 2-4 hp



West Wight Potter 19

Designer: Herb E. Stewart

LOA: 18 feet 3 inches

LWL: 16 feet 3 inches

Beam: 7 feet 6 inches

Draft up/dn: 6 inches/3 feet 7 in

Displacement: 1,225

Sail area: 144

Ballast: 255 pounds

Spars: 22 feet on deck

Auxiliary: 2-6 hp



Craig's former West Wight Potter 15, Piety, sits at the dock awaiting the next adventure.

doubt, on the identity and success of her little sister. Again, without changing the hull, the manufacturer added a foot to the boat's LOA by factoring in the bow pulpit and transom-hung rudder, a marketing strategy that apparently enhanced the small ship's appeal. The Potter 19 has gained in popularity in recent years.

Today, a new Potter 15 sells for as little as \$4,495, and the Potter 19 sells for \$7,995. There are, of course, used Potters available for less. Prospective buyers of used Potters would do well to check the Potter owner association Web sites for listings.

The West Wight Potter 15 is advertised as "easy to trailer; easy to rig; easy to launch; easy, yet exciting, to sail," all of which is true. With its 6-inch draft (with the board up), it is also easy to beach and is ideal for thin-water cruising or gunkholing. It has a self-bailing cockpit and is self-righting in the event of a knockdown, provided the cabin is not flooded with water. Potters produced in the last two decades are non-sinkable.

Accommodations are rather Spartan on the WWP-15, but the cabin does


give you storage for your gear and a place to sleep out of the weather with a bit more comfort than a pup tent. On a 15-foot boat, you can't ask for much more. Cooking, however, will have to be done in the cockpit or on shore. Some owners have cockpit awnings or tents that extend the protected living space in bad weather.

Potter exploits

The sailing prowess of the little West Wight Potter is legendary. Not only have Potters been sailed in the bays and estuaries of Great Britain and North America, but a few have made rather extraordinary journeys that helped create the Potter legend. Stanley Smith sailed one of his early Potters from England to Sweden, a distance of 800 miles across the unpredictable North Sea, to deliver the little boat to a Swedish customer. John Van Ruth singled-handed his Potter, *Freya*, from Puerto Vallarta, Mexico, across the Pacific to Hilo, Hawaii, a distance in excess of 2,200 miles. When Van Ruth arrived in Hawaii, he was confident the boat was sufficiently seaworthy to take

him the rest of the way across the Pacific. David Omick sailed alone in his Potter the roughly 1,000 miles from Seattle, Wash., to Ketchikan, Alaska.

Few persons have done more to promote Potter sailing in North America than Lawrence Brown has through his numerous articles in national sailing magazines and his book, *Sailing on a Micro-Budget* (later released as *Frugal Yachting: Family Adventuring in Small Sailboats*) published by Seven Seas Press. John Hart, David Diefenderfer, and Steve Flint also have written accounts of their adventures in their Potters. Some of us remember Judson Abbot's chilling story in *Small Boat Journal* (November 1987) of his ordeal on Lake Michigan in his Potter, *So Small*.

The West Wight Potter is a recognized class boat in North America and several Potter associations have arisen over the years that now maintain Web sites on the Internet (see Page 48). The Potter is back in production in Great Britain, and there are associations of enthusiastic Potter owners there as well. Yet the North American popularity and success of the Potter have never been equaled in Great Britain. Several years ago I talked with Sir Robin Knox-Johnston after he spoke to a gathering in Chicago. I mentioned my love for the West Wight Potter. I was surprised when he responded, "I am not acquainted with the boat." The Potter's legendary reputation does seem to be an especially North American phenomenon. 

Craig sailed Piety, his West Wight Potter (#397), on San Francisco Bay while living in Berkeley in the 1970s and early 1980s. He now lives in Chicago, co-edits Twin-Keeler, a newsletter for owners and admirers of twin-keeled sailboats. Contact him for a free copy: ceadma@aol.com. He sails a Westerly Warwick in northern Lake Michigan with Escanaba as his home port. He has had articles published in Sailing, Practical Boat Owner, The DIY Boat Owner and other sailing periodicals.



Quick and easy

Capture the cooling breeze

With or without a sewing machine, and with or without previous sewing experience, you can make a windscoop for the forward hatch on your boat. Windscoops coax gentle breezes into your cabin to cool you off. You can use any kind of fabric, but most windscoops are fashioned out of spinnaker cloth. You will want something light and durable. A windscoop needs to be able to fill and move air into your boat in a light wind

but stand up to moderate air. If you don't have spinnaker cloth, try old sailcloth, bedsheets, or even old boat tarps (depending on their weight). For more pizzazz, you can use different colors.

Figure 1 shows the finished product. The second diagram shows the pattern you need. If you want to adjust a dimension here or there to custom-fit this to a certain hatch size,

feel free. Just make sure you go through the whole pattern to correct all the other dimensions your adjustments will necessitate. You might also have to split

the pattern into two or three pieces if your material isn't wide enough.

by **Brian Engelke**

For our example here, we will assume our cloth is 2 feet wide and our pattern will consist of three pieces.

First use a ruler, yardstick, or straightedge and a colored pencil or cloth pencil to lay out the sides and back of the windscoop as in Figure 2.

Seams and hems

After you have clearly marked these and allowed for the seams and hems, cut out the sides and back with the sharpest scissors you have. This helps prevent the cloth from unraveling.

For this project, you are doing two types of sewing. The first type, shown in Figure 3, will be a seam used to put the side and back of the windscoop together. This involves putting the two edges of cloth together and folding them over. Sew a zigzag stitch along this edge. Be certain to go slightly over the cut edges while sewing to reduce unraveling.

The second type of stitching, shown in Figure 4, is a hem. This stitch, used along the remaining exposed edges of the windscoop, provides a strengthened edge for attaching grommets. This involves folding an edge of cloth over three times and sewing a straight-line stitch along the top. With three folds of fabric, a sure footing is provided for the grommets in which to put bungees or lines used to hold the windscoop in place. You might want to practice a little on these stitches before the final assembly of your scoop to help with the consistency and look of your work.

Looking at Figure 2, you can see where you will need the seam and hem stitches. Keep the folds on the hem stitching and seams to the inside of the scoop and follow this practice with your seams. Your windscoop will look more professional, and if you do have a few "oopses," they won't show.

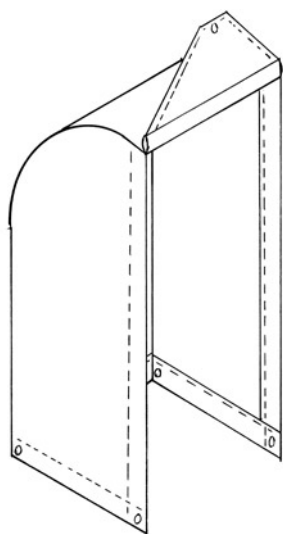


FIGURE #1

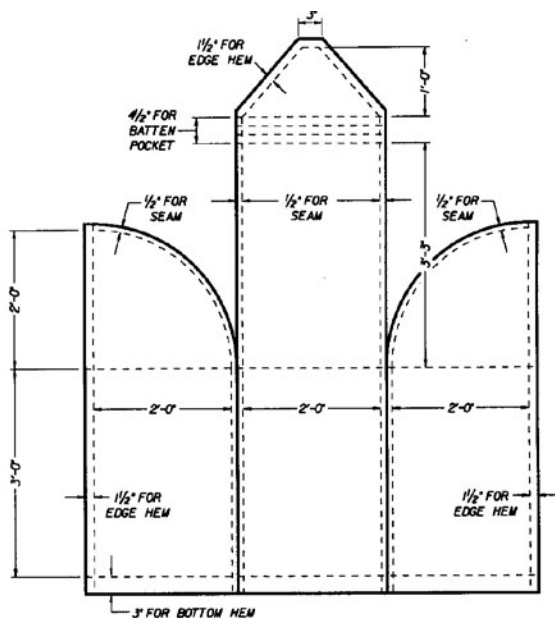


FIGURE #2

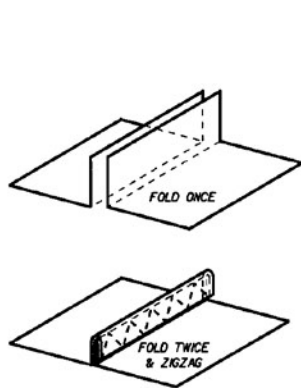


FIGURE #3

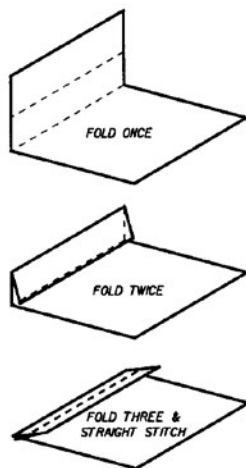


FIGURE #4

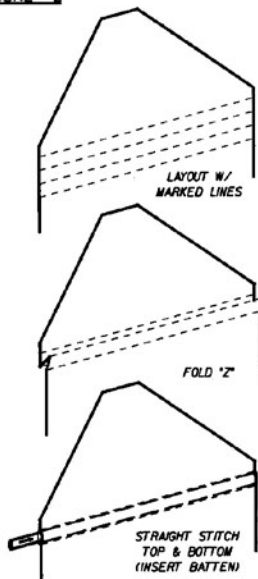


FIGURE #5

Batten pocket

After you have completed the shape, seaming, and hemming of your windscoop, add a batten pocket. This holds the scoop open to capture the slightest breeze. You can use a dowel rod, ruler, or similar rigid object for this purpose. I use left-over batten material in my example. Simply fold the extra cloth at the head of the windscoop like a Z, onto itself, as shown in Figure 5. Then use a straight-line stitch along the top and bottom of the pocket. Insert the batten and add a few stitches to each side to hold it in. If you don't do this, your batten will fly out as the scoop moves around in the wind like a sail and, as you know, nothing ever lands and stays on board.

Now add grommets to the four corners at the bottom of the windscoop to hold it in place, and at the head to suspend it from a halyard, and you are done. Grommet kits and directions for installation can be found at discount stores where camping or tent-repair kits are sold. After the grommets are installed, you can harness the wind to your advantage, and you have the satisfaction of having done it yourself. Congratulations!



Brian Engelke and his wife, Kelly, own and operate Sails and Sew On, a full-service sail loft and boat canvas house in Perry, Kansas. Although they are as far

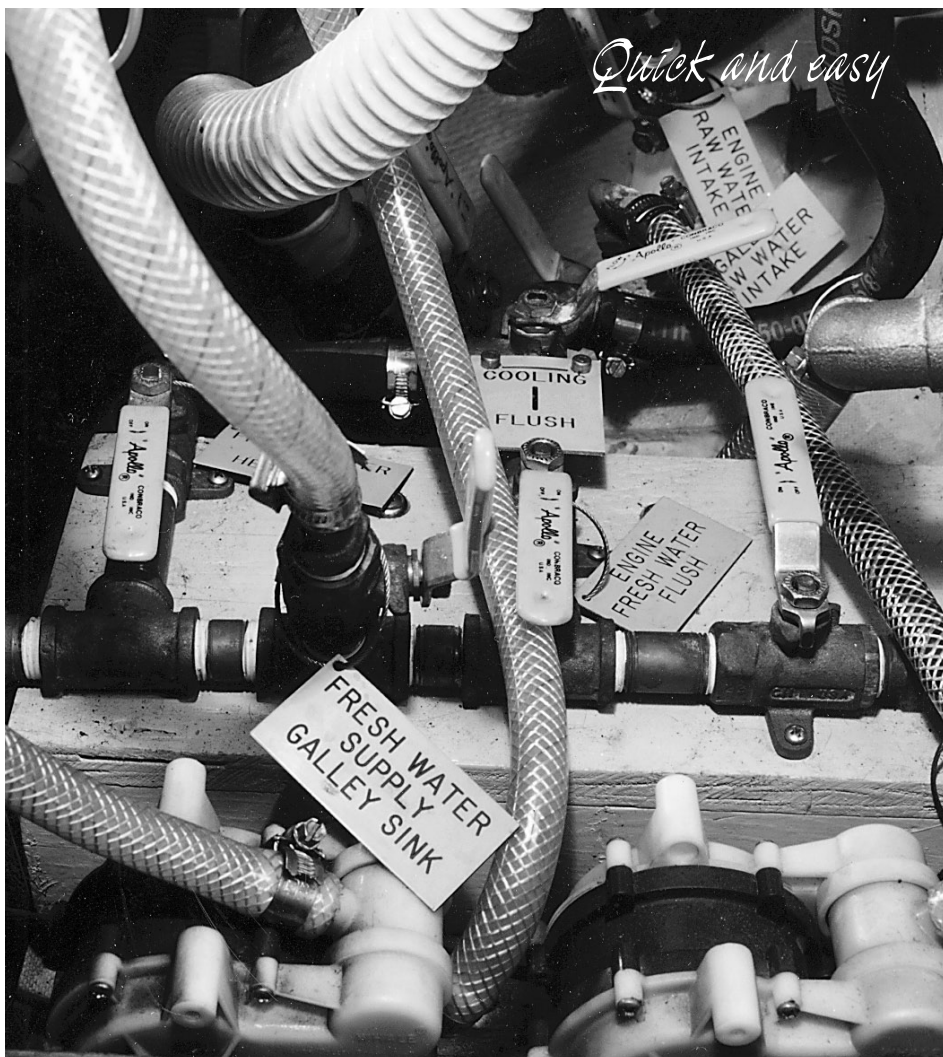
away from blue water as they can get, they do an extensive business on both coasts and locally (Lake Perry) through their Web site:



<<http://www.sailsandsewon.com>>. They sail and race a 1967 Columbia 34, which they have restored.

We're looking for more

If you've got any quick and easy projects to tell others about, let us know. *Good Old Boat* is looking for short descriptions and photos or sketches which help explain the project at a glance. There's fame and a small fortune in it for you.



Freshwater treatment for a salty Yanmar

Shortly after purchasing my 1979 Ericson Independence in 1995, I began to think that I didn't want my Yanmar diesel to sit idle full of salt water. The boat had spent its life in fresh water on Lake Michigan, and now I was bathing it in Pacific salt water in Marina del Rey, California.

I contacted Yanmar America and my local Yanmar distributor with my idea of a freshwater flush for the engine. No one saw any glaring problems with the concept. My plan was to devise a system

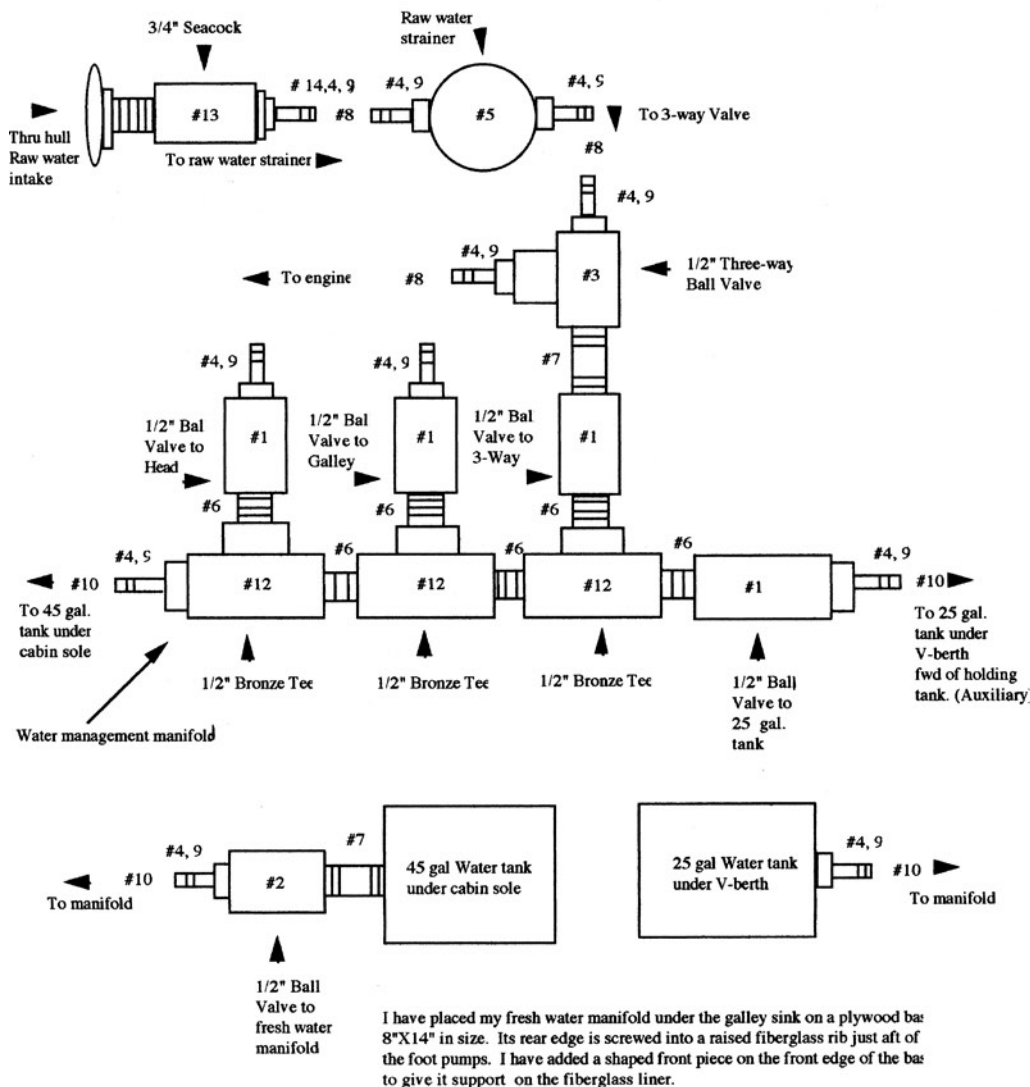
that could be used anywhere that would not depend upon fresh water from a garden hose at dockside and instead would use the onboard fresh water supply for flushing the engine.

I have since converted my engine from raw water cooling to fresh, and the result has been to reduce the amount of fresh water necessary to completely remove

the salt water from the cooling system. The raw water configuration took approximately five gallons to flush the engine water jacket. Since converting to freshwater cooling, it only takes two to three quarts to flush the heat exchanger.

My procedure is to turn the handle on the three-way valve while the engine is at idle. This cuts off the saltwater intake and replaces it with fresh water from my onboard water tank. After approximately 30

by Glyn Judson



The following is a list of the materials I used in the construction of the manifold above. All part references are from the 1998 West Marine catalog. I have placed P/N Reference numbers in drawing for clarification.

- | | | |
|------------------------------|----------------------------------|--------------------------------|
| 1. Ball Valve, #185480 | 6. Nipple, 1/2"X close, #307413 | 11. Tape, Teflon, #400507 |
| 2. Ball Valve, #195404 | 7. Nipple, 1/2"X 1 1/2" #107021 | 12. Tee, 1/2", #307637 |
| 3. 3-way Ball Valve, #185514 | 8. Hose, 1/2", exhaust, #443739 | 13. Seacock, 3/4" |
| 4. Tailpiece, #112864 | 9. Clamp, hose, #155665 | 14. 3/4" 1/2" Reducer, #307876 |
| 5. Strainer, #205310 | 10. Hose, 1/2", 162 PVC, #159194 | |

Editor's note: It is important for sailors considering this type of system to examine the characteristics of the three-way valve (#3 in the drawing) that they choose to use for selecting fresh or salt water to be routed to the engine. The valve must be designed so flow from the raw (salt) water system to the boat's freshwater system is never possible whatever the position (including intermediate positions) of the valve. Such an unintended reverse flow might contaminate the freshwater tanks and, depending on their elevation, backfill them with sea water. Check the characteristics of the valve before you use it, even if you think you are using the one specified in this article.

It is also important to clarify that the freshwater connection to the head (#1 left) is to the sink, not the flushing water for the commode. The flushing water for the commode must have a separate seawater intake that is not shared by any other device. The design of most head-flushing pumps will allow waste contamination of the flushing water since they share the same cylinder in a double action pump, and even a perfectly functioning check valve allows some backflow as it closes. In fact, the backflow is what causes the check valve to close. Flushing water should be completely separate from all other systems.

seconds, I stop the engine and re-manifold back to saltwater intake, leaving the engine ready for its next use and the entire engine cooling system sitting salt-free.

The beauty of this system is that it can be used on any engine and will surely prolong its life. By adding additional valves to the manifold, you can neatly and efficiently control all the fresh water in the whole boat from one location.

Glyn is a recently retired aerospace photographer who has owned his 1979 Ericson Independence 31, the Dawn Treader, for five years. Since purchasing his first sailboat in the early 1980s, he has created a number of innovative systems to make his boats as user-friendly, efficient, safe, and "shippy" as possible. Glyn is researching the whereabouts of the other Ericson Independence 31s, like his Dawn Treader, below, all manufactured about 20 years ago. Out of a total of 74 hulls made, he has located 66 boats. Contact him (glynmarejudson@sprintmail.com) with any news of the 8 boats he's still missing.



Quick and easy

Pole control

While most of the rigging on our boat was very satisfactory when we bought it, the whisker pole and mast pad-eye were not particularly reassuring. The pole was a small-diameter, twist-lock affair that did not lock and unlock reliably, and the pad-eye did not fit the mast well. The pole collapsed under load. I bought and installed a twist-lock repair kit, but then the pole took a frightening bend when it was under much of a compression load. It didn't have the strength for the job.

It took awhile to get over the sticker shock of a new line-control whisker pole, but when I worked for Corporate America, nothing was too good for little *Mystic*. I spent a season figuring out how to get a decent-sized pad-eye that fit the mast and exactly how I wanted to stow the pole on deck. I didn't consider stowing the pole vertically on the leading edge of the mast. A friend had done that on his boat, and I found it incredibly awkward. I suspected it didn't help performance much to mess up the leading edge of the spar and put that much weight up high.

The stronger pole was more than twice as heavy and, when fully extended, was awkward to use. The line-control system also worked poorly. The control line was too small and jumped off the sheave frequently. A good friend machined a much wider sheave, and I installed a larger line and a cam cleat. That made the pole work nicely. I think the vendor has made some similar

improvements since then. The need and the solutions were obvious. But the pole was still heavy.

With one hand

If you take the "one hand for yourself and one for the ship" rule seriously, you should be able to handle the pole with one hand for almost all opera-

by Jerry Powlas

tions. I worked out the choreography that first year and concluded that I needed chocks that would allow enough movement so I could pick up the after end of the pole, snap it into the pad-eye, then rig the topping lift and jib sheet to the forward end and lift it with the topping lift. Then I could go back to the mast and extend the pole. At no time did I have to lift the pole like a

"One hand for yourself and one for the ship" means you should be able to handle the pole with one hand

"free weight." Roughly half the weight of the pole was always taken by either the forward chock or the pad-eye. The

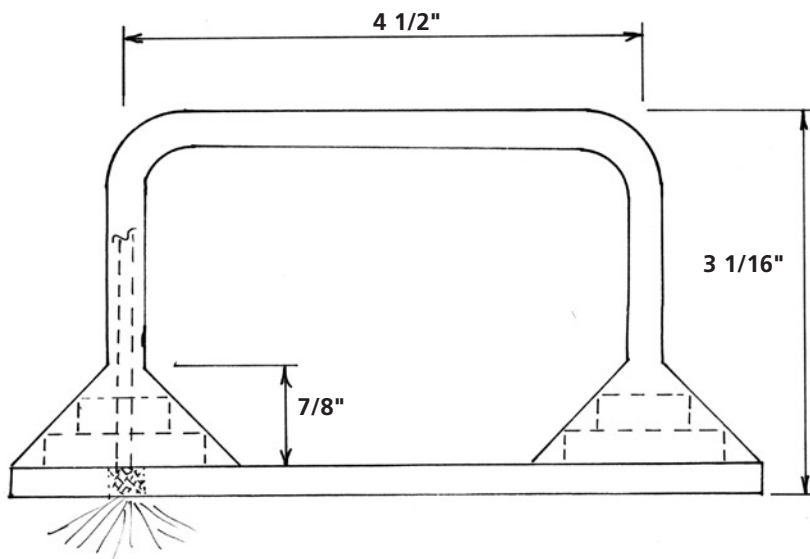
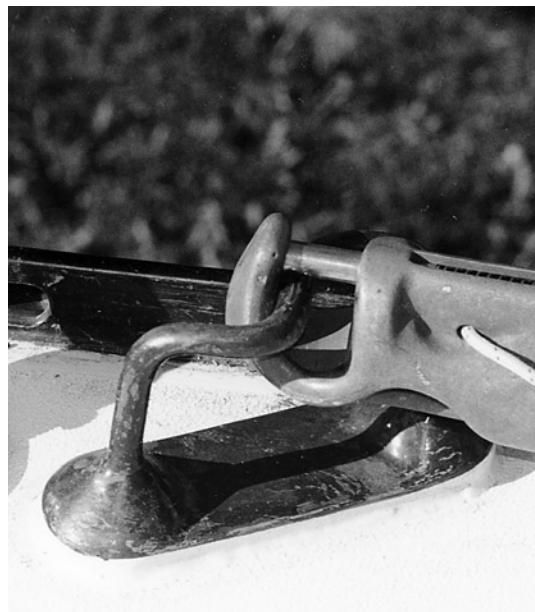
same applied when striking the pole, only in reverse.

That winter, I brought the pole home and flopped around on the basement floor with it trying to visualize the kind of chock I needed to buy. Then I went looking at chocks. None allowed the degree of freedom at the forward end that I needed to make the process a true

one-handed affair. The available chocks were heavy and needed to be screwed to the deck. I don't much like putting screws into my balsa-cored deck. It can be

done properly but not simply. I went back to the basement floor.

I made wire models of what I thought the chock that I needed would look like. The ones that looked promising were duplicated in full-sized mock-ups and tried with the pole movements I wanted. I will not admit here how many models and mock-ups I made. I wasn't a publisher yet, so there was leisure time available for such mindless and soothing puttering.





Finally, when I had the ideal shape, I moved on to making the "production parts."

Soft wire inside

I made the complex shapes from New

England Ropes' Regatta Braid line with soft aluminum wire inside. The 1/8-inch wire allowed me to form the rope to the desired shape and to keep it there while I completed the assembly. The rope and wire were not strong enough to actually hold the pole in place, but they were strong enough to keep the desired shape while I assembled the chock. The chock base was made from 6-mm marine plywood skinned with glass cloth on both sides. The conical shapes were made from a stack of plywood disks. A hole down the center of the disks and through the base allowed the rope to extend out the bottom.

I combed the rope out into a flat disk under the base and glued the whole thing with epoxy. I soaked the rope with epoxy as well, and when the first course of epoxy had kicked, I added filler to the next course and filled in the rope and the edges of the disks to make cones out of them. I happily filled, trimmed, and filled some more. I mixed some graphite and aluminum powder with the epoxy to give the finished assembly some UV resistance. Painting would have achieved the same thing.

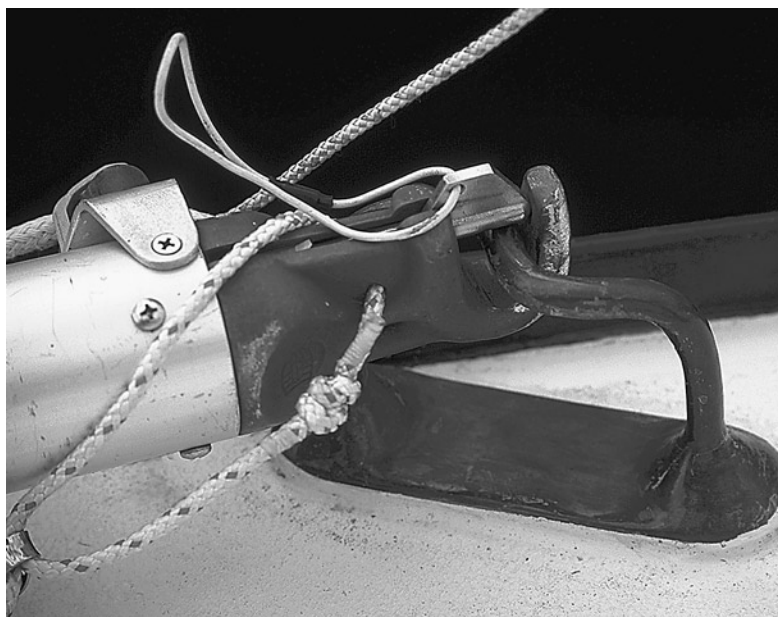
In the spring, I mounted my special chocks on

the deck after measuring to make sure the pole would pivot from the aft chock to the new

mast pad-eye. I sanded the gelcoat of the deck where I intended to mount the chocks, sanded the chocks, and glued them to the deck with more epoxy. After the epoxy kicked, and I had done some unscientific tug-tests to make sure I had a good secondary bond, I painted the sides of the chocks and the glue line at the deck to protect the epoxy from UV degradation.

Chock strength

How strong are the chocks? The rope has a breaking strength of 3,000 pounds. It is attached to the deck in two places, and the direct rope-to-deck-bond area is about 3 1/2 square inches. The total bond area is about 7 square inches per chock. The bond strength probably would never degrade to less than 1,000 psi and probably would be more like twice that in most cases. Not to put too fine a point on it, the parts



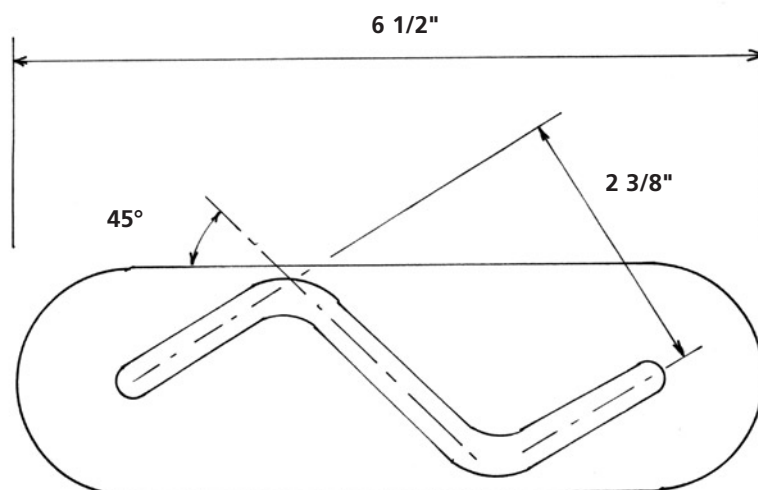
will take some abuse, and a boarding sea will not take the pole. The chocks and their attachment to the deck are certainly stronger than the purpose-made aluminum alternatives, because the aluminum chocks are mounted to the deck with fairly small screws. I would not want to lift the boat with these chocks, but I think in an extreme loading, the rope would distort and break the epoxy-resin stiffener while staying attached to the pad and the deck. The chocks have been in service for three years and have needed no attention other than an occasional coat of varnish to protect the epoxy from UV.

If you choose to do something like this on your boat, note that the forward and aft chocks have shapes that are mirror images. One shape will not work for both. (See pictures and drawings.)

The aluminum wire was purchased in a hardware store. It had a .010-inch vinyl coating that I removed. I chose 5/16-inch Regatta Braid because I knew from other projects that it would take the epoxy well, and was soft enough to accept the wire. Other ropes might work as well, but I know some ropes are too stiff, and do not take epoxy well.



Jerry is Good Old Boat's technical editor.



Mariner's Museum presents Levick photos, Cup history

An America's Cup Treasury: The Lost Levick Photographs, 1893-1937, by Gary Jobson, foreword by Ted Turner. The Mariners' Museum, Newport News, Va., 1999; 174 pages, 151 photographs; \$45.
Review by Will Sibley, Shady Side, Md.

As a child growing up in Maine, one of my early memories was seeing the immense J-class boat, *Ranger*, sailing on Casco Bay. Gary Jobson's annotated treatment of newly recovered photographs of America's Cup giant sailing craft was, for me, a powerful reminder of the glories of past participating yachts in the Cup series.

Jobson has been involved in Cup racing since campaigning aboard

Courageous in the late 1970s. He is a most appropriate analyst for the rediscovered photos by Edwin Levick and his sons which document the grandeur of Cup contenders in the period between 1893 and 1937.

The text of this volume provides a year-by-year account of America's Cup

races and includes many anecdotes which document a history of features — good and bad — of the racing yachts, owners, and crewmen. The book includes informative notes in brief form on race strategies, events, and outcomes.

The key feature of the volume is the marvelous collection of photographs from the hands of Levick and his sons. Some depict the grandeur of the yachts, while others provide us with details of rigging and organizations and visual insight into the humans involved in these large-scale racing ventures.

The America's Cup yachts between 1893 and 1937 can be placed in three categories. From 1893 to 1920 the yachts were very large, ranging around 130 feet in overall length, carrying enormous gaff rigs with topsails and multiple jibs. From 1920 to 1930, vessels were reduced in size to about

75 feet in waterline length, but they retained gaff rigs.

The year 1930 marked the advent of the J-class yachts, of which 10 were built in the period 1930 to 1937. These boats were built to a rule permitting significant variation in displacement and length, but with a relatively fixed sail area. Most were about 120 feet overall, but *Ranger*, built in 1937, was the largest at 136 feet overall with a waterline length of 87 feet. J-class yachts were marconi-rigged, with masts weighing 5,500 pounds carrying mainsails weighing upwards of a ton. Raising the main might require 15 men. And stepping the mast must have been a joy!

The book is easy and pleasant to peruse at leisure; one's reading can begin or stop nearly anywhere, since the account is arranged chronologically with each Cup competition handled separately.

For Internet buffs, additional interesting material is available. One site, <http://www.ac95.org/30/30_7.html> provides a competition-by-competition account. Another, at <<http://www.mysticseaport.org/public/collections/rosenfeld/rosenfeld.gallery.amercup.html>>, provides an additional source of wonderful photographs of many America's Cup racers under sail.



Lori Lawson's *Green Flash*, a high-seas mystery thriller

Green Flash, by L. M. Lawson, (Paradise Cay Publications, 2000; 256 pages; \$14.95.)

Review by Carolyn Teclaw, Annandale, Va.

Break. Break. Break. Staccato, rushed and emphatic, the words punched across the airwaves . . . "My wife's gone . . . I was off watch and just got up . . . I don't know what happened."

Green Flash is a mystery about what may be the two biggest fears sailors have — losing the person you love overboard and being suspected of having given a little push. When cruisers Jessie and Neal Fox find Jennifer Stover's body floating in the ocean, it's just the

beginning of a tangled chain of events that leads them from the middle of a passage to Zihuatanejo, Mexico, then on a car trek into the mountains, into Mexico City, and back to the harbor at Zihuatanejo.

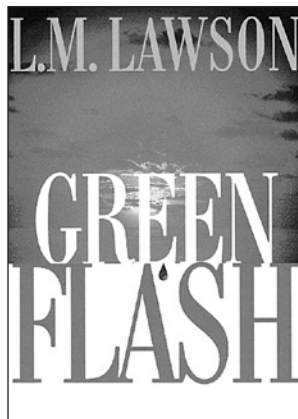
Even though suspicion is the driving force behind the story, it's also a story about doing the right thing, no matter what. Jessie and Neal agree to complete their passage and hand over the body and the video camera that's attached to it to U.S. authorities. After they anchor in Mexico and find themselves face-to-face with Jennifer's husband, they realize they may possess the answer to any questions about the woman's fatal fall.

At that point, what's right becomes an open question. Neal insists on handing over evidence to the authorities; Jessie thinks they should give the grieving widower the video containing the last moments of his wife's life. The cruising community, ever gossipy, nosy, and opinionated, is divided and vocal. Individual characters are quick to add pressure and intrigue to the already tense situation.

In true mystery style, the plot is complicated by lots of twists and turns. It includes bandits, Mafia, illegal export of antiquities, sabotage, and a little romance besides. In the end, Jessie and Neal wish they'd never taken their sailboat over the small bit of ocean that held a body.

While I wouldn't say it was a book I couldn't put down, *Green Flash* is a good, solid mystery with the added bonus that it takes place on and around sailboats. Some sailors might prefer that it was more about cruising and less about the mountains and art of Mexico, but then it would be an entirely different tale.

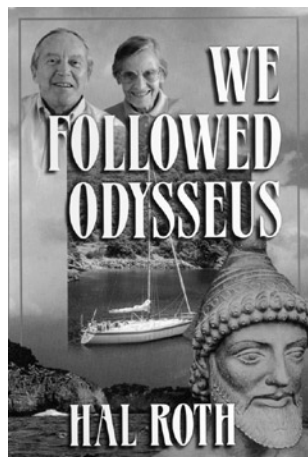
Green Flash is well written and the characters are human and likable, despite a couple of details in the story that might make you wonder if you've missed something. What's most important is that this mystery will probably keep you guessing right up until the end of the book. I'll be looking for the next adventure of Jessie and Neal that will surely follow this one. Definitely worth reading, pack *Green Flash* in your duffel and take it along with you for a weekend on the boat.



Hal and Margaret Roth ride in the wake of Odysseus

We followed Odysseus, by Hal Roth (Seaworthy Publications, Inc.; 1999; 225; \$27.95)

Review by Karen Larson, Minneapolis, Minn.



Hal Roth is perhaps best described as an adventurer – but not the foolhardy type. Hal is also a storyteller extraordinaire. Fortunately for him and his wife, Margaret, who has supported his many dreams, Hal's had some great stories to tell.

The Roths discovered sailing in 1962, while they were in their 30s. They bought *Whisper*, their 35-foot Wauquiez Pretorien, in 1966 and set off on an 18,500-mile South Pacific voyage the following year. This earned them the coveted Cruising Club of America Blue Water Medal and resulted in Hal's first sailing book, *Two on a Big Ocean*. Not bad for beginners.

Many miles and books later, the Roths, now in their 70s, have discovered another adventurer and retraced his route through the Mediterranean. This adventurer was the Greek, Odysseus, known as Ulysses to the Romans. It's uncertain whether this man was a mythical hero, a real human enlarged significantly by literary embellishments over the centuries, or an obnoxious ill-mannered braggart and, in Hal's words, a noble thug. The author of the *Iliad* and *Odyssey*, Homer himself may be a legend.

In the book, *We Followed Odysseus*, Hal and Margaret struggle with fact and fiction and wind up having a two-year odyssey of their own telling the story of Odysseus, intertwined with the reality of that man's world 32 centuries later. They had to look a long way back. Ruins scarcely exist, and other evidence is harder to come by.

Homer's stories of Odysseus begin with the Trojan War of 1200 BC. The tale of the siege is reported in the *Iliad*.

Our hero's travels home are told in the *Odyssey*. The journey which, at its shortest could have been only 565 nautical miles, took Odysseus perhaps as many as 3,000 nautical miles and 10 years in a gradually diminishing fleet of boats (starting with 616 men and 12 ships) beset by weather, gods, humans, and monsters until only Odysseus is left to return home alone.

The fighting ships of the time were powered by oarsmen or square sails, depending upon the weather, and were useless to windward. Because they were in open boats, had very limited navigational tools, had no sleeping quarters, and needed to provision often, these sailors stayed near shore, which lengthened their journeys. Complications came for Odysseus' crew when they were blown to sea without charts or a means for getting bearings.

"Why," Hal asks, "in God's name would anyone want to go to the trouble of retracing the voyages of a prickly Greek who may not have even existed?" Then he answers his own question, "Because the tales are just true enough to be possible." Archaeological evidence suggests that at least part of these tales is true. Besides, Hal and Margaret had fun following the route, and the rest of us can have just as much fun speculating with them about the stories which were told, and enjoying the Roths' modern-day voyage in an ancient cruising ground.



Bill Mantis explains how to rig a canoe and more, much more

The \$50, 5-Hour Canoe Sail Rig, by William C. Mantis (Mediterranean Avenue Press, 1999; 95 pages; \$9.95.)
Review by Dale Hedtke, St. Paul, Minn.

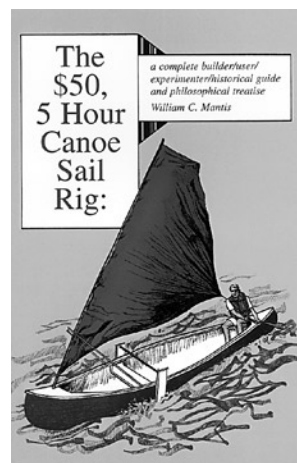
This is not your typical how-to book, as the title may suggest. While there is a well-presented discussion about rigging your canoe for sail, the author takes the reader on a brief romp through the history of naval architecture and provides social commentary on the relationship mankind has had with boats. Its subtitle, *A Complete Builder/User/Experimenter/Historical Guide and Philosophical Treatise*, is a synopsis of the book's contents. The promise of practical information on creating a workable, inexpensive, lateen

sailing rig for a canoe or other small boat is fulfilled, along with a fascinating exposure to a variety of hydrodynamic theory and design details. For example, did you know a dolphin has a total surface area of 40 square feet?

The goal of a \$50 sail rig that can be constructed in 5 hours (50/5) seems very attainable. The author argues that the simplicity and low cost of an easily transported and maintained sailing vessel is preferable to the complexity of a cruising yacht. He does a good job of describing the concept of a sailing canoe and supports his claims that a lateen rig is a practical choice for the 50/5. His materials include a closet rod for the mast, electrical tubing, and other hardware-store metal parts for supporting the mast and holding parts together, exterior plywood for leeboards, some 3/16-inch nylon rope, and an acrylic tent fly for the sail. Fabrication and attachment of the mast, sail, and leeboards are described in clear fashion in the first part of the book. Building and sailing concepts are simply presented and do not presuppose any sailing knowledge on the reader's part.

The second part of the book presupposes a greater degree of sailing experience and engineering knowledge, but it is not beyond the capability of interested sailors. The arguments are compelling, but not always well supported in the limited space given. Aspect ratios of sails and blades, wind-pressure calculations, discussions of wetted surface area, and the frontal area of dolphins are all mentioned. The information made me think about some of the long-held "truths" I have about certain concepts, and the historical perspective is fascinating.

Bill Mantis is well read on boat design and hydrodynamics. If you'd like a simple guide to creating a practical sail rig for your canoe, buy this book. If you'd like to have your intellect stimulated with discussions about hydrodynamic design, historical, and political commentary, or witty comments about the common condition, buy this book.



Sirens' song is back: Zen and the art of sailboat maintenance

Song of the Sirens, by Ernest K. Gann (Sheridan House Inc., 1968; New edition 2000; 318 pages; \$16.50.)
Review by Thomas G. Vincent,
Catonsville, Md.

If I had to come up with an alternate title for this book, the only one that could do it justice would be *Zen and the Art of Sailboat Maintenance*. It has all the same elements: an epic journey, intellectual observations, and practical technical explanations. A romantic, yet thoughtful book, *Song of the Sirens* is rich in detail, colorful characters, and poignant insights. An unabashed naval romantic, I enjoyed it immensely.

It's the story of one man's love affair with the old boats he has owned or chartered. Focusing on his favorites (his 17 sirens), the book explores the fascination man has with the sea and attempts to explain the allure of the vessels he has designed to sail upon her. Like the sirens of Greek mythology who, with enchanting songs, lured sailors to dash their ships against hidden rocks, Gann's ships are seductresses, tempting and urging him on until he plunges forward into their purchase, unmindful of the dangers that lie ahead. And dangers there are. For the ships he describes are not the sleek beauties pictured in glossy magazines. These are sailing and working vessels with flaws and problems.

All the things we lovers of old boats know so well are here: leaky bilges, recalcitrant pumps, cantankerous generators, and motors that gleefully wait for the most inopportune times to strike. Nor are his crew members always ideal. The tension and frailty of human relations, which stressful situations and life in close quarters intensify, are explored. All this is presented with a wry sense of humor. I particularly loved his description of the boat with two heads that shared common plumbing so that when one was flushed, it drenched the unlucky person sitting on the other one.

Romance there is aplenty in this book. However, like Persig's book about motorcycles, Gann's is a distinctly masculine love. His reminiscences tend to focus as much on t'gallants, tops'ls, and typhoons as they do on people. Moreover, *Song of the Sirens* is not simply an autobiography. The ideas expressed take some thought to understand. While Gann's digressions into intellectualism might not appeal to those seeking a pure romance or adventure novel, I found them to be a

welcome counterpoint to the mundane details of, say, life on board a fishing trawler. *Song of the Sirens* is well worth reading.

In his introduction, Charles Doane describes the book as one he has read several times, and that it has "spoken to him" each time. I can understand why. It's truly a story that can stand up to multiple readings. Ernest K. Gann has woven together a wonderful tale about our romantic relationship with the sea and

the old boats that carry us there. I was charmed by this book, and I fully expect that it will charm me as much when I re-read it 10 years from now.



John Rousmaniere updates the yardstick for sailors

The Annapolis Book of Seamanship, by John Rousmaniere (Simon & Schuster, 1999; 403 pages; \$40.)

Review by Jon Paulus,
Parma, Ohio.

When we go to sea in good old boats, we go to enjoy the romance of sailing. In the preface to *The Annapolis Book of Seamanship*, John Rousmaniere says that to enjoy the romance fully, we must have "forehandedness." That's a state of mind, a kind of mental and technical preparedness. We'd do well to listen to him. With more than 40 years and 30,000 sea miles of experience, he's a top-gun sailor. He's also a sailor who's able to translate his experience to the written page. Credited with 15 nautical titles, John Rousmaniere's name is spread across the seascape of sailing literature.

This extraordinary book could be called *The Chapman's for Sailors*. First published in 1983, it quickly became the yardstick by which to judge other sailing references. The U.S. Naval Academy and the U.S. Power Squadrons use it as the text for their sailing classes. It's now available in a third edition. It's an exceptional place to gain forehandedness.

Charles F. Chapman's *Piloting, Seamanship, and Small Boat Handling* is focused on powerboating, while this book will make you a better sailor. It is clearly and logically organized. John starts with basic skills and "bathtub naval architecture." He includes chapters on weather, health, and safety. Building on these basics, he covers advanced topics like heavy-weather sailing and emergencies. He uses some clever devices to underscore important points.

For instance, a brief section on dead reckoning introduces the chapter on magnetic compasses. Some chapters conclude with useful review quizzes. "Hands on" sections, sidebars with quick-reference facts, are placed throughout the book. The illustrations and graphics are fresh-looking and complement the excellent writing. In this edition, John made some significant changes. He does a superior job of gender-neutralizing the language. For "helmsman" he substitutes the word "steerer." Sailboats, with a nod to tradition, continue as "she." Sections on multihulls, equipment updates, and terminology are new to this edition. New section or old, every current sailing topic seems to be addressed.

This book will be immediately beneficial to the beginning sailor. A sailor of medium ability will find a lot to recommend it. The most seasoned sea dog will also find it useful. It will be a life-long reference for any sailor. John Rousmaniere sets himself the goal to provide sailors with the knowledge and skills needed for forehandedness. That, for him, and us, is the basis of confident, comfortable sailing. He certainly accomplishes his goal, for the book is the consummate sailing reference.

But this reference book has heart as well. John Rousmaniere, the sensitive romantic sailor, is in evidence. On almost every page, his love of sailing shines through. This book really leaves behind only one unanswered question: buy one copy, to carry between home and boat, or one for each place?



Roles on board

The Skipper

Somebody has to be in charge. The crew may vote on where to sail, what to eat for dinner, or when to get under way in the morning, but there must be a commander. The very best skippers are men or women able to steer, manage the engine and sails, anchor, pilot, and do all the big and little chores that are required to get the boat and her crew safely through the day. They also are well organized. Good skippers don't forget to buy lunch. They don't leave the charts in the car.

The skipper should also be a leader, skilled at delegating authority, willing to teach, and (most of all) able to take charge decisively. A test in any job, this is especially challenging on a pleasure boat, which, unlike an army platoon or a division of a corporation, is a purely voluntary organization. People go sailing for fun, and many will get off the boat if they're not having any. Captain William Bligh of the *Bounty* may have been an excellent seaman and an extraordinary leader in emergencies, but the mere mention of his last name evokes images of a petty, cruel autocrat more interested in his ship than in his men. A skipper must indeed care for his vessel, but she or he should also command with the attitude of being first among equals rather than God Almighty.

As tactfully as possible, the skipper should, from the beginning of the day's sail or the week's cruise, establish a clear routine. The skipper's first job is to be sure that the crew knows how to use vital equipment, certainly the toilet and possibly also the engine, the radiotelephone, the bilge pumps, and the stove. Here he may have less trouble instructing landlubbers than changing the habits of experienced sailors familiar with other systems on different boats. Next, the skipper should point out the location of safety equipment such as fire extinguishers, life jackets, and safety harnesses. Then he should lead a calm discussion about emergency procedures, including rescues and firefighting.

Next comes the delegation of authority, which can be difficult. For trips longer than a day, the skipper should appoint a second-in-command. This should be somebody whom the skipper trusts both as a

sailor and as a leader. On many boats, these two people — the owner and his mate — do all the work. All seamen are proud of their skills, but a ship with only a couple of performers is an unhappy one. The reasons for this star system are understandable. When new crewmembers come aboard, at first they are as awkward as they are hopeful. The skipper should respect their eagerness, he should encourage and include them by giving them jobs to do. Obviously the job should not be a vital one, like steering through a crowded anchorage in a 30-knot wind. But casting off the mooring or dock lines, hoisting and dousing sails, trimming sheets, and dropping anchor are chores that in normal weather are simple and easily learned. Anybody doing them, whether a six-year-old child or a 60-year-old grandmother, will be satisfied that she is making a contribution. Later on, in open water, allow everybody a chance to steer.

There are a few jobs that are always challenging and sometimes tricky and a bit dangerous. One is steering up a crowded channel. Another is anchoring. Clear command is important at such times. A novice may bristle when relieved at the helm or windlass at such a moment unless the crew member sees the situation from the captain's point of view.

There are right and wrong ways to accomplish just about every important task on a boat, but often there are several correct ways

among which each skipper has a personal favorite. He should tactfully but firmly make clear how and why he wants jobs done his way, demonstrating both correct and incorrect techniques. Among the key tasks where a mistake could lead to disaster are cleating a halyard incorrectly, taking a bearing carelessly, and going on deck in rough weather without a safety harness. Somebody on board might be used to different equipment. If so, the skipper should explain why she prefers her procedures — but be open to suggestions for better ways.

The Crew

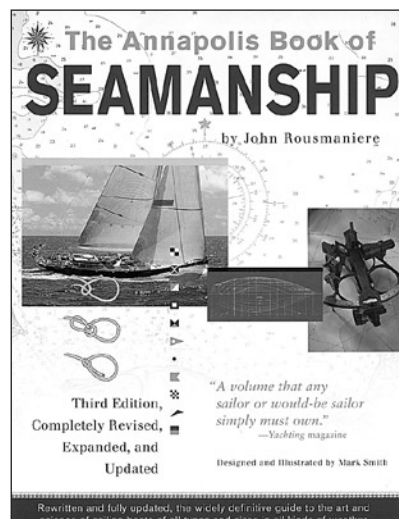
Each crew member on a boat has a responsibility to him- or herself and everybody else aboard, beginning by frankly admitting any physical or other limitation on his ability to perform that responsibility. Don't give a misleading or false answer exaggerating your abilities. If you have a tendency to get seasick, bring your own pills, and take them before you get under way. Try to help out, but don't get in the way during maneuvers. If you don't know how to do a chore that you have volunteered for or that has been assigned to you, ask — nobody will think less of you for wanting to do a job right, but the wrath of Poseidon will descend on you if your claims of competence prove to be false. Many skippers get excited when they're tense. Try not to take their comments personally. At first you may be annoyed by a skipper's seemingly militaristic procedures, such as asking you to repeat orders after they're given or to coil lines in a specific way. You

can respond by simply ignoring them, but such passive-aggressive behavior eventually will lead to worse problems. Better yet, take the edge off your frustration by asking (at the appropriate moment),

"Why do you do it this way, Skipper?" A true Bligh will answer such a reasonable question with a cold, withering stare, convincing you that perhaps you might enjoy yourself more on somebody else's boat. But a skipper with a sense of fair play will answer politely and thoroughly.

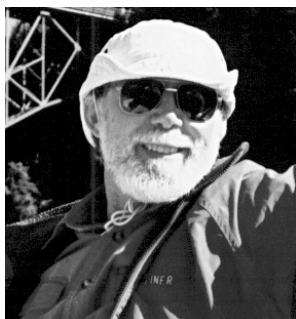
The old adage, "One hand for yourself, one for the ship," means to take care of yourself while you take care of the vessel. This is literally true in rough weather, when you must hold on with one hand while doing even the most menial jobs, but the saying's deepest meaning is that you should always be alert to what is going on, both on deck and below. Don't assume that the skipper is keeping a perfect lookout or is on top of every maintenance job. On cruises and long daysails, your "one hand for the ship" might be a small donation to the boat's provisions, even if it's only a bag of fruit or a six-pack of drinks.

On long sails, people can easily get on each other's nerves, just as they would in a crowded automobile on a long drive. Try to understand and minimize your own eccentricities just as you attempt to tolerate your crewmate's. Whistling, constant talking, and repeated humming of the same song are among the otherwise petty annoyances that have led to discord, but the worst flaw of all is sloppy seamanship. Do your job right and you'll be respected.

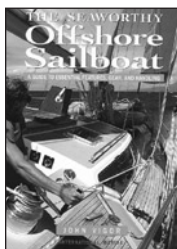


An excerpt from The Annapolis Book of Seamanship

John Vigor our featured author

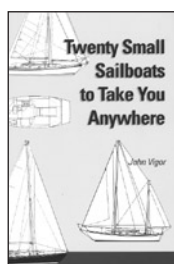


One of our favorite people, John Vigor recently completed two new books we are pleased to offer: **The Seaworthy Offshore Sailboat** and **Twenty Small Sailboats to Take You Anywhere**. While we were at it, we added a couple of John's earlier publications to our bookshelf as well. John has worked for newspapers around the world and is a contributor to leading sailing magazines. He has sailed for more than 40 years in boats ranging from 11 to 40 feet in length and logged some 15,000 miles of ocean voyaging. He was national champion of the South African International Mirror Dinghy Class. In 1987, John, his wife, and one of their sons escaped from South Africa, sailing to the U.S. in their 31-foot sloop during a state of emergency in South Africa when the apartheid regime clamped down on journalists and freedom of expression.



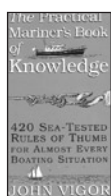
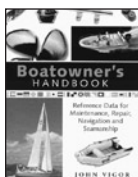
The Seaworthy Offshore Sailboat, by John Vigor – A favorite on the subject of offshore preparations, including information on how to prepare the boat you own, rather than the one in your dreams. \$29.95.

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Twenty Small Sailboats to Take You Anywhere, by John Vigor – This is the book *Good Old Boat* is reprinting chapter by chapter (a strong statement about how much we like this one). If you'd like to get to your boat's review, assuming it's one of the 20, before we finish this series in the year 2002, here's how to get that information more quickly. \$19.95.

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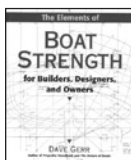


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History: Pearson era and the birth of fiberglass

Small Boat Journal Remembered: Removing immovable objects

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Features: The Git-Rot boat; Good old consignment shops; Iceboating photo essay; Sailing women role models; Georgetown wooden boat challenge

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Technical articles: Sealants; Boat stability; Riding sails; New swageless fitting; Fiberglass production overview; Building a stitch-and-glue dinghy; Restoration of an Allied Seabreeze (35); Stove fuels and baking on stovetop; Tahitiana (a steel classic)

Boats: Tanzer 22 feature boat; Pacific Seacraft 25 boat review

Features: A mariner's celebration of the sea, art essay; Boat Economics 101

May/June 2000

Technical articles: Advantages and repair of wooden boats; How rating rules shaped design of good old boats; Varnish instructions beyond the label; Restoring a Pearson 26; Pros and cons of traditional and inflatable dinghies; Should you sail with the transmission in or out of gear?

Boats: Morgan 38 feature boat; Pearson Triton boat review

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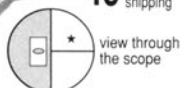


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Continued from Page 3

and the negative to a copper plate also immersed in the same water. The galvanic corrosion will eat up the surface of the stainless steel and deposit it on the copper bar. Finally, ordinary steel is not subject to crystallization as David states in his article (or was it an editing error?); galvanized steel would be a very good choice if the zinc did not have such a low friction resistance.

**Jean/John Somerhausen
Douglaston, N.Y.**

Reply to Jean Somerhausen

The national authority on copper-base metals is the Copper Development Association (CDA), not an author writing about metal corrosion in boats. The CDA is jointly supported by the major brass and copper manufacturers in the U.S. Each alloy of brass, copper, and bronze has been given a CDA alloy number. There are hundreds.

According to the CDA, bronze is an alloy of copper and tin. The alloy may also contain other alloying elements such as zinc, lead, bismuth, antimony, aluminum, and iron – to name a few. If it contains tin, then it is a bronze. Brass, on the other hand, is an alloy of copper and zinc. It also may contain other alloying elements. The most usual alloying element besides zinc is lead.

There are many people with differing opinions as to where certain metals fall as far as brass and bronze are concerned. You should be careful who you listen to. One of my employers, Chase Brass and Copper Co. (a major producer of brass and copper products) refused to call silicon bronze a bronze because it does not contain any tin. During the 10 years I spent with them, we had to refer to that family of alloys as “silicon copper” which is, in fact, a better description of what that metal really is.

As far as passivation is concerned, the EPA clamped down on nitric acid passivation in 1991. Since that time various people have tried to develop other methods using other chemicals. Most don't work. A few work for a short period of time. One of the major fittings manufacturers here in New England uses phosphorus. Their fittings usually don't make it past the first season without showing signs of rust. I have been contacted by many of the major boat manufacturers over the past few years, including Eric Goetz, the nation's leading maker of high-tech boats,

concerning the problem. Most find the bleeding rust a major problem and are seeking solutions. One of the fastest growing segments of the boating industry is the chrome plating of stainless steel. Eric Goetz is very interested in my high tensile bronze as an alternative to stainless.

**Roger Winarski
Tiverton, R.I.**

The name's changed

The May issue of *Good Old Boat* credited Hurth for the use of an illustration of a two-shaft transmission. Hurth is now owned by ZF Marine.

This tip may help others

During my recent repowering project, I learned how to easily and neatly increase the size of a hole through a bulkhead or hull using a hole saw. I needed to replace my old exhaust system with a new and much larger-diameter one. This required the installation of a 2-inch through-hull fitting where the existing 1 1/2-inch fitting was mounted on the hull.

After removing the old fitting, I tapped one of the soft wooden tapered plugs (that we are all supposed to carry in case a seacock fails) into the existing hole. I cut off the excess part of the plug that was too large to fit into the hole and marked the center of the plug. Then I used the hole saw to drill the new larger hole in the hull as if the old hole weren't there! The wooden plug provided the “center” for the saw, and I ended up with a perfectly round hole for the new exhaust fitting.

I also used this technique for installing the larger seacocks that were required. I hope this will help someone else struggling with this problem.

**Bruce Duckett
Ocean Springs, Miss.**

About that Columbia 40; tanks, too

Concerning Mark Cole and the note about the Columbia 40 (*Good Old Boat April newsletter*), I could be wrong on the use of the pipe in the Columbia 40. In the 1960s it was certainly widely held that Charlie Morgan had used a very heavy pipe keel in his *Paper Tiger* to reduce the ballast penalty. If, as Mark says, the pipe in the 40 is only a 1 1/2-inch schedule 40 (1.9" ODx.145-inch wall), it certainly would not add much weight, as it would only weigh about 10 to 11 pounds. Nor would it add much strength, for that matter, although, if it were heavily glassed in place, the

glass itself would add some rigidity.

Doug Bauer asks about sources for water tanks (*April newsletter*): All kinds of odd-shaped tanks (fuel, water, and waste) to fit various areas of boats are available from Kracor, P.O. Box 23667, Milwaukee, WI 53223; 414-355-6335; 414-355-8782 (fax).

Ted Brewer
Gabriola Island, British Columbia

Simpson-Lawrence to the rescue

I have found a product that might be worth a review in your magazine. Many older sailboats, Tritons included, were built without a real galley, and trying to shoehorn a galley, with sink and stove, where there was none can be a design nightmare.

I ran across a Simpson-Lawrence combination sink and two-burner propane stove that is 19"x18"x4.5". The whole thing drops in like a kitchen sink; no high-tech cabinetmaking skills necessary. At a 4.5-inch depth, the sink is certainly not meant for blue water. But it would surely do when gunkholed in a lagoon or tied up at dock. The burners come with potholders, and a cutting board cover for the sink is optional. Quote for the unit was \$265,

which is almost \$100 dollars cheaper than the Force 10 propane or even the Origo drop-in stove. Quite a deal. The representative is Ev Rockwood. He can be reached at ev@simpson-lawrence-usa.com.

Skip Baker
Sacramento, Calif.

Edson praised

Just a plug for the wonderful folks at Edson in New Bedford, Mass. Here in Noank, Conn., the weather still isn't very nice (*mid-April!*), but we put the boat in the water last week anyway. While moving the old girl from the travel lift to our slip, I noticed that the steering was very stiff. After tying up and some disassembly (gotta love the sail locker accommodations), I determined that some new conduit ends were needed for the cables. Monday morning I called Edson and ordered them. They were on my doorstep Tuesday when I came home from work – about 32 hours later. Now that's good old service.

Bill Litke
Hampton, Conn.

About those Tritons

Thank you for your article on the Pearson Triton. I have two comments. I note that you said that the first hundred or so had single lower shrouds and then they changed to double lowers. I am the owner of hull #193 which has single shrouds.

I agree that the galley is inadequate. My boat has a partial solution. I have a two-burner alcohol stove mounted on a sturdy wooden shelf, hinged to the forward end of the counter. It's fine for routine cooking and can be folded up when access is needed to the drawers under the sink.

For safety and maintenance reasons, I also cut an access opening on the in-board side of the panel below the sink so the sink drain hose and its unprotected through-hull can be reached.

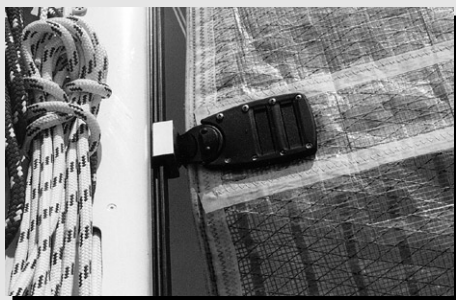
I love this boat. I sailed it with a friend for 25 years before I bought it from him three years ago.

Paul Nida
Troy, Mich.

Thanks for the photo

I had e-mailed you regarding my desire to see more holding tank placements in boat articles or one article on several boats as an aid to this sometimes tricky retrofit. In the latest issue (*May 2000*)

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on the Triton was a fine photo showing the placement of their choice (in the head). Thank you for including that photo. The devil is in the details.

Rich Green
McMinnville, Ore.

Tank cleaning cautions

Originally written to Sidney Rosen, editor of the Albin Vega newsletter:

I have heard that those who fail to learn from history are destined to repeat the mistakes of others, to paraphrase a statement. I have just completed an experience which, by sharing it, may save others much unhappiness. This has to do with removing the bilge fuel tank from *Vesper*, hull #1868. Here's my story:

I had read of a boat whose diesel engine failed shortly after entering rough water and almost running aground, had the skipper not been able to set his sails in the nick of time (*Good Old Boat* newsletter, April, 2000). The cause of the failure was a plugged filter. This was caused by the tossing of the boat in rough water, churning the fuel in the tank, etc. It's a worthwhile, "must read" article for anybody with diesel

power.

This started me thinking about my tank. *Vesper* is 27 years old. I doubt that her tank has ever been cleaned. I looked at the tank top in the bilge and decided it didn't look like much of a job to remove the 12 small bolts, lift the top aside, wipe out the plastic tank, and replace the cover. Read on.

The tank top consists of a stainless-steel plate, approximately six inches in diameter with five penetrations (besides bolt holes) for connections for: fuel to engine, excess fuel return, tank vent, spare, and tank level indicator. This plate forms the top layer of a sandwich consisting of, additionally, a gasket, the plastic flange of the opening, and the bottom of the sandwich, which is a split-ring, each half with six threaded holes.

With some difficulty, I was able to remove the 12 bolts (freeing the two halves of the split-ring). The tank fill line is at the aft end of the tank top, a separate, much larger (approx. 2" hose) penetration.

Rather than describing all the problems I had, I'll just describe what was successful. It proved necessary to remove the tank from the bilge to

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reinstall the plate, since capturing the threaded holes in the split-ring halves with the bolts, while working with only one hand, was impossible.

It is possible, though, to remove the three hoses from the tank-top-plate connections. Note that I said possible, not *easy*! It is also necessary to remove the 2" fuel fill line from the fill connection inside the port cockpit storage bin. This proved to be the only way to allow the tank to be lifted from the bilge. Once the three small hoses and one large one are removed as described, the tank can be lifted and pulled forward enough to remove the hose clamp, and thus the 2" fill line from the tank. Now the tank can be lifted from the bilge.

My work was rewarding. The tank was, indeed, cruddy. It had a lot of pieces of what looked like brittle, thin, black cardboard. This is the "mat" described in the *Good Old Boat* newsletter. An additional benefit from all this, besides being able to clean the bilge, was that I was able to clean the float-operated tank level indicator, and it worked! Until then, I didn't even know I had a tank level indicator.

If this description is published, and if anybody has any questions, I will be pleased to offer verbal assistance. I can be reached at SaylerEd@aol.com.

Ed Davis
Mystic, Conn.

In defense of full keels

I suggest to Mike Roberson of Grand Rapids, Mich., (who wrote in the February *Good Old Boat* newsletter) to go with the full keel. It's steady and sturdy and does manage a good turn of speed, although it might take small craft advisory winds. But heck, that's exciting! To compare a fin keel to a full keel is

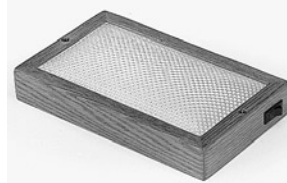
like comparing racing-slick tires to all-weather radials. Deeper bodied full-keel boats slice the H₂O; they don't pound. And considering the fact that fin keels are bolted on, you might not want to have the boat pounding too much.

You're half right, Jerry, when you said that full-keel boats give a better ride in rough weather. In fact, they give a better ride period. It just takes a little longer to get to speed. What the heck, if you're doing 4 knots, start the engine.

You state that full-keel boats are harder to turn. Nope. Fin-keel boats are harder to make go in a straight line. You probably meant slower to turn. That would be true. Remember the first time you drove an MG? Going down a straight road was a series of zigzags. It took practice to go straight. Same with a fin keel.

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I agree that backing up a full-keel boat is harder than a fin, but I thought the idea was to make the pointy end go first. My Alberg 30 is a bear to back. You talk about the increased beam of the fin-keel boats and, yes, that is so objects and crew below decks have farther to fall when you're heeled over.

Did I mention that fin keels are usually *bolted* on? Yikes! And for gosh sakes, don't run aground with a fin keel. I'll take my full keel any day. On second thought, go buy a fin-keel boat. That only makes me feel special. Difference is what makes the world go 'round.

Oh, and keep reading *Good Old Boat*. It's a format that is long overdue for all us good old boaters.

Jim Dickson
Kittery, Maine

Forget the formulas

Regarding a comment in a previous issue, there is a much simpler way of determining how big a boat you need. It doesn't require all the formulas, variables, and calculations. It is, simply: "Never buy a boat shorter than your age." Now, isn't that really the best way to go?

Andrew Potter
Lexington, Mass.

In praise of Folkboats

We spent the weekend out again. The seas were 5 feet and steep, and the wind was 20 to 25 knots. It made for a less-than-smooth sail, but we loved it just the same. We were averaging 6.5 knots all day. We went out in the Gulf about 10

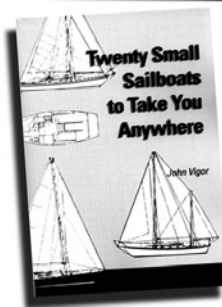
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miles, just to say we did, and then came back in. We feel good about being able to take the little 26-foot Folkboat out in those conditions with all her sails flying. We're still waiting for weather strong enough to make us reef!

Pat Johnson
Pensacola, Fla.

Remember half-hour Teal dories?

The January issue of *Good Old Boat* ran a feature article on the Georgetown (South Carolina) Wooden Boat Show and its dinghy building contest. A team of two built a Teal dory in less than 30 minutes (27 minutes and 26 seconds, to be exact). *Anyone* can do this, right? Now it's time to look ahead to the next Georgetown event and make plans to build your own super-quick dinghy on Saturday, Oct. 21. Contact Jan Lane about Georgetown's 11th annual Wooden Boat Show Challenge, P.O. Box 2228, Georgetown, SC, 29442. Call toll free: 877-258-3888, or visit: <<http://www.woodenboatshow.com>>.

Pressure-cooker bread

The pressure-cooker bread (*March 2000*) comes out quite moist on the top. I turn it upside down on a rack after "baking," to allow it to cool and dry out. The bread is excellent, and I am surprised that it keeps for several days. Many of my bread recipes start to get moldy after a couple of days, since they have no preservatives in them. I feel this bread will keep well on the boat if I get an appropriate plastic container to keep it air tight.

I also tried the pizza on the stovetop and had excellent results. I was surprised, since I have always done pizza in the oven. And I have done the pineapple upside-down cake. It is great.

Right now I am trying to get "psyched" to begin chemically removing 25 years' worth of bottom paint and then to put on a new barrier coat and new bottom paint. I will be using your Web site to re-read the articles on painting and bottoms. We are taking before/after pictures of the bottom and the cabin. We're also getting new cushions down below and for the cockpit. We're having a blast.

Gregory Fox
Marblehead, Ohio

Apathetic no more

I have a decade-and-then-some collection of (another popular sailing

Continued on Page 74

New directory of suppliers

If your favorite suppliers of parts and services aren't there yet, they **will** be. See the brand-new directory of suppliers of goods, services, and information important to good old boaters on the *Good Old Boat* Web site. Check it out. Add your favorites (or tell them where to go to do it themselves). This is a tool we can all use. Like fine wine, it will get better with time.

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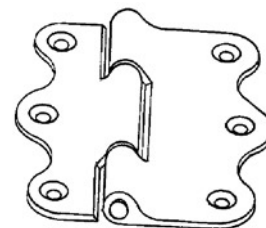
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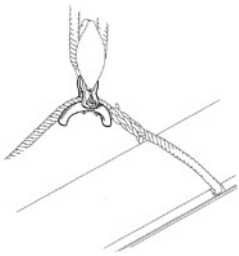
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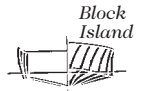
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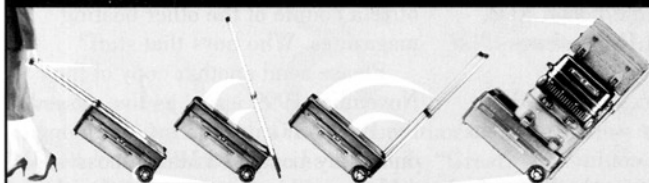
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Continued from 69

magazine), and I used to wait on the edge for the next issue to arrive. But it has changed from the earlier days of focusing on how-to and details, to something more of a history focus. I've found myself apathetic about the recent issues; the last two I didn't even buy until they were technically out of date, past their shelf life. But *Good Old Boat!* Yeah! Keep your focus on the practical and pragmatic, how-to, and how-I-did-it, plus your mix of art and dreaming. You've got a winner that inspires others' wins.

Rick Faltersack
Portland, Ore.

Good timing

By the way, your timing on the May issue couldn't have been better. I've been debating on whether to buy the classic nutshell pram Jon Black built himself to go with *Wishing Star*, or to go with a more conventional inflatable tender. I've also been agonizing over whether to leave the tranny in gear while under sail. How'd y'all know I needed help on that stuff?

Best wishes on your continued success, folks. I love the magazine!

Dave and July Taylor
Mansfield, Texas

*Dave, you'd be amazed (what with the miracles of the Information Age and all) what we know about our readers. After having said all that, we know we should have the answer to this, but we don't: what sort of a dinghy **did** you choose?*

Like it, but with reservations

From the perspective of one year's subscription, I think you're doing a terrific job, and the proof of that is my two-year renewal. *Good Old Boat* is a remarkable magazine. You're not afraid to publish articles that are so technical and comprehensive that the "clean-hands" publications would shy away from them: the how-to-pull-an-engine and gelcoat blisters pieces, for example. At the same time, you publish neat stuff like poetry and art, recipes and essays. And you do it well: the layout and editing are excellent. I like the mix with two reservations.

Good Old Boat has a definite bias toward liveboards and bluewater cruisers. We're late-starters – only been sailing four years – and we may (hopefully, **will**) wind up there eventually, but at this point the biggest thing we have is a Victoria 18 (definitely a good old boat, just small).

So, for now at least, I'd welcome more pieces on smaller good old boats. Also, while I'm fairly literate, I sometimes encounter nautical jargon in the magazine that stumps me. Maybe when you use a really obscure word – one that isn't in Webster's – you could parenthetically define it for the likes of us newcomers.

Congratulations on surviving and thriving. I look forward to lots more of *Good Old Boat*.

Peter Heinlein
Yonkers, N.Y.

Thanks for the feedback, Peter. We have several articles on trailerable sailboats in the works. We'd recommend John Rousmaniere's book, The Illustrated Dictionary of Boating Terms. (Where do you think we come up with those nautical terms, anyway?) W.W. Norton & Company, 1998 (latest edition).

Reminds me of *Skipper* magazine

Congratulations on achieving the excellence of the old *Skipper* magazine, published in Annapolis in the 1950s, with your new publication.

I feel that I am back home after a year's exposure to Fountain and Donzi 60-mph Tupperware bathtubs with

shower enclosure bridges that monopolize a couple of the other boating magazines. Who buys that stuff?

Please send another copy of the November 1999 issue, as I've passed the Pearson Grumman articles along to one of my Lockheed Martin bosses. I told them so at the time, but they bought a shipyard instead.

I'm also enclosing a poem I composed in the Kipling-Poe sense for a bulkhead plaque:

The Lady or the Boat

*You may have her for only a year or two;
Perhaps she'll leave you never –
But you'll think of her with a kind of a sense,
As though it were forever.*

Charles Sweet
Port Hueneme, Calif.

Like "family"

Of all the boating stuff I get in the mail, I anxiously await the arrival of each new issue of *Good Old Boat*. It feels like "family."

Tony West
Hermosa Beach, Calif.

Where have you been?

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mag I always wanted and never found (before).

Dan McDougal
Williamsport, Md.

Cover to cover

You've probably heard this many, many times, so one more time won't hurt. Your magazine is simply "Great!" (So far, I've enjoyed every issue, and unlike a couple of other sailing magazines, find that I pretty much read the thing cover to cover.) Keep it up!

Atis Adamsons
West Hartford, Conn.

Atis, as you can tell, we don't tire of hearing kind words.

Rubbed clean

When sending a gift subscription for her husband, Jan Pierson wrote: "This is a surprise birthday subscription as there is no print left on the complimentary issue!"

Carol Pierson
Apalachin, N.Y.

Real people

I love your site and your magazine. It's a great source for real people who take pride in being able to do for themselves.

Eric Hansen
Stafford, Va.

Send questions and comments to Good Old Boat, 7340 Niagara Lane North, Maple Grove, MN 55311-2655, or by e-mail to jerry@goodoldboat.com. Please limit messages to 150 or fewer words. We reserve the right to edit.

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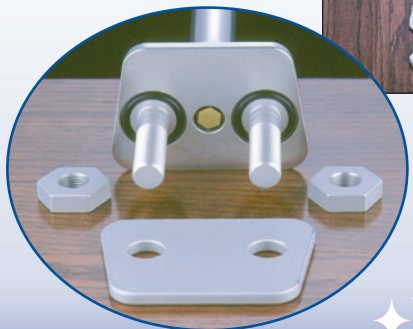
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Cool summer T-shirts

Just in time for summer, we're introducing new warm-weather T-shirts with Good Old Boat artwork you may recognize. The "will work for boat parts" art was initially designed for our Web site by Dave Chase, who has done many great caricatures for us. The "museum view" design first appeared as the cover of our November 1999 issue. The artist is Scott Kennedy, truly a genius with a pen. Both shirts are on off-white, natural fabric and of high-quality 7-oz. cloth.



John Boll, at left in both shots, is a "two-timing Tartan owner," having just replaced a 35 with a 41. **Dave Whittier**, at right, is the proud owner of the Columbia 25 pictured here.



Chuck and Terry Chism, at left and above, sail a Pacific Seacraft 34, named *Rock Steady*. The commander is Soojee, that ball of fluff in Chuck's arms. Note Chuck's *Good Old Boat* ball cap, also. (Great sun shade — that's why you can't see Chuck's face!)



Spider engineers

Return to your boat after a week or more, and you'll see their lacework decorating the lifelines, shrouds, and pulpits. They're lovely, these spider webs, with silvery threads in ageless patterns, the plan for which is known only to spiders. They're born with this knowledge. There's no training or parental role modeling. The morning dew collects in prismatic beads on these intricate weavings.

I enjoy studying these designs anywhere I find them in nature. But not on my boat. The spiders and their webs must go. So I clear the webs and heartlessly destroy the spiders. Evening arrives, and with the lowered rays of the sun, I notice the engineers of the insect world returning. They emerge from small shelters where they've hidden from sun, rain, predators, and ruthless crewmembers. They've been hitchhiking, spending the day with us, unconcerned about where we're going or where we'll wind up. This boat is their environment. It will serve their purposes for their entire lifespan. My goal is to shorten that lifespan.

They crawl to the tops of antennas and shrouds and drop delicate, trailing gossamer threads. A gentle breeze assists in the landing on another vertical surface. Before long, the two vertical structures have the genesis of their well-known design. We've watched, amazed, as these small engineers fashion webs from tiny threads one section at a time. We've watched as one spider repeatedly reached a key thread (one of the main supports), made an exact turn (35 degrees perhaps) and set off again for the next support. Like all the others, this web was perfectly planned, yet probably

difficult or even impossible to see in its entirety from the close-range perspective of the spider.

I've watched and grown frustrated. "Who invited you?" I rant as I ruthlessly destroy the results of tedious hours of arachnid effort. "How did you get to this boat anyway?" We're on a floating island connected to a dock

much of the time by just a few lines. I'm fairly certain that spiders can't fly. Do they crawl out along the docklines? I don't think that's the route. We have observed perfectly horizontal fibers, the kind created only by spiders, strung across a dock at eye level. How did a spider pull *that* off if it didn't fly across the four- or five-foot gap between the pilings on either side of the dock?

Finally, I decided that, while that little act of ingenuity still defies reason, the common way for spiders to get to my boat is by climbing to the mast or shrouds of someone else's boat and launching themselves from there into the unknown, wherever the wind is currently blowing them. Often, it seems to be to our boat. I used to sweep the little buggers overboard until I realized that, when we're in port anyway, the

action is pointless. They simply walk on the surface tension of the water and quietly return to my boat when

I'm not looking. I've watched them do that. Ruthlessness is required here.

"Jerry," I say, noting a spider behind him, "smash that spider, would you please?" That's when I am reminded that

he, too, is an engineer and is quietly on their side. I'm in this fight by myself. Surrounded by engineers, I acquiesce. Our boat is their home, too.

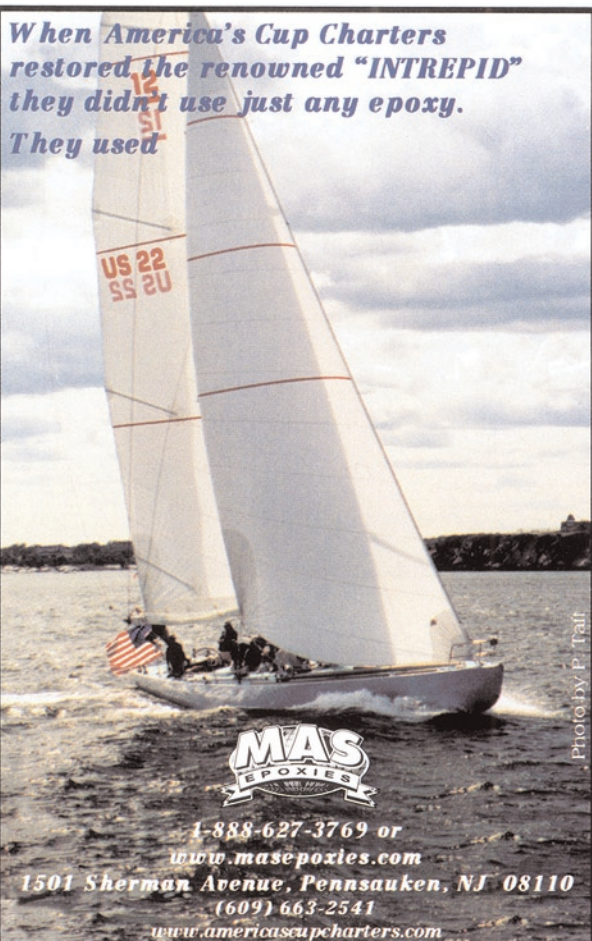


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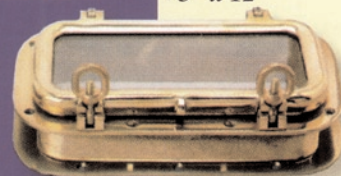
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No one to speak for the stars

Since Carl departed, there is no one left to speak for his “billions and billions” of stars. With Sagan gone, his stars are still out there, as they have been since a lost sailor ten millennia ago lifted his eyes for guidance. But we are paying less attention.

Since 1960, an iota of time as the stars go, fewer and fewer sailors raise their eyes to the heavens for guidance across the empty oceans. We have replaced Sagan’s glorious mystery of distant stars with clickety little stellar imitations . . . satellites. We manufacture our stars these days . . . a process that at once increases our control of our lives while, at the same time, diminishes our ability to glory in the unknowable mysteries of the universe. We have replaced distant stars with close-by satellites, thereby reducing our vision from unknowable parsecs to a mere few hundred miles. In my book, a bad trade.

In 1976, I bought a Davis plastic sextant (the only one I could afford) and set out from Moorhead City toward the Azores. With the Davis in one hand and Mary Blewitt’s crystalline little book in the other, I committed myself and my crew to the guidance of the immutable stars. My boat was a 32-foot Westsail, as good a vessel as a tyro sailor could hope for. My experience was more bravado than fact, and my crew was even dumber than I, if that could be possible.

I lost my ocean virginity on that passage, a process of high exultation. Celestial sights were taken daily, and I learned the hard way that an accurate sight from the deck of a leaping, swooping sailboat is more a matter of art than of science . . . a tradeoff I would make any time.

My findings were erratic but, on the average, reassuring. Even when, at the end of the passage, I found myself 40 miles to starboard of the port of Horta, it was small matter to me, after a glorious passage across 3,000 miles of ocean.

by Reese Palley
artwork by
Pepper Tharp

My splendid achievement was not that I had missed by 40 miles, but that, with the aid of the stars, art, and little technology, I had made it at all.

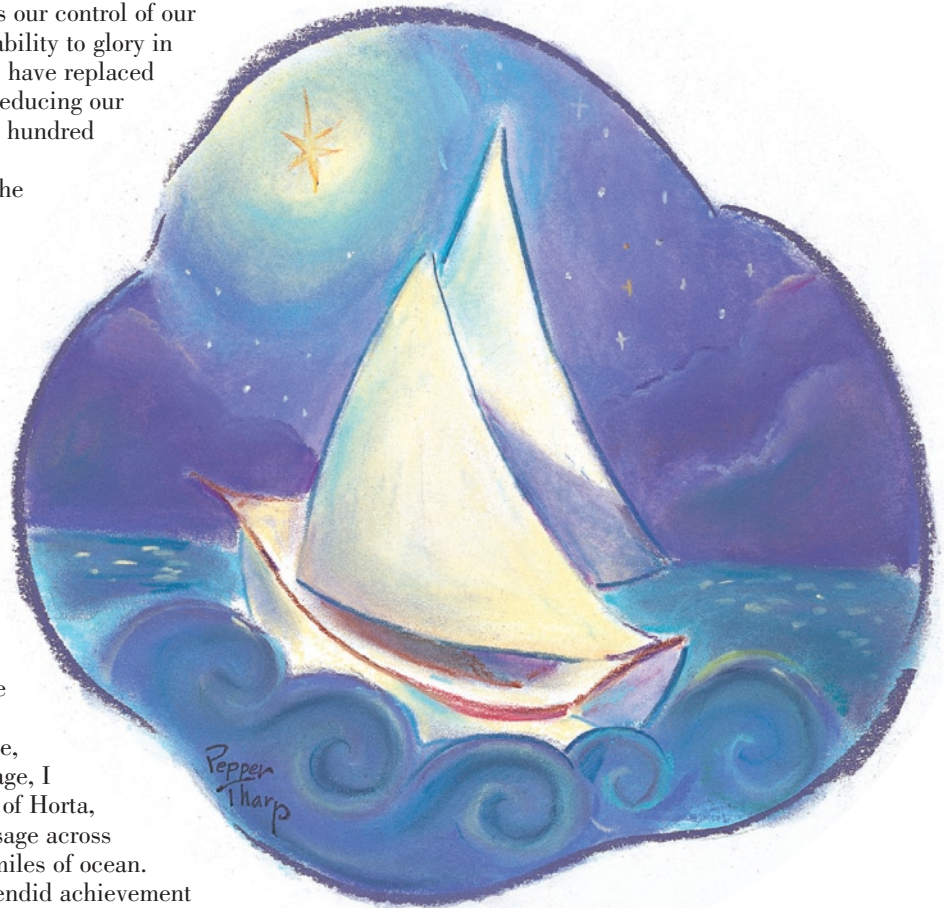
I am Luddite enough to be sentimental about the passing of the stars. It is feckless to gaze up at a satellite and wonder what magical mysteries it conceals. A satellite conceals nothing . . . indeed, that

is the basis of its usefulness. The stars conceal almost everything about themselves except the one thing important to every sailor . . . where they are.

Wonder and the mystery are passing from us. We have pulled back from the whirling spheres of Carl’s heavens and are settling for the smallest sphere imaginable. Where, in the past, we were encouraged, with art and patience, to reach out into unimaginable mysteries to determine our place on Earth, we now push a little button and all is revealed . . . except the really important stuff.

Sailor, take very good care of your old sextant. Polish it, clean it, and by all means, practice on it. Who knows what is the future of satellites?

But we all know what is the future of the stars.



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Good Old Boat magazine is about:

Creating a community of sailors – Through our directory of sailing organizations and contacts, we're developing links between sailors.

Offering a resource – By pooling the knowledge of our readers, we're creating a directory of the suppliers of parts and services we all need.

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