

GOOD OLD BOAT

The sailing magazine for the rest of us!



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About the cover...

Restful, soothing, peaceful ... these adjectives come to mind when contemplating this photo by Colleen Shantz taken last summer at Treadwell Bay, 200 miles north of Vancouver. It shows *Shaunsea*, the LM 29 of Colleen and Lorne Shantz, rafted with Rita and Dennis Frewer's *Aquila II*, a Truant 37. They're awaiting passage through the Nakwakto Rapids, reported to be the strongest saltwater rapids in the world with a current of 16.8 knots and an 8-minute slack.

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The view from here



Risking lives to save lives

A recent issue of *USAA* magazine carried the story of a National Guard rescue attempt that occurred during “The Perfect Storm.” Not the Hollywood version; the *real* storm. The 106th Rescue Wing of the New York Air National Guard flew an H-60 helicopter into the storm in answer to a distress call. The conditions were so bad that the helicopter could not manage mid-air refueling, ran out of fuel, and ditched. A Coast Guard ship in the area was able to rescue four of the five crew. One crewmember got separated from the others and was not recovered. They lost the aircraft and one crewmember and were unable to provide assistance to the vessel in distress. A tragedy.

There are lots of ways to take hindsight shots at that mission if you want to. Don’t.

We got a little heat from an article we published in the January 2001 issue about a couple who used their EPIRB when the steering on their vessel failed. One reader said they used the EPIRB for a radiotelephone. Another reader, a two-time circumnavigator and a notable sailing personality said: “Don’t scare your readers with that kind of stuff.”

My understanding was that the motto of the Rescue Service, a forerunner of the Coast Guard, was: “You have to go out; you don’t have to come back.” Such a motto would have served notice to the crews who rowed and sailed those large open rescue boats that they were involved in a risky endeavor that might well try their courage. A Coast Guard historian set me straight on this. They had no such motto, and they were making the same tough calls then that they make now about whether to launch a rescue mission.

It is reasonable to take the position that sailing is normally a safe activity and should not be characterized in print by one over-dramatized story after another. It is also reasonable to assert that setting off an EPIRB is an extremely serious business. People may well risk their lives coming to your rescue.

The reality, as we see it, is that those events did, in fact, happen. The National Guard sent out a rescue mission that cost lives and equipment. An experienced sailing couple lost steering on a boat they were delivering and set off their EPIRB. These are tales of judgment calls sometimes made amidst fear and exhaustion.


Tales of fear and exhaustion will not attract rational people to sailing. My advice to those who find themselves frequently experiencing fear and exhaustion is “find another skipper.” On the other hand, if you sail enough, some of this will creep into your experiences unbidden, so it is worthwhile to discuss these issues.

A popular misconception is that courage is about not being frightened in threatening circumstances. Wrong. Such behavior betrays foolishness, inexperience, and immaturity. Courage is about what people do *while* they are frightened. There is no real courage without fear.

Fatigue is the natural enemy of good judgment. Fear acts against good judgment as well. Combined, they are formidable. What mortals can use against fear and fatigue is habit. Training and experience can allow a sailor to do the right thing at the right time under stress. Good performance without these is a fluke or perhaps entertaining fiction. Don’t expect it.

The Rescue Service sailors were not fair-weather boaters. They often did their work in the sort of foul weather that puts vessels in distress. Recreational sailors have more choice. They can pick their weather windows. They can go in a well-found and well-prepared craft. They can acquire the necessary training and skills and seek trained crew or train their own. By these actions, recreational sailors can make the vast majority of their experiences remarkably safe and enjoyable. *In fact, the recreational sailor has a serious responsibility to do exactly that.*

In this imperfect world, however, most sailors will eventually find themselves in threatening circumstances. In those moments, their performance and judgment will vary according to their training and experience. It will be extremely tempting to second-guess them after the fact. Go easy on that. Even if you have taken a similar test, and felt you did better, you can’t be sure it was exactly the same test.

What can we learn from all this? Authorities will launch rescue missions that can be hazardous to their crews. It is a judgment call they make all the time. Even experienced crews can get in trouble and call for assistance. It is a judgment call, too. All of us who sail should be prepared to do it thoughtfully, so that it is a safe and pleasant experience. It is a judgment call. 

by Jerry Powlas

Kudos to riggers

I'm a new sailor of eight years with a good old C&C Redwing. Destiny carried me to East Greenwich, Rhode Island, a few years back where I met some extraordinary people in the rigging business. The tiny company with the splendiferous name, New England Yacht Rigging, is run and owned by Maggie McGillivray and Charlie Russell who must have been sent by Poseidon in a rarely sympathetic moment. They are incredibly knowledgeable, patient, nice, have reasonable prices, and provide excellent rigging service. They are very committed to helping us keep our boats afloat and seaworthy. (One Water St., P.O. Box 641, East Greenwich, RI 02818; 401-884-1112.)

**Joel Gordon
Albany, N.Y.**

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**Donald "Pete" Petrie
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Many thanks and a Bravo Zulu to Jerry Powlas for those pungent and lucid memories of shipboard life in the Navy (January 2001 editorial). Yes, Jerry, she's gone. *Newport News*, our last all-gun cruiser, was decommissioned in July 1978 and finally went to the scrappers in 1993. Readers who want to track down the fate or whereabouts of their own ships can find the details in the Naval Vessels Register at <<http://www.nvr.navy.mil/nvrships>>.

**Tom Lattomus, CDR USNR (Ret)
Janesville, Wis.**

Seawind II report

Bravo for the fine report on the Seawind II (January 2001). After owning #129 for 15 years of active sailing, we confirm most of John Vigor's opinion. Our experience is different on the performance. We have passed larger sailing vessels at sea and have outperformed

larger and lighter vessels when going to windward with 6- to 8-foot waves on the nose. The Seawind II seems to enjoy these conditions without pounding while raceboats are left behind, miles behind on a long voyage of several days. We have logged 200-nm runs within a 24-hour period with 35-knot winds, outrunning a tropical depression while sailing at 60 degrees apparent and sailing side by side with an Amel 42. We have no difficulty in pointing with sloops or cutters, often passing them on a close reach in strong winds. We thought your readers might appreciate another view of the Seawind II's performance as poor performance is sometimes judged under light winds or with inexperienced operators. We pour the canvas on and have found the mizzen stays installed by Allied to be too small. They should be ¼-inch, as designed by Thomas Gillmer. This is essential for proper performance of the staysail and mizzen in winds over 20 knots.

**Don and Brenda Bundy
Port Richey, Fla.**

How do YOU spell relief?

After reading the Tom Beard article on EPIRB in the January 2001 issue, I can't believe how naive sounding these people are, particularly with "160,000 miles under their belts." Making a delivery without an SSB on board (a new boat) is idiotic. Compare the cost to the cost of pulling the trigger on the search and rescue mission. They were not in imminent danger. Inspection of the quadrant area should have been done before the EPIRB was triggered, not at some later time. The fact that the emergency tiller was functioning was the indicator of gear failure, not a missing rudder. Who designs new boats with emergency tillers that only provide "a few degrees" of motion? Any competent pre-inspection of a boat to deliver would have seen that problem. If you're going to sea as a professional, you have to act like one. No SSB, (no weatherfax?), no weather guidance from shore-based providers? The vessel itself was not carrying a properly registered EPIRB? What else was missing? How do you get insurance when you have missing

offshore transit safety gear? Every time search-and-rescue personnel go airborne, they are at risk; this fact cannot be taken for granted. It's interesting to illustrate the mechanics of an initiated alert-to-rescue. It's dumb to use it as a positive spin article essentially about going to sea unprepared and unable to deal with problems rationally.

**Greg Bowl
Boston, Mass.**

*Greg's letter is representative of several comments we received about the wisdom of pushing the EPIRB button when not in imminent danger of sinking or dying. When we accepted the article and again when we worked with the pages in preparation for publication, we realized this article would be controversial. There are only two of us here dealing with content, and **we** didn't completely agree. In the end we decided that the article shows how the EPIRB system works, and that is a useful concept to understand. Most of us will never have occasion to push one of these buttons, thank goodness, but we wonder about them just the same. Because he was trying to keep it short and to the point, Tom Beard left out a few points that he now explains in response to Greg and others who questioned the wisdom of the actions outlined in his article. We don't doubt the seamanship of the Beards and leave it to Tom to explain in more detail (his comments and Greg's have been edited for brevity).*

Continued on Page 72

Mail
Buoy





THE IMPORTANT THING TO remember about this boat is the “D” behind her name. There are about 26 different Cape Dory yachts, power and sail, ranging from the original Cape Dory 10 to the Cape Dory 45. There are, in addition, two Cape Dory 25s, but only one is the Cape Dory 25D. And she is quite different from the Cape Dory 25 without the “D” — which, incidentally, stands for diesel.

The very name Cape Dory conjures up images of traditional designs, high-quality building, and extraordinary customer loyalty. In short, the 25D is a cult boat, with active owners’ associations, sites on the Web, and high resale value.

That should be “comparatively high resale value,” of course, because as ocean cruisers go, the 25D is not expensive. On the East Coast and Gulf Coast, where most of them are, you can expect to pay between \$12,000 and \$15,000 for one.

She is a pedigreed design — an Alberg, like almost all the Cape Dory line — but she doesn’t have the usual skinny hull of his older boats. She has a beam of 8 feet on a waterline of 19 feet, a reasonably generous modern proportion, and it shows in her interior. Down below, she is probably one of the most functional mini-cruisers ever designed for two people.

She is in no way an updated Cape Dory 25, which was designed by George Stadel and originally produced by Allied as the Greenwich 24. Andrew Vavolotis, owner of Cape Dory Yachts, bought the tooling and redesigned the boat, relaunching her as the Cape Dory 25 in 1973.

And then, in the fall of 1981, the Cape Dory 25D came along, sowing great confusion everywhere.

by John Vigor

Unique interior for a *classy* classic

She was also a Cape Dory, and she was also 25 feet long, but she was wider, heavier, deeper, and derived auxiliary power from a small inboard diesel instead of a gasoline outboard.

The 25D has been compared with the classic 25-foot British design, the Vertue. Numbers of this Laurent Giles favorite are found all over the world, and many have made circumnavigations. In theory, even though the 25D is about half the displacement of a Vertue, she's equally capable of deepsea work; but for some reason she has not yet developed the same kind of reputation. Perhaps her time is yet to come.

Basic design

She has a solid GRP hull, but her decks and the cabintop are GRP/balsa sandwiches. End-grain balsa is extremely light, and it's highly resistant to crushing. It also provides good insulation against heat, cold, and sound. But it has a wicked habit of soaking up water and turning to slush if you don't take a lot of trouble to seal the through-holes for deck fittings. Luckily, balsa that has deteriorated is usually quite easy to detect, either by tapping the deck with a screwdriver handle and listening for a dull thud instead of a good solid ring, or else simply by jumping up and down on it heavily.

The 25D has an old-fashioned, hard-bilged, full keel — a true sea-going keel, slightly cut away up forward — and a deep-displacement hull. Her rudder has a straight afteredge and is squared off at the bottom. It hangs off

the end of the keel, with the rudderstock appearing well aft in the cockpit. The propeller spins in an aperture cut half from the rudder and half from the deadwood. This is a real cruising underbody, strong and very resistant to tangling with crabbers' underwater lines.

Above the waterline she looks solidly and pleasingly traditional, although her mast is taller and her sailplan more efficient than those of most traditional boats. Her cabinhouse has the chunky, purposeful appearance of a boat that works for its living, yet it avoids looking boxy. Her cocky sheerline manages well the important task of resolving the aesthetic conflict between a straight, sawn-off counter stern and a rounded bow with a moderate overhang.

The cockpit is generously sized — in fact it's bordering on too large for serious ocean work — but it does have a sensible bridgedeck to prevent water cascading down below in the event of a pooping. There is a shallow cockpit locker to starboard and a deeper one to port.

An anchor roller is built into the stemhead forestay fitting, and the foredeck also accommodates a reasonably-sized anchor locker capable of holding an anchor, some chain, and a normal nylon rode. In general, the foredeck is free of toe-stubbing fittings and feels bigger than it really is.

The standard engine is the little 7½-hp Yanmar diesel, a neat installation that weighs little more than 150 pounds. It's cooled by raw sea water and drives a two-bladed bronze propeller. The 25D's nominal range under power

at cruising speed is about 200 to 250 miles, drawing about a quart of fuel an hour from her 13-gallon tank. Access to the engine is pretty good, via a lift-out bin in the top of the covering box, and also — if you need to get really up close and serious — by taking away the companionway steps and unscrewing the front panel of the box.

Accommodations

As far as the accommodations go, Carl Alberg did a very sensible thing by putting the head where the V-berth would normally be. By opting to do without a cramped V-berth, he opened up a large toilet and storage area capable of being closed off completely from the rest of the boat — a real luxury in a 25-footer. This arrangement makes a great deal of sense for a cruising couple, for whom a V-berth would just be a place to store random odds and ends such as blown-out sails and expired flares anyway.

There are two settee berths in the main cabin, a short-looking one to port whose footlocker protrudes through the main bulkhead to form a countertop in the head compartment, and a normal-looking one to starboard that pulls out to form a double. There's also a fourth bunk if anyone should need it, a quarterberth to starboard.

A cabin sole located low in the bilge provides standing headroom throughout the boat — 5 feet 11 inches in the saloon and 5 feet 9 inches in the head compartment, which has its own deck-opening hatch and two opening

Bob and Paula Ohler sail Aloha Spirit, facing page, in the Middle Chesapeake. Dave and Jane Olson found their dreamboat, Sophie, resting in a barn in Wisconsin. They towed her home to Minneapolis, Minn., to sail on nearby Lake Minnetonka. One of their favorite additions is their "Conestoga-wagon-style awning" by Shadetree, shown in photo.





Bruce Barber may have the most extensively updated 25D anywhere. Above, a view of the standard head compartment and modifications to create a nav station on his Nancy Dawson. More about his projects on Page 8. Karma's galley, far right. Lou and Marcia Ostendorf sail this 25D on the Neuse River and Pamlico Sound with Beaufort, North Carolina, and Ocracoke Island as favorite destinations.

ports for ventilation.

Unfortunately, there's a design law that says if you stick four full-sized bunks and an oversized head into a 25-footer, you don't have any room left over for a chart table and precious little for a galley. There is a galley, to be sure, but it would delight only the heart of a Spartan. It features a twin-burner alcohol stove, which produces little heat at great expense, and a stainless steel sink whose main feature seems to be inaccessibility. It is largely hidden beneath the bridgedeck and its fresh-water pump is so artfully concealed and difficult to work that it might have been conceived deliberately to save water.

In fact, bachelor sailors might be tempted to wash their dishes in the head, where there's a sink right out in the open within reach, but for more fastidious crews, washing up on this boat will mean sitting in the cockpit with a bucket. Still it's not a bad swap for such a comfortable sleeping cabin and head compartment. And if you're handy with tools, the galley situation could be improved fairly easily.

The ports in the main cabin all open to provide wonderful cross-breezes in hot climates and almost certainly the odd drip of rainwater in more temperate climates. They are solid bronze and add greatly to the 25D's air of old-fashioned reliability.

The rig

The 25D carries a comparatively tall mast, stepped on deck but supported underneath by a compression post that takes the load straight to the keel. This avoids the very common problem of deck beams and bulkheads buckling under the constant downward pressure exerted by the mast.

The masthead sloop rig is simple, efficient, and easily managed. The mainsail has an area of 140 square feet, and the foretriangle measures 164 square feet, making cockpit sheet winches more of a cruising convenience than a necessity. The mainsheet traveler is sensibly located aft of the tiller.

Double lower shrouds support the mast at each side, and a single forestay and backstay running to the truck take care of fore-and-aft movement.

The shrouds terminate at their lower ends in massive chainplates set into the hull/deck joint, and while that interferes with the sheeting angle of the jib, it provides the widest — and therefore most stable — base of support for the mast. That's an important consideration with a high-aspect-ratio rig.

Performance

Her hard bilges and high ballast ratio make her quite stiff, and she stands up to her canvas well but, as in any small boat, you'll need to reef her mainsail

when the wind gets up to around 16 or 20 knots. She is modern enough (just) to have come equipped with efficient jiffy reefing instead of the troublesome main-boom roller reefing so favored by builders in earlier years.

She's no racer, but her PHRF rating of 252 proves she's no sluggard, either. She'll need a bit of help in calm weather to overcome the frictional resistance of her large underwater area though, and large light foresails will provide it.

You'll find the shrouds prevent you from sheeting in a 100-percent foresail tight enough for really high pointing, but if you're willing to go to the trouble of re-arranging the sheeting, you can bring the foresail sheet inboard of the shrouds for a beat, making use of a length of track on the cabintop, and take it back outside the shrouds for a reach or a run.

If you're beating in any kind of chop, you probably won't bother to change the sheeting position because you'll need to fall off the wind a little, in any case, to gain enough power to drive you through the waves.

Known weaknesses

- Poor access to the galley sink.
- Water capacity. She carries only 20 gallons of drinking water in a plastic tank. For an ocean crossing, you'd need to double that amount at least,



Nancy Dawson's cockpit at left. Bruce Barber has revised a John Gardner pram (in tow) creating a dinghy which can be stowed on the foredeck (see Page 8). He notes that the pram's not all that comfortable to row and makes more of a surface disturbance than the Nancy Dawson when under way, but his grandson loves the small boat. Below, the Olsons' Sophie shows her Alberg heritage.

carrying the extra in small cans or a flexible bladder.

- No chart table. It's not an unusual failing, even in much larger boats, but the appointments of the 25D seem so solid and complete that you notice it more here. A cunningly placed sheet of plywood or a folding table would suffice.

Owners' opinions

Bob Ohler sails his Cape Dory 25D, *Aloha Spirit*, hull #2, out of Deale, Maryland, and cruises in the Middle Chesapeake. He has been sailing for 20 years and does a lot of singlehanding. He says the 25D is ideal for that.

In his part of the world they talk about "Cape Dory days." That's when the wind is in the northwest, blowing 18 to 22 knots, and the bay is covered with whitecaps. The boat loves it.

The first thing he does when the wind starts to rise is take one reef in the mainsail. That happens at about 16 knots. "She's well balanced and very easy to control then," he says. "My wife never has any trouble with her. The boat has a little weather helm, but that's a good thing, and it never gets excessive if you reef in time."

Bob finds the boat to be good and stiff. In fact, he has sailed her in 30 knots and 5-foot seas with a working foresail and just one reef in the main. It's not the sort of thing he'd recommend you to do for long, especially at sea, but it shows the boat can take it.

He raked the mast back 6 inches to make her point better, and when he's going to windward he uses the Cunningham cringle for a flattening reef. "It makes her point 10 degrees higher," Bob claims.

"She needs some sort of headsail at all times," he notes. "It seems to help to windward, especially — prevents her hobbyhorsing and plugging away in the same hole. She'll do that if you don't have a jib to pull her over the waves." He says she's also a star performer on a reach under foresail only.

Aloha Spirit has a Yanmar 1GM single-cylinder, 7-hp diesel, which Bob cautiously describes as "adequate."

He always wears a safety harness when he's alone and strings jacklines

of 1-inch nylon webbing from the bow, around each side of the cabintop, and then back to the cockpit.

His headsail has a downhaul that leads back to the cockpit, just as the foresail halyard does, so he can drop the sail at will. Then he trims and cleats the sheet to keep the sail firmly in place on deck.

Bob's against roller furling on the foresail. "I've had it on other boats," he says. "You just never know when it will go wrong. I'd never go back to it."

For deep-sea work, Bob advises that you:

- Check the chainplates for rust.
- Get a solar panel to keep the batteries charged.
- Fit a self-steering wind vane.



Mike Smith sails his Cape Dory 25D, *Solitude*, out of Niantic, Connecticut. He has owned her since 1986 and has put in a lot of hours in all kinds of weather up and down the coast.

Solitude has a 135-percent genoa on a roller furler gear, so the first thing Mike does when the wind pipes up is crank in the jib.

At about 16 to 20 knots, the jib will need to be down to about 100 percent, and he'll take in the first of the two jiffy reefs he has in the mainsail.

"She gets weather helm as she heels over," Mike says, "but as soon as you take that reef in the main and flatten out the sail, she's perfect — easy to handle."

He finds the boat to be the ideal size for singlehanding, although she's also comfortable with two aboard. "She's not a handful," he notes. "Everything is set up nicely in the cockpit for a singlehander. Even docking is no problem."

Mike, too, has the standard Yanmar 7-hp diesel, but has stronger views about it, perhaps because *Solitude* often needs a very strong push upriver. "It's grossly underpowered," he feels. "I'd like to replace it with a 12-horse, two-cylinder diesel in a couple of years."

His advice for anyone contemplating an ocean voyage in a 25D:

- Beef up the lower shrouds. Make the standing rigging ¼-inch diameter all around.
- Secure the companionway hatchboards in place at sea.
- Add padeyes in the cockpit for your safety harness.
- Run safety jacklines of nylon webbing or tubing from the bow cleats to the stern cleats.

Conclusion

You'd go a long way to find a 25-foot boat with a better interior than this for serious cruising. Doing away with the V-berth up forward was a radical design concept but a real winner in a boat dedicated from the start to cruising.

For \$12,000 to \$15,000 (maybe a



Bruce Barber built his stitch-n-glue (actually drywall screw-n-tape) pram to fit on the foredeck of the 25D. He notes that the lashed-on gunwhale cushioning is pipe insulation in a Sunbrella sleeve.

little more if she has been upgraded and maintained to meticulous standards) you can buy a classic Alberg that will take you anywhere in a lot more safety and comfort than you'll find in almost any other 25-footer you care to name.

Further thoughts

Bruce Barber sails *Nancy Dawson*, a 1982 model, hull #77, in the Chesapeake. Some of his thoughts, taken from a letter to *Good Old Boat*:

Few changes had been made to the boat before I purchased it, so I found myself improving, in modest ways, an already fine boat, rather than undoing or reworking (or perhaps even accepting!) previous owners' efforts. A blank canvas, as it were ... If a boat has to have a "worst feature," the 25D's is the location of the galley sink, which is tucked under the bridge deck and nearly inaccessible. The best that can be said of the sink is that its removal improves maintenance access to the engine ... On the Chesapeake, the primary need for prolonged use of the engine is motoring in calms, and for this the engine (1GM) is perfectly suited. Powering upwind in waves, though, can try your patience ... Capacities — of water, provisions storage, and holding tank — are the factors that limit cruising independence. The "berths for four" provide two people a good level of comfort. The head com-

partment is downright luxurious ... The water tank is poorly plumbed. Both the deck fill hose and the vent hose enter from the side, so both are full of water much of the time, and venting is poor. I removed both hoses, and fill the tank at its quarterberth access. The vent is now a small hole drilled in the cap ... The holding tank is under the engine, with the head about 10 feet distant in the bow. These were originally connected by a hose passing through the locker under the port settee. One of my first revisions was to replace the hose with rigid PVC ... There is a lot of teak, which increases the time spent on annual maintenance, but due to the simple systems and small

size, this is still a low-maintenance boat ... The original bronze fittings are all still available from Spartan, so new cleats, for instance, can be matched to those existing ... All things considered, the 25D is a good-performing, confidence-inspiring boat, sturdily built and well-equipped. What attracted me was its traditional appearance, the Cape Dory reputation for seaworthiness, an expectation of easy singlehanding and one-person maintenance, the likelihood of few expense-related surprises, and the 3½-foot draft, which allows access where many others fear to tread. 



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. 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. In the course of writing this book, John sold his Santana 22 and bought a Cape Dory 25D, which he and his wife, June, sail in the Pacific Northwest.

Cape Dory 25D

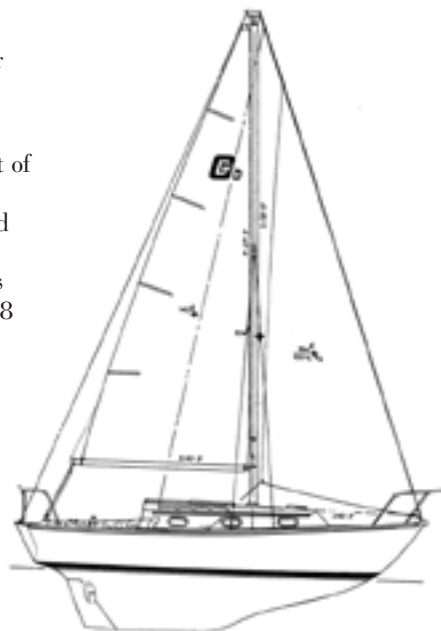
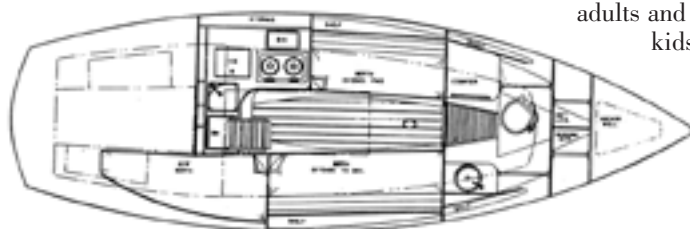
In short

Designer: Carl Alberg (1981)
LOA: 25 feet 0 inches
LWL: 19 feet 0 inches
Beam: 8 feet 0 inch
Draft: 3 feet 6 inches
Displacement: 5,120 pounds
Sail area: 304 square feet
Ballast: Encapsulated lead
Spars: Aluminum

Auxiliary: 7½ hp diesel
Designed as: Conservative cruiser

In comparison

- **Safety-at-sea factor:** 7 (Rated out of 10, with 10 being the safest.)
- **Speed rating:** Not fast, but not bad for an out-and-out cruiser. In the Northeast USA, her PHRF rating is 252. In comparison, a Herreshoff 28 ketch rates 255.
- **Ocean comfort level:** One or two adults in comfort; two adults and two kids in



Cape Dory Resources

Cape Dory 27 refit page

Peter Baumgartner
 pbaumgartner@mindspring.com
 <<http://demo.napsys.com/london/>>
 Peter told *Good Old Boat* readers about his Cape Dory 27 refit in January and March 2001 issues. Photos of the project on his site.

Cape Dory 30 Personal Page

Ed and Pat Carlson
 <<http://hometown.aol.com/skywindmcm/Page4.htm>>

Cape Dory Discussion List

<<http://members.sailnet.com/resources/links/list/index-new.cfm?id=capedory>>

Cape Dory Discussion Message Board

<<http://www.toolworks.com/capedory/>>

Cape Dory Owners' Association (California)

Micaela Baker
 P.O. Box 305
 Denair, CA 95316
 micaelaf@earthlink.net
 <<http://www.toolworks.com/capedory/>>
 Holds members events twice a year, publishes an occasional newsletter, and hosts active Web discussion.

Cape Dory Owners' Association (California)

Jo Anne Kipp
 1801 Parkwood Dr.
 San Mateo, CA 94403
 Dick Honey, co-commodore

Cape Dory Owners' Association (Lake Michigan)

Kim Richards
 Williwaw@att.net
 <<http://williwaw.home.att.net>>
 \$15 to join. Monthly newsletter is *SeaWorthy*. Jerry Hammernik is co-founder of the organization with Kim and Jan Richards.

Cape Dory Sailboat Owners' Association (National)

Bob Ohler
 5001 Valley Dr.
 Chesapeake Beach, MD 20732
 410-535-9596
 bobohler@chesapeake.net
 Publishes a bi-monthly newsletter and promotes on-the-water activities.

Cape Dory Sailboat Owners Association (NE Fleet)

Fleet Captain Leo MacDonald
 860-859-9600
 macdola@gwsmt.pnu.com
 <<http://www.toolworks.com/cdsoa/>>
 Fleet Secretary Catherine Monaghan,
 catherine_monaghan@merck.com;
 732-381-3549

Cape Dory — The Typhoon

Noel Peattie
 23311 County Road 88
 Winters, CA 95694-9008
 530-662-3364
 Prints newsletter at no cost to readers (except for a contribution for postage), also prints a directory of Typhoon owners.

Robinhood Marine Center

HC 33, Box 1460
 Georgetown, ME 04549
 800-443-3625
 rmc@clinic.net
 <<http://www.robinhoodyachts.com>>

Spartan Marine

A subsidiary of Robinhood Marine offering parts for Cape Dory boats.
 800-325-3287

Triad Trailers

A former supplier of trailers to Cape Dory and its dealers. Still has specific specs for Typhoons and most Cape Dory sailboats up to 30 feet.
 860-354-1146
 triadtrls@aol.com



Twice

AS A CHILD WATCHING SAILBOATS glide across the flat waters of Michigan's Lake St. Clair, I used to imagine they were all bound for distant adventures. Looking back, it seems I'd always dreamed of a sailing voyage that would take me beyond the confined waters of the Great Lakes to explore the open seas, particularly to the fabled islands of the South Pacific. These thoughts recurred as I spent my teenage years finishing school and then moving into my own apartment and earning a living. I nearly married and settled down at one point. Then, at the age of 21, an impulsive decision brought my dormant dream within reach when I spent my entire savings buying a used 28-foot Pearson Triton from a Detroit yacht broker.

I knew little about boats when I bought this 13-year-old 1966 Triton. Fortunately, my broker gave me sound advice when he recommended this as the best boat available in my price range. Some 700 of these Carl Alberg-

designed boats were built by the Pearson cousins in Rhode Island between 1959 and 1967, and many are still sailing. Although my broker rightfully viewed this minimally equipped boat as a coastal cruiser, I admired her long keel, low profile, and handsome lines. Instinctively, I knew she was the boat to take me across oceans. Obviously, she would need more equipment and a few structural modifications, but exactly what would be required to make her into my ideal boat would remain a mystery until I gained more sailing experience.

My sailor's apprenticeship began two years later when I quit my factory job in Detroit and convinced two friends that the best way to avoid the coming Michigan winter was to join me on a voyage to the Caribbean. That September we set out for the Atlantic by sailing through lakes Erie and Ontario and motoring down the barge canal to the Hudson River and New York City.

by **James Baldwin**

We reached Florida by a series of short offshore passages and longer detours inland through the Intracoastal Waterway. In the waterway we practiced running

aground and (unknowingly) annoyed impatient bridge operators and road traffic by trying to pass through under sail. Offshore, I nervously plotted our course and speed each hour and made wildly inaccurate first attempts at celestial navigation. Despite some further misadventures, we enjoyed an idyllic winter cruising among the low sandy islands and shallow gin-clear waters of the Bahamas. After making a crew change, we sailed through the Caribbean as far as Trinidad before running low on funds and turning back to Florida.

Strengthened resolve

That first voyage introduced me to a cruising life that suited me perfectly and strengthened my resolve for the ultimate adventure — to sail alone

around the world. I renamed my little big-hearted boat *Atom*, in honor of Jean Gau who, decades earlier, made two solo circumnavigations in his 29-foot Tahiti ketch named *Atom*. After working as yacht delivery crew and training as a marine service engineer for one year at a boatyard in Ft. Lauderdale, Fla., I prepared for my upcoming voyage by undertaking the first of several refits. To free me from the drudgery of the tiller, I installed a new Aries windvane self-steering gear. I beefed up the original 7/8ths mast rigging by adding a set of forward lower shrouds, upper shrouds, a masthead forestay, a second backstay, and a pair of running backstays. By leaving the original fractional rigging in place I gained the security of redundancy at the expense of some windward efficiency.

A weak point on the Triton is the light overhead beam supporting the deck-stepped mast. When I noticed

Huang Ho-Mei aboard Atom in Trinidad, above. She and James are currently sailing in the Caribbean. Atom's stern showing solar panel mounts, Monitor windvane, and outboard motor, at left. James using the ham radio, opposite page.



around in a Triton

*Fixing his boat in exotic places
and exploring distant locales
appeals so much, he does it twice*

a small crack in the beam and the cabintop beginning to deflect downward, I reinforced it from underneath by bolting a stainless steel U-channel frame around the original wooden beam and supporting bulkheads.

When the boat was as ready as my youthful impatience and limited funds allowed, I found I had only \$500 left. Yet I refused to consider delaying the voyage for another year or two. There is a certain wisdom to reckless youth. After all, if lack of money stopped me this year, then other insecurities could just as easily keep stopping me until my exploring instinct faded into a life of vague regrets. With an undiscovered world before me, I set out alone from Miami in June of 1984 and threaded my way nonstop for 15 days through the islands of the Caribbean to Panama.

In all but the lightest of winds, the self-steering gear held *Atom* on her course, giving me the freedom to take short naps, prepare meals, and navigate by sextant. To find some kind of harmony with the creatures who would be my sole companions, I stopped fishing and became vegetarian. After locking through the Panama Canal, I entered the 10,000-mile-wide Pacific Ocean. For six months I explored among the stunningly beautiful islands of Polynesia, Tonga, and the Solomon Islands.

Anchor lines parted

During this two-year voyage, I visited 10 islands. At each I left *Atom* moored securely to two or three anchors while I went out with a backpack for days or weeks to walk across the island and climb its highest peaks. Always I returned to find her unmolested, though sometimes one of the anchor lines had parted from chafing on coral. At that time I used only a short length of chain next to the anchors because I lacked a windlass to handle an all-chain rode. On the little island of Tikopia I was delighted to find one of the last remaining outposts

where native Pacific island culture was bravely resisting the onslaught of Western technology. Several times I was tempted to settle down among the welcoming people of these happy isles, but the dream of completing the voyage and the adventures just ahead over the western horizon always lured me on.

While awaiting the end of the Indian Ocean's typhoon season in New Guinea, I spent three months walking alone through the island's forbidding rain forest. Staying in thatched huts in remote mountain villages, I learned how to live as a primitive man — narrowly escaping death from recurring malaria, getting caught between warring tribes, and once falling 50 feet down a hidden shaft in an abandoned gold mine. A village chief who befriended me in the Highlands — an ex-cannibal who had four wives himself — tried to convince me to stay by offering me two of his daughters in marriage. This was a bargain, since daughters as fine as his were usually commanding a “bride price” of 100 pigs each. New Guinea was pure Adventure Country. I loved it, but knew I had to leave before it killed me.

Sailed nonstop

From the smothering rain forests of New Guinea, *Atom* and I sailed nonstop for 30 days through the wreck-littered Torres Strait and past the long, empty, northern coast of Australia to the open waters of the Indian Ocean. The trade winds blow at their strongest here, often at gale force for several days at

a time. We made fast passages between the islands, running with deeply reefed sails at average speeds of 130 miles a day.

Although the islands of the South Indian Ocean are less numerous than those of the Pacific, they are no less exotic. I was again lured away from the sea to walk across Mauritius and the French territory of Reunion Island. With its active volcano, knife-edged mountains rising 10,000 feet above the sea, and uncountable waterfalls pouring into lush hidden valleys where small communities live in complete indifference to the mad goings-on of the outside world, Reunion Island qualifies as the nearest thing to paradise on this earth. Perhaps my view of the island is biased, as I remember the girl there who waved goodbye from the shore when *Atom* sailed reluctantly out of the bay.

The only illness I suffered at sea on this voyage occurred after I departed Reunion for Durban, South Africa. Somewhere south of Madagascar, in a region known for frequent gales and unsteady winds, I became incapacitated from a relapse of malaria. As I lay in my bunk for three days in a lonely, helpless fever, *Atom* dutifully looked after herself, and somehow covered 200 miles through disturbed seas in the general direction of Durban.

Increasing deck leaks forced me to take drastic action during my two-month layover in Durban. Many Tritons suffer from waterlogged balsa-cored decks. I removed every deck fitting and cut off the deck's upper fiberglass layer.





Atom's head, at top, showing the Lavac toilet behind a watertight bulkhead. And the former engine compartment, above, showing the watertight cockpit locker drain hoses (shutoff valves are located under main cabin floorboard) and integral water tank built between the hull and cockpit floor.

I removed bucketsful of stinking balsa mush, refilled and leveled the deck, and reinstalled the hardware. It was a miserable job I had been putting off for a long time. Having an absolutely dry boat inside made it worthwhile.

Off the aptly named Wild Coast of South Africa, I met the first serious storm of my sailing career. As the southwester blew up some impressive seas, I turned and ran directly downwind under a bar-tight storm jib sheeted amidships. While dropping headlong down one of these slab-sided waves, the strain from the windvane steering lines snapped the wooden tiller. *Atom* instantly broached, roughly plunging her lee spreader into the sea. I remember a loud snap signaling a broken intermediate shroud. But thankfully, due to the extra rigging I had installed, the mast stayed in place. As *Atom* rolled wildly while being hammered by the beam seas, I bolted on the emergency tiller. Ironically, days later we were carried gently past the rocky buttress of the Cape of Good Hope by a favorable current in a flat calm on a brilliant sunny day.

Only two stops

From Cape Town back to Florida, I enjoyed the life alone at sea so much I visited land only twice, stopping briefly at St. Helena Island and Martinique. For navigation, I usually fixed my position with three star sights during evening or morning twilight. The night sky of the Southern Hemisphere had become a familiar field of fiery beacons and signposts. At night in the South Atlantic, I could even maintain my course from my bunk by keeping the frosty streak of Halley's Comet lined up in view through the open hatch.

As exhausting and frightening as it was at times, I now remember the easy days far outnumbering the bad. The personal rewards of the voyage were incalculable, and I never for a moment regretted my decision to go. Those two years as a vagabond sailor created an unbreakable bond between *Atom* and me and ended any chance that I could remain satisfied with the normal life of a land dweller. Within a year I would set out again, this time on a voyage alone to China and what would become a 12-year-long second circumnavigation.

Second time around

Back in Ft. Lauderdale in 1987, I began my second major overhaul of *Atom*'s vital components. To reduce the risk of collision with floating objects, I installed a watertight collision bulkhead in the bow section under the V-berth. *Atom*'s original worm-eaten mahogany rudder was replaced with a piece of 1½-inch tapered plywood sheathed in fiberglass. Then, after several months drying out on her trailer in a Ft. Lauderdale boatyard, I sealed the hull below the waterline with two coats of epoxy barrier coat.

For years I had been continuously repairing my Atomic 4 gasoline inboard motor. It had been such a beast to maintain that I decided to remove it entirely and sail engineless. I also felt that I was ready to tackle this sport on a higher level. Sailing alone and engineless seemed the best way to discover my limits. By crossing the Pacific and cruising extensively for five years in southeast Asia without an engine, I proved to myself that it was entirely practical. All that's required are a boat like the *Triton* that sails well in light air, a sculling oar, and an uncommon degree of forethought and patience.

Borrowed motor

To transit the Panama Canal I borrowed an outboard motor, but barely used it as we took advantage of a brisk following wind to complete the majority of the passage at 6 knots under spinnaker. When I arrived in Hong Kong I found I was unable to get a permit to make a river journey into mainland China as I had originally planned. I did manage to navigate the shoals of Chinese bureaucracy and cruise the mainland coast, however, by leaving *Atom* on a mooring in Hong Kong and signing on as first mate on a three-masted Chinese junk for the British-sponsored Marco Polo Expedition. Between delivery jobs and cruises around Asia on *Atom*, I

stopped to work for two years as production manager for Hans Christian Yachts in Taiwan and Thailand.

Supervising the construction of these well-designed cruisers gave me new insight into boatbuilding techniques as well as the funds necessary to continue making improvements to my own boat. When I made my final departure from Hong Kong, *Atom* was fitted out with all-new teak exterior trim, an improved Chinese sculling oar, three stainless steel anchors, a new dodger and Bimini, and a hefty bronze anchor windlass, among other things.

I upgraded my self-steering with a new Monitor windvane. The Monitor's size may be overkill for a 28-foot boat, but its performance has been exceptionally good, even in light air where the Aries vane had struggled to find its way. I also opted to rejoin the modern world by adding GPS, an HF-SSB transceiver, and a 3-hp outboard motor that hung on an adjustable stern bracket.

For another two years I traveled through the best cruising grounds imaginable among the hundreds of islands in the central Philippines. My days of singlehanded came to an end on Leyte Island when I met an island princess. Marjorie Lacaba was a fisherman's daughter with the innocence and courage to join this mad foreigner on a small boat headed for Africa. We sailed together for the next three years through the Philippines, Indonesia, and across the Indian Ocean to Madagascar and South Africa.

Another refit

In South Africa it was time to give *Atom* another thorough refit. I discarded her mast, due to excessive corrosion between the aluminum and the bolted-on bronze sail track, and replaced it with a new anodized aluminum mast with a molded slot for sail slugs. My new masthead rig was two feet shorter than the original fractional rig. I now added a Harken jib furling system but kept two of my working jibs and a storm jib to use on an inner forestay if the furling ever became inoperable. To give extra support to the mast, the inner forestay normally attaches to a heavily reinforced pad eye halfway between the mast and the stem, where it does not interfere with tacking

the jib. If I ever need to hang a sail on it, there is a wire eye strap near the bow that it can connect to.

To support the inner forestay, I installed intermediate aft lower shrouds that can be set up like running backstays but which I usually keep attached to chainplates just aft of the lower shrouds. These sort of semi-permanent running backstays have a plastic sleeve on them to prevent chafe on the mainsail. They not only act as support for the inner forestay but also will provide a degree of redundancy if my backstay or a shroud should ever break.

"That first voyage (Detroit to the Caribbean) introduced me to a cruising life that suited me perfectly and strengthened my resolve for the ultimate adventure – to sail alone around the world"

Down below, I modified most of the lower storage lockers into watertight compartments by adding sealed partitions and gasketed access hatches. I've added enough of these sealed compartments that I'm confident you could knock a hole in *Atom* anywhere below the waterline, and she would remain afloat. Even the Lavac toilet was placed behind a watertight bulkhead to prevent any of its plumbing fittings from flooding the boat.

My Triton came with a plywood cabin sole covered by a thin veneer of teak. Over the years the teak had become worn and chipped until it looked so hideous I covered it with a piece of outdoor carpeting. While rebuilding the interior, I resurfaced the plywood sole with 2-inch-wide strips of African iroko separated by lines of black Sikaflex. I converted the area below the V-berth, where the original 23-gallon fiberglass water tank was located, into a 43-

gallon integral water tank whose bottom was the hull of the boat itself. Another 30-gallon integral tank was installed in the otherwise useless space between the cockpit floor, the cockpit side lockers and the hull.

I fit the two deck scuppers with valves that allow me to divert rainwater collected on deck to a hose below deck that I insert into the water tank or use to fill jerry jugs.

In South Africa I replaced my single 12-volt battery with four 6-volt golf cart batteries wired into a single 12-volt bank of over 400 amp-hours capacity.

To recharge them I use two solar panels, each rated at 43-watts output. With a good charging system and massive battery storage capacity, I

chucked my portable gasoline generator and replaced it with an 800-watt inverter. Even with all this electrical capacity, I replaced all my power-hungry incandescent lights with fluorescent or halogen.

Atom was now in better shape than she had ever been since her birth 33 years ago. This was fortunate because she would soon be tested to the limits in her second passage around South Africa. After our first year in South Africa, my companion of three years decided she would not spend one more cold, dreary winter living in a boat that was being rapidly torn to pieces and slowly rebuilt. It was sad, but understandable, when she boarded the plane with a one-way



Atom's interior. Note the raised V-berth.



Atom under spinnaker in the Indian Ocean.

ticket to her home island in the Pacific.

As replacement crew I took on Alex, a young French traveler who admitted to having no sailing experience. This I considered an advantage, as the coming discomforts of sailing a small boat around the Cape of Good Hope are best left to an innocent's imagination. His only other qualification was that he'd been in the elite French commando marines, so I guessed he could handle whatever hardships might come his way.

Port to port

On my first rounding of the Cape 12 years earlier, I sailed nonstop from Durban to Cape Town in 10 days. To make it more interesting and (I thought) easier, this time around I took the standard strategy of running from port to port between favorable weather forecasts. Unfortunately, due to either El Niño, or just God's will, that year the South African coast was plagued by an unending succession of westerly gales. With the rest of the international cruising fleet, we crawled and beat our way from port to port through one cold front after another.

Upon rounding Cape Agulhas, the southernmost tip of Africa, Alex and I were congratulating ourselves on our clever timing when out of nowhere came a southeasterly storm, locally called a Black Southeaster. In Cape Town, the wind-weary locals hardly notice the average 40-knot gale, which they refer to affectionately as the Cape Doctor. But even the rugged Cape Towners furl their umbrellas and curse the dreaded Black

Southeaster. For two days we ran off, hove to, and even tried to run for shelter at one of the fishing harbors in False Bay.

By deciding to go into False Bay I had weighed up the sailor's classic dilemma of choosing between seeking safe harbor in a storm or staying offshore with plenty of sea room. My decision to attempt making port was partly influenced by my crew. Alex may have been the only marine commando never to find his sea legs. During the height of the storm, he retreated to his bunk, drenched from the icy waters that had gone right through his faulty foul-weather gear, teeth chattering like Spanish castanets, and heaving his guts out into a bucket.

First encounter

Because katabatic winds coming off the mountains increased the closer we worked our way in toward port, I decided to exit False Bay and take our chances offshore. This was also my first encounter with hurricane-force winds, and I was surprised to find most of my well-planned storm tactics were totally unworkable once the wind had laid us over flat and breaking seas were sweeping the decks. Going forward to hoist the storm jib on the mostly submerged foredeck was impossible and, besides, I realized my storm jib was ridiculously large for winds gusting more than 80 knots. Because of a lack of sea room, I couldn't deploy the sea anchor. My parachute-type sea anchor needs a minimum scope of 600 feet of line to be effective, and once clear of the coast there was too much shipping in the

area to sit there as an unmaneuverable 600-foot-long target. I was thankful that at least my cockpit lockers were now individual watertight compartments because the lee side of the cockpit was constantly awash.

We eventually managed to hoist the tiny 12-square-foot storm trysail which, along with a tiny corner of unfurled jib, allowed us to claw our way offshore, saving us from being dashed to pieces against the cliffs of Cape Point. Early the next morning we weathered the surf-beaten cliffs of the Cape Peninsula by a narrow mile and turned downwind to round the bony finger of the Cape of Good Hope under bare poles. *Atom* stood up remarkably well to this storm, the only damage being some chafed lines and repairable cracks in the deck-stowed kayak. Even Alex's wounded pride recovered when I congratulated him on surviving the worst storm he was ever likely to see. Surprisingly, he agreed to continue on with me to Brazil.

Dream crossing

As if compensating for the severe beating, we crossed the South Atlantic with hardly any effort. Day after pleasant day, *Atom* rode the waves with sails spread like giant butterfly wings before the gentle southeast trade winds. In Brazil I made use of dry-out legs fabricated out of stainless steel pipes to dry the boat standing upright between tides. I left Alex in the care of four lovely barmaids at a riverside disco on Brazil's northeast coast and continued on to the Caribbean. I not only lost my crew in Brazil, but I also lost my outboard motor to an envious fisherman who figured he needed it more than I did — which may have been true, after all.

After 20 years of cruising the world's oceans, my 35-year-old Triton is in every way a better boat than new. I've never thought of replacing her with another boat. And why would I, now that she is everything I need in a boat? Over the years, *Atom* has evolved into a self-sufficient and capable cruising boat that has brought me through numerous adventures — with more to come.



James has been published in many popular sailing magazines. Some of his other articles can be down-loaded at <<http://www.mightywords.com>>. Contact him at: yachtatom@hotmail.com.



The Metal Boat Society

These days, when you think of boats, you more than likely think fiberglass. Heck, almost all the sailboats out there seem to be FRP. Stop to ponder a bit more and you'll probably remember wood. It used to be that all boats were wood, but these days they're the exception. Many folks are leery of upgrading and refitting an old plank-on-frame vessel, what with the potential for finding major decay, replacing fasteners, and such. Wood-epoxy boats don't suffer from any of these drawbacks, and are most certainly good values, however. Still, the last material you're likely to hit on is metal. This is a shame as both steel and aluminum (and even the exotic and expensive copper/nickel) make fine boats.

Indeed, old trawlers, tugs, and yes, yachts, of steel and aluminum make excellent choices. Ranging from gargantuan conversion projects to simple upgrades, metal craft are well worth consideration. Of course, there's the home-building route. As large as such projects are, this is one of the best ways to get your dream cruising machine at a cost you can afford, assuming, that is, that you have the skills, time, and exceptional patience for such an undertaking.

But where do you go for information on metal boats? How can you judge an old metal boat's condition? What tools do you need to make repairs and modifications? How about paint, rust prevention, galvanic isolation? Should you insulate the hull and, if so, with what materials? Are integral tanks OK, and how do you clean and inspect them?

Does metal limit hull shape? What suppliers, designers, and surveyors have the knowledge and experience to help you through your projects?

There are several good books on these subjects, including Tom Colvin's *Steel Boatbuilding*, Volumes 1 & 2; Gilbert Klingel's *Boatbuilding With Steel*; Ernest Sims' *Aluminum Boatbuilding*; and my own *The Elements of Boat Strength*. There is, however, another useful resource, though it's little known — the Metal Boat Society.

Founded in the Puget Sound area in 1987 by Sheila Moir and LeCain Smith (who were building their own metal

dreamboat, *Perelandra*), the Metal Boat Society is a non-profit, all-volunteer organization. It's dedicated to supporting and providing information to metal-boat builders, buyers, and owners. Originally, this information was published in their *Metal Boat News* newsletter, but for many years now, this has been replaced by the larger and more comprehensive *Metal Boat Quarterly*, affectionately known as *MBQ*.

The articles cover a wide range of subjects. Designers such as Tom Colvin, Michael Kasten, and Patrick Bray have shared their knowledge on subjects as diverse as twin keels, surface preparation, speed and powering, plate cutting, and more. Builders, too, have written on everything from insulation questions to deck fittings and paint systems.

Of course, there are also fine and exciting cruising stories of voyages on metal boats, including adventures by Moir, Smith, and the Colvins. Of equal interest are letters from members actively engaged in metal-boat building, repair, upgrading, modification, or cruising. These letters not only give insight into what it's like to work with metal, but

they are a wonderful source of useful information on what's really functioned well in practice (and what hasn't). In addition, *MBQ* frequently features design reviews. Not only have Colvin's, Bray's, and Kasten's designs been covered, but also those of Scott Sprague, Dudley Dix, Laurent Giles, Charles Withholz, and John Atkin.


Over the years, *Metal Boat Quarterly* has undergone several changes. The most recent is a change in editors. For about five years, ending in August 2000, designer Michael Kasten was the *MBQ* editor. As a designer myself, I quite

liked the direction Kasten took. He was clearly aiming to include more technical articles and to make *MBQ* a reference source not only for home builders and repairers but for professional builders and designers as well. I think he struck a great balance.

The new editor, Metal Boat Society

president Lynn King, has de-emphasized the professional-level information a bit. He's returned *MBQ* to more of a home-builder's and how-to periodical. Nevertheless, in two recent issues there were articles on precut metal-boat kits, angle grinders, steel masts, appropriate mast sections, foam insulation, electric-system grounding questions, a woman's

perspective on metal boats, tool tips, a Bruce Roberts radius-chine 39-foot cutter design, and a 30-foot radius-chine Dudley Dix sloop, not to mention classified ads, cruising recipes for deep-sea chow, and more. Not bad.

If you're considering a used metal boat, or even if you're building a metal boat for yourself, the Metal Boat Society and its *Metal Boat Quarterly* are well worth a look. The Metal Boat Society holds an annual festival (the next one is on the Columbia River, Wash., in August this year). The festival is open to the general public. And they host an Internet Web site at <<http://www.metalboat-society.com>>. For more information, contact: Metal Boat Society, P.O. Box 61856, Vancouver, WA 98666; 360-695-4861; fax: 503-286-9991. 

Designing yachts and commercial vessels out of his New York City office, Dave Gerr, N.A., is the author of Propeller Handbook, The Nature of Boats, and The Elements of Boat Strength, published by International Marine Publishing Co., Camden, Maine.



by Dave Gerr



“JIMMY? IT CAN’T BE. YOU’RE DEAD!”
 “I’m standing right here in front of you, Bob. I’m not dead.”

The shallow, wrinkled face of Bob Wainwright went from surprise to sadness. “Why *aren’t* you dead? You said you’d be dead. I mourned for you.”

Jimmy Sangster looked down at his friend of 75 years and read the disappointment in his eyes. The park around them was quiet on a crisp, fall day with no one walking through the brilliant carpet of red and yellow leaves laid amid the sparse stand of lonely, naked trees. Bob sat on the bench the way he always had since moving into the seniors’ home across the street. His shoulders were stooped, his hands rested on the curved handle of his cane, and his knees, showing bony and thin through his trousers, were given to shaking as if he had to go to the bathroom all the time.

In contrast, Jimmy Sangster stood stiffly at attention to his full height of six-foot-three. He was still an imposing figure of a man at 84 years of age, with a shock of thick, white disheveled hair over a tanned, leathery face, broad shoulders, barrel chest, and only a slight paunch around his middle. In his youth, he’d been six-foot-five and proud of it. He decried the loss in stature

Friends forever ... fiction with a touch of truth

**by Don Davies
illustrations by
Scott Kennedy**

and wondered where the two inches had gone. Perhaps the same gremlin that had snuck in one night and pasted thickets of springy gray hair over his eyes had also filed away at the soles of his feet. Such were the mysteries of aging.

He looked down at his stooped friend and pictured him once again on the day they’d met by the railway tracks, hitching rides. Bobby had been 10 then, with a wiry, thin body and a thick, black tangle of hair. Jimmy was only nine, but already stood almost a head taller. Still, he’d never mess with Bobby. Bobby had a toughness and determination that more than made up for any size disadvantage. In a fight or hopping trains, he was fearless and relentless. And now, all these years later, it took all that determination and guts just to get up in the morning and shuffle across the street to the park.

“What’d you do, chicken out?” asked Bobby, looking up, feeling his hands shake on the cane, and regretting the words as soon as they’d come out. Jimmy squared his shoulders and looked down at the pale white expanse of skin where a 10-year-old’s thick, black hair had been.

“Doesn’t matter,” apologized Bobby, quickly. “It’s just that for 75 years you were always the one person I could count on to do what you said you were going to do. You’re the last idol to fall, Jim, but at least you lasted longer than me.”

Jimmy sat down beside his friend and the bench squeaked

Neptune's autumn

its objection. "You been cashing my pension checks like we planned?"

"Sure." Bobby smiled at the thought of the government and Sun Life finding out they'd been paying a dead man, but not until long after they were both gone.

"You got any of the money?"

"Got it all, more'n \$1,800 right in my sock. Cash money, and no one at the home knows a thing about it."

"Thought you'd buy a VCR or something."

"What for? Can't run one of the damn things anyway."

Both men stared at the ground and said nothing for a long time, struggling in an awkward silence. Bobby felt the numbness in his fingers and toes from the diabetes; he would have to go back soon. Still, he wanted to know.

"I'd toast you every morning with my prune juice, you know. Every day for the last three months I'd raise that glass high in the air and say, 'Here's to my best friend, Jimmy Sangster. Lived like a man, died like a man.'" Jimmy leaned back, visualizing the raised glass and toast to an uncaring room full of old folks, but said nothing. "So why didn't you die?" demanded Bobby.

With a long sigh, Jimmy began. "I did what I said I was going to do, Bob. I went down to the boat and there she sat, just the way I'd left her. New owner hadn't even changed the lock. According to the harbor master, he's only had her out a few times over the past six seasons."

"You talked to the harbor master? But I thought you were just going to jump aboard and take her."

"When I saw her I knew she hadn't been sailed in a long time. Harbor master told me the owner was in Europe, so I just said he asked me to take her over to Long Beach for refurbishing. He could tell I knew the boat and that was that."

"So you slipped her lines and out you went, just like you said you would." Bobby's shoulders straightened a bit and his eyes started to take on a twinkle that had once belonged to a 10-year-old crouched beside a railway track, ready to jump a slow freight train.

Jimmy turned to face his friend. "You know, that engine started on the third crank. That's an amazing boat. It felt just like I knew it would. I guided her out past all the piers, waving to everyone just like we used to, and she just hummed along. I cleared harbor under power and then put up the main and the jib, pointed her west, and let her sail. It was a beautiful sunny day with a gentle wind, and the sails filled, and she leaned into it. God, it was a beautiful day to die, Bobby, a beautiful day to die."

"And you didn't take any food or water or anything with you?"

"Nope, not a thing, but after I put her on autopilot and went below, I found the tank was full of fresh water, and the galley was stocked with all kinds of canned goods and a bottle-and-a-half of Pinch."

"But you said the guy was in Europe? Hadn't been on the boat in months?"

"Right," shrugged Jimmy, "but he paid one of the kids at the marina to keep her stocked in case he got a chance to come back and go for a sail. I found that out later, when I brought her back."

Bobby had been sitting a long time. He wiggled his butt on the hard wooden bench. He felt an ice-cold deadweight from his knees down. It would be difficult to get up. "So why'd you bring her back? You said it when you left. You got arthritis in your hands and both knees. You got a heart condition. You got the prostate problem. Life wasn't going to get any better, you said."

"I said it, and I meant it." Jimmy leaned into the conversation. "The first day I didn't eat a thing, and I didn't have the medication with me. I let her just sail out into open ocean. But somewhere around nine or ten, in the dark, the breeze stiffened, and she took a hell of a heel. I had to go forward and take down the jib

on a plunging deck awash in seawater, then a reef to the main, then I hoisted the working jib, and then the angina hit. I went back to the cockpit and waited. Hurt like hell, but I thought it was a great way to go."

"How'd you get the jib down? That was a two-man job 20 years ago."

"Don't know. Didn't think I'd have the strength, but I got her done."

"Jeez."

"Anyway, my chest felt like Neptune was standing on it, so I went below and got the bottle of Pinch. Next thing I know, I wake up to a beautiful sunrise, and she's sailing along flat as you please. My hands hurt like hell from the ropes and the dampness, and I thought my legs would break off when I first moved them because I'd fallen asleep in the cockpit, but as the sun warmed me, things got better. Made myself a coffee and put up more sail."

Bobby sat enthralled at the story. He'd forgotten the numbness in his legs and hands. He remembered when he and Jimmy would sail up and down the coast for weeks on end, stopping at each yacht club, buying drinks and meeting people. Those were great days.

"... as I hung overside there, my feet in the water, the waves tugging and tearing at me, trying to pull me to the water, my hands numb, I said to myself, 'This is what you wanted. Just let go and it'll all be over.' But I couldn't let go, Bob, I couldn't let go."

"It went like that for three days," continued Jimmy. "Didn't eat a damn thing. Drank coffee in the morning, water all day, and Scotch at night. Found the prostate got better and better so's I could piss over the side without dribbling all over myself. I'd get a shot from the ticker every now and then, but I'd just stop working and rest until it was gone. Then on the fourth day, the storm hit, and I figured that was it."

Bobby leaned forward, putting all his weight on the cane and pushed down hard to stand up. He shuffled his unfeeling feet to get some circulation back into them. Jimmy just stared up at him as he hobbled back and forth, supporting himself on the cane. "Well, go on," Bobby said, almost angrily.

"Well, it was one hell of a blow. Wind speed indicator showed she was going at 60 to 70 knots. Got the jib to the deck and tied down. I was at the mast trying to get the main down when the mainsheet let go at the buckle, and the boom nailed me in the shoulder, sending me to the rail. The main was halfway down and filled like a pillowcase. She was plunging and bucking into the huge swells, and I thought she'd sail right under. I was lying on the deck, my shoulder hurting like hell when a wash of water picked me up and threw me against the rail. Would have gone right over, but I reached up with one hand and grabbed on."

"Seventy knots with that main loose and not reefed. That'd rip the mast right off her," Bobby said.

"That's what I thought."

Bobby's pace quickened as he limped back and forth in front of the bench. His toes were still numb, and he waited for the next words, which came haltingly from the sitting figure staring down at the green wooden planks of the bench.

"Bobby, as I hung overside there, my feet in the water, the waves tugging and tearing at me, trying to pull me to the water, my hands numb, I said to myself, 'This is what you wanted. Just let go, and it'll all be over.' But I couldn't let go, Bob, I couldn't let go."



Bobby stopped his pacing a moment and looked down at his friend. There was moisture in Jimmy's eyes along with a very clear sense of the mystery of that moment. Jimmy looked up, seeking an answer from his friend. "I was four days out, in the middle of the ocean, fighting for my life in the worst gale I've ever seen. It was perfect, and I couldn't let go."

"Course not," said Bobby. "A challenge like that, you



couldn't just quit. Winning against all odds, that's what life is all about!"

"I suppose. I don't know how, but I hung on there for at least an hour until it let up a bit and I could pull myself into the cockpit. I cut the main halyard and went below. My chest hurt like hell, thought my shoulder'd been broke, and I fell asleep in the main cabin with the hull rockin'

like a roller coaster. Never thought I'd wake up, but there I was again the next morning, sipping coffee on deck in a pouring rain. The wind had died down, but it was cold and wet. I jury-rigged the main and turned her around, and here I am, Bobby, and I don't know why. As soon as I tied her up, I knew I'd made a mistake. I should have stayed out there. I should have died. There's nothing here but dried-up old memories and young people pushing you out of the way. I don't know why I came back."

Bobby leaned heavily on the cane and sighed. "I know why you came back, Jimmy."

Jimmy looked up in surprise. "Why?"

"You came back for me."

Like a hand drawing a line on his face, Jimmy's mouth slowly arched into a broad smile. "You! You! You wouldn't last five minutes out there. Take you off those blood thinners, and your arteries will clog up like grease in a drain pipe."

"Ya, well, we'll see. Maybe I'll be the one pushing your carcass over the side."

"Jeez, you won't even make it to the boat. Look at the way you're limping."

"Ya, well, you'd limp, too, with a wad of bills in your sock. Now let's get going before they come looking for me."

Bobby turned and straightened his back and shoulders as best he could. He moved off down the gravel path away from the barren trees, away from the park bench and the old-age home. Jimmy sat there a long moment and then rose and followed him.

"It's October, Bobby, there ain't going to be many sunny days."

"Maybe, but there will be Pinch, and sardines, you know the small ones we used to have aboard. Got to get some of those." Jimmy fell into step beside Bobby's limping gait.

"So now we're going to the grocery store. And I'm going to stand there while you take off your shoes and socks in the middle of the check-out line to pay for this stuff."


"I'll get the money out of my sock in the bread section. And fruit. We'll die of scurvy before anything else. You'd never think of fruit."

Jimmy put his hand on Bobby's cane and brought him to a halt. The two men turned to face each other, wrinkled old warriors planning their final battle. "What about your stuff at the home?"

"Nothing there I need, Jim."

Jimmy pulled himself up to his full height, feeling Bobby's hand shake on the cane beneath his, "Whichever one is left aboard raises a glass every night he's able, to us."

Bobby put his hand over Jimmy's and felt a warmth come back to his numb fingers. "To us."

The afternoon sun hung low above store rooftops lining the main street of the small town. The two silhouettes stood facing each other on the sidewalk. Behind them, the paved street stretched down to a pier far in the distance. The cold wind of a disappearing fall day swirled around them. They turned toward the harbor and leaned into it. 

Don, a freelance writer, sails a 1974 Grampian 30. He lives in Toronto, Ontario, and sails Lake Ontario with the North Channel and Georgian Bay as favorite destinations.



Year of the “quick”

We owned our Chris-Craft Capri 30 for seven years. Each year our annual haulout included a long list of improvements and things we wanted to fix. My dream was to have a year when all we did at this annual event was paint the bottom and change the zinc. That year finally came in 1999. I looked forward to it with excitement.

My wife, Robyn, had different plans. As the month of the haulout approached, she made a suggestion: “Honey, since we don’t have any *real* work to do on the boat this year, could you replace the cabin sole while it’s up? You have the week off anyway.”

I should have known better, but I said yes. After all, I *had* been promising

to replace the sole for six years, and it really was *only* a one-day job.

This was the first of many conversations that started with “Honey, since we . . .”

This is the list of the major things we completed during the year of the “quick” haulout:

- Replaced the sole.
- Replaced the Formica countertops.
- Replaced the leaking mid and forward ports with opening Bowmar ports.

These items started a season-long trend that included refinishing the entire interior, refinishing the mahogany, remaking the

dodger, remaking the anchor supports, and refinishing the deck.

During the course of this effort I learned several useful tips (in addition to this one: never tell your wife that you plan a short haulout). These might be useful to other boat owners.

First and foremost, I learned about a tool called a Roto Zip saw. Robyn discovered it, graciously bought it for me, then declared it might be real handy. She’s like that, bringing me new tools and expecting me to put them to use. This is a most valuable tool and nearly essential for anyone attempting to restore an old boat. It can be used to cut any shape against a variety of contours and to whatever depth is

required. The carbide tip blade lasts for an exceptional number of cuts. The standard blade can be used for cuts which require the smallest possible blade-cut width but will not last as long. If you do your own work, you will find this an invaluable tool.

Easily removed

The first job was to replace the sole. The original sole was tabbed to the hull sides and counter cabinets. This

was easily removed with the Roto Zip.

However, there were several places

that I could not reach with the tool. I dealt with this problem by placing the Roto Zip cutter in a standard Dremel tool. I did not have the control when using the Dremel that the Roto Zip gives, but it was a useful trick for tight places. When replacing the sole I made the entire middle section (about 8 inches wide) removable from the head to the engine compartment. This removable section allows access to the centerboard pin, making it possible to clear debris from the drain path all the way to the bilge. Bracing was permanently attached to the removable portion of the sole so this section could rest against the hull to prevent flexing. It’s a little tricky to match the contour of the hull, but the stable floor surface is worth the extra effort.

My next task was to replace the countertop, no small task, but it was easier than it looked. I first removed everything mounted on top of it, then the countertop itself could be removed. The countertop consisted of laminate over marine plywood that was screwed to the cabinet from the bottom and the front. The screws on top were hidden under the laminate. To get to them, the old laminate had to be destroyed. I found that the laminate could be broken loose in very large sections by

by David Waltrip

Before and after is just a state of mind for refitters and sailors like Dave and Robyn. No sooner did they turn this Capri into a dreamboat than they sold it and started on a Caribbean 35, another Chris-Craft.



haulout

using a wood chisel, but it could not be removed intact. Once it was removed, it was easy to remove the plywood top. That done, it was possible to sand this surface with a belt sander to ensure good adhesion for the new laminate. Once the top was removed, I had excellent access to the icebox. This was important because there was a significant amount of space between the box and the engine room, and it is easy to add additional foam insulation to protect from engine heat. I added about 1½ inches of insulation. This added barrier almost doubled the amount of time we could go without buying ice, from two to four days.

Jigsaw cut

I cut the laminate for an exact fit along the back edge. This was done with a jigsaw, using a hollow-ground blade. It did not give a perfect edge, but nobody will ever see this edge. The front edge and the edges around the sink and icebox were cut to have an overlap of approximately ⅜ inch. Gluing the laminate in place after the plywood counter was installed proved to be the easiest part. I followed Don Casey's instructions and placed waxed paper over the surface after applying the Formica contact cement. Once the new laminate was exactly where I wanted it, I slid out the waxed paper one piece at a time. The result was a perfect alignment. The final step was to finish the visible edges, using a router and a laminate bit to give a perfect finish.

Resources for Chris-Craft sailors

Chris Craft Discussion List

<<http://members.sailnet.com/resources/links/list/index-new.cfm?id=chriscraft>>

Chris-Craft Owners' Association

Robert Pemberton, 803-773-2160

pemberton@sumter.net

<<http://people.ne.mediaone.net/dje/ccsail.htm>>

Owners' association for all Chris-Craft sailboats (Apache, Comanche, Cherokee, Capri, and Caribbean).

Chris-Craft Apache 37 Web page

dje@mediaone.net

<<http://people.ne.mediaone.net/dje/apache/main.htm>>



Restoration relived

One small project at haulout time leads to another and another

The third major "Honey Do" was to replace the portlights. The Capri 30 came equipped with two opening port lights that had developed a permanent leak after 30 years. We'd been trying to fix it for seven years. We finally decided to replace the ports with new ones and to add opening portlights over the V-berth. Of course, one cannot buy the same size window as the originals, so we had to order the next size up. My wife called the retailer to check on availability while the boat was on the hard. They told her they could provide three-day delivery if she wanted to pay the extra shipping cost; otherwise it would be two weeks. She agreed to pay the extra money, and we removed the old

ports. When the ports had not arrived after five days, she called again and was told that the three days was *after* they received the ports from Bowmar in about six to eight weeks. Hell hath no fury like my wife as an angry consumer. We received the ports four days later.

Installing the ports was extremely easy. I again used the Roto Zip to open the space for the larger ports. I sealed the exposed edge with epoxy and installed the windows without a significant problem, although installation did require two people, one inside and one outside. (Note: I did not consider the small hole I drilled in Robyn's finger while she was holding the outside frame to be a significant problem.) The added breeze is wonderful, they do not leak, and Robyn didn't even complain.

The quick haulout prompted a season of additional projects, resulting in all the things we had talked about for years being completed, and the boat becoming a truly beautiful cruiser. So what to do when you've completed the upgrade? We bought a Chris-Craft Caribbean 35 in serious need of our attention.



David's two passions are rebuilding old boats and sailing. He and Robyn cruise the Chesapeake from May through October and

are hoping to cruise full-time in 5 years. Sailing and boatyard partners in all respects, the Waltrips argue only about whether David really can't varnish or just pretends to be inept in order to avoid the ordeal. When do you suppose Robyn first suspected this subterfuge?

Endless sailing

Retired? Retiring? Not

Reese Palley

"Putting around the golf course is my idea of death," says Reese Palley. "Why die before your time?"

After 20 years as a successful art dealer, Reese reinvented himself as a sailor and writer. Reese, whose personal motto is "Always certain, often wrong," bought a 32-foot sailboat and decided to cross an ocean.

"It was an enormous conceit, since I really knew nothing about sailing," he recalls. "I think that I had a vague and formless expectation that, at sea, I would discover something of value in myself."

Today, Reese is the author of three books about sailing: *Unlikely Passages*, *There Be No Dragons*, and *Unlikely People* (see Page 64 for more information). There was a time, however, when Reese did not know how to sail. In fact, he didn't come to sailing until his early thirties, in the midst of his career as an art dealer.

"At the time I was up to my armpits in people," says Reese. "Buyers, sellers, wives, lovers, kids, lawyers, and the whole panoply of other folk who need something from you. We lived by a quiet enclosed bay in New Jersey and, in a blind attempt to save something of me for me, I bought

But of course, sailing. What better activity to begin or continue as you near and reach retirement years?

a little sailboat. I thought that I was seeking adventure, but I found something so much more valuable...solitude.

"My first summer on my boat was spent with my jib sheeted to windward," he says. "I was too proud to ask. I was certain that I could figure it out for myself. Actually, you only really learn to sail by sailing."

Reese insists there is no parallel between his life as an art dealer and his life as a sailor, except the conviction that he could succeed against "the two most

When he first set off on *Unlikely VII*, Reese didn't know he'd spend the next 15 years circumnavigating. At the beginning of his journey, he discovered that it was easier to look ahead than behind him.

"You kind of get into the habit of going on and a reluctance to face the land and its toxicity," says Reese. "Later, I learned that Moitessier went around again (in a 1968 solo round-the-world-race) rather than deal with the prospect of fame and admiration."

In the prologue to *Unlikely Passages*, Reese wrote "An Encouragement of Ancients," in which he entices the newly retired to embrace life at sea: "Clear your body of land-based pollutants, lose weight, take off your clothes, and find a new faith in God." Reese discusses all this and more.

"We are perforce slower and weaker than the young apes," explains Reese. "Since sailing needs neither speed nor excessive muscle, we can sail forever. The real attraction of sailing for an old guy (or gal) is that there is essentially no end. Sir Francis Chichester sailed his last circumnavigation and achieved his first 200-mile day alone in a 55-footer while dying of cancer.

"I cannot conceive of ending my sailing life," he continues. Although his boat, *Unlikely*, took a beating in Hurricane Georges in 1998, Reese took a year to re-fit the boat and prepare for his next adventure. He and his wife, Marilyn, hope to retrace the last passage of the *Fantome*, the 282-foot windjammer schooner that went down with its 32-year-old captain and 30 crewmembers during Hurricane Mitch in October 1998.

Reese sums up his current thoughts about life with a note of optimism.

"At 79," says Reese, "I am somewhat



dangerous competitors of all: the Art Mafia and the Sea."

Reese spent one summer teaching sailing and restoring a 26-foot boat. When pressed to disclose his technique as a sailing instructor, Reese admits, "My system of teaching is to admonish my student to closely observe where the wind is coming from. After that, I usually doze off."

In general, Reese has little interest in keeping a finger on the pulse of the sailing community. "The whole purpose of sailing to me is to create distance from people...even from other sailors," says Reese.



The indefatigable, incorrigible Reese Palley at home in any boatyard and with Marilyn, above.

these sailors

by Michelle Potter

interested in dying, but much more interested in what curious project will I be involved in next year.”

Daniel D’Urso

At the age of 81, Daniel D’Urso is still building and sailing boats. “I like being out on the water,” says Dan. “You’re getting away from everything when you cast off your lines and head out to sea. You leave all your problems behind.”

When he was 20, Dan volunteered for service in the U.S. Navy. By May, 1941, he had been commissioned as a Navy Ensign and designated a Naval Aviator.

During World War II, Dan flew seaplanes throughout the Pacific. Being a pilot helped Dan learn about sailing.

“In a seaplane, you are very conscious of the wind, current, and sea conditions. You have to take off into the wind. You’re very conscious of the wind direction and velocity. It’s very easy to go from a seaplane to a boat,” says Dan.

“Knowing my exact position at all times was of more than casual interest,” he continues. “As a result, navigation is practically a habit. Navigation is still of major interest. As a member of the USCG Auxiliary, I teach navigation classes to the general public roughly six times a year.”

In 1946, Dan purchased his first boat, an El Toro dinghy, and sailed it in the Oakland estuary in California. He took the El Toro with him when he was trans-

ferred to Honolulu and sold it in Hawaii. While on duty in Honolulu, Dan sailed 110s furnished by the Navy as part of the recreation program.

In 1949, while stationed in Florida, Dan built his first boat, a 13-foot outboard, from a kit by Chris-Craft.

“Building a boat is a challenge I enjoy,” says Dan, “but sometimes there’s frustration. Not everything fits like it’s supposed to, and everything takes twice as long as it’s supposed to. However, when everything is done, and all the lines are ‘sweet and fair,’ it does give you a keen sense of accomplishment.”

In 1955, Dan was ordered to duty as an operations officer/navigator. During off-duty hours, he built a 12-foot J-class racing boat, which left his shipmates bewildered and amused.

“They insisted it would not go through the hatch,” recalls Dan. “It did. The trick was to not install the gunwale rubbing strakes until the boat was out of the compartment and on deck.”

Over the years, Dan continued to build boats. He built a 17-foot outboard with a cuddy cabin and used it to fish from Newport Harbor. With the scraps left over from this boat, he built a 12-foot kayak.

After a 12-year hiatus, Dan returned to sailing in 1987 with a 10-foot dinghy. He trailer-sailed a Compac 16 on Lake Perris, California, and then moved to sea with a Compac 23.

Dan’s most recent project is the



Sailing means getting away from it all for Dan D’Urso.





Ted Adamopoulos and the motor well and raised deckhouse of his much-modified Cal 21.

restoration of a West Wight Potter 14, which came to him as a gift from an old friend. According to the previous owner, this was the third hull built by West Wight Potter in the United States.

"The boat had been terribly neglected and was in sad condition," says Dan. "The biggest problem was dry rot in and around the mast step and supporting structure. Restoration has been a real challenge. The ports on the sides have been enlarged, and the port in the front is now longer and narrower. The side ports were no problem. I enlarged the opening in each side of the cabin to fit the factory-supplied ports and riveted them in place. The front one is being built from scratch."

When he is not working on his West Wight Potter (which he will name *Luna Rosa, Jr.*), Dan sails his Island Packet 29, *Brezzalino* ("gentle breeze" in Italian) with his wife, Julie.

"The Potter is intended to be an afternoon daysailer," says Dan. "It's easy to launch and easy to handle...and it will

be a great boat in which to teach my great-grandchildren to sail."

Ted Adamopoulos

Ted Adamopoulos, 61, grew up in a small seaside town in Greece. As a child, he watched sailboats race in national competitions in the nearby harbor of Tourkolimano.

"Sailing is in my blood," Ted declares. "Greece has beautiful, clear water. It's a beautiful country."

Ted's father taught him to sail when he was eight years old. By the time he was 18, Ted was winning local competitions in Lightnings. He was made an honorary member of the Greek Royal Yachting Club. For the next four years, sponsored by the yacht club, Ted traveled to Italy, Finland, Yugoslavia, Germany, and Switzerland as he worked his way to the top of the racing circuit.

"I raced three regattas per week. I was in the Finn, the Olympic-class Star, the Lightning, 5.5-Meter boats, and the Olympic-class Dragons. I was the Greek national champion and European champion in the Flying Dutchman," explains Ted.

Ted's trophies, medallions, and photos do little to convey one of his favorite parts of racing — the people. "I've met some very nice people," he says. "I've made a lot of friends."

One of the relationships that Ted treasures is his 40-year friendship with King Constantine of Greece. In their younger days, the two men kept a watchful eye on each other as friendly competitors. Today, they correspond by mail. Ted lives in Florida; King Constantine lives in exile in London. Ted takes pride in telling that King Constantine and Odisseu Eskitzoglou were gold medallists in the Dragon class in the 1960 Olympics. But later that year Ted beat the two of them in a Flying Dutchman competition.

In 1962, Ted retired from racing and came to the United States. He and his wife, Lurene, spent summers cruising

in Maine before a project at his home in Orlando, Florida caught his eye. In 1997, Ted bought a 30-year-old Cal 21 from the Salvation Army for \$200. He has spent the last three years restoring it.

From the beginning, Ted knew that his project would be a labor of love. He stripped *Seabreeze* and kept only the fiberglass shell. The amount of time involved with the restoration has surprised him.


"It takes a lot of time to do this," says Ted. "It's not a five-minute job. It's a lot more difficult to take an old boat and restore it rather than build a new boat from scratch. With an old boat, you have to take out all the material, the wood inside the boat that has rotted through the years. It's been a much, much longer project than I anticipated."

Ted took special care to customize *Seabreeze* during his restoration. He started by raising the cabin so he could have more headroom. Inside, Ted installed a V-berth at the bow, a single berth on one side, and a head with an electric flush system. In the cockpit, Ted went with a wheel steering system as opposed to the more typical tiller.

His most significant modification to *Seabreeze* concerns the engine. Instead of an outboard engine mounted on the transom, he decided to build a dry well to house the engine in the lazarette of the boat. By moving the engine toward the center of the boat, Ted hopes to prevent the outboard's propeller from interfering with the keel-hung rudder.

When asked if racing ever crosses his mind, Ted smiles and shakes his head.

"This kind of modification isn't for a racing boat, it's for cruising. The reason I chose to get a smaller boat is because it's easy to go different places and trailer the boat," explains Ted. He plans to cruise down the Intracoastal with his wife, and then hopes to return to Maine.

"The scenery in Maine is much nicer than Florida," says Ted. "You can go island-hopping. The view is beautiful any place you go. Maine is probably the prettiest state in the country." 

Michelle is a sailor, educator, and writer. She raced on the 4th-place team in the 1998 Women's Worlds for J24s. Today, she writes for SailNet and cruises on Moondancer, a 34-foot wooden boat built by her husband, Whitney.





by *Hugh Owens*

A new Toerail for an old Warhorse

*Beefing up a retired racer
with aluminum*

My mate, Karlene, and I looked long and hard for a sailboat suitable for world cruising that we could afford. I've become convinced that boat speed is an important component of voyaging safety, so a major goal in our search was to find a good old *fast* boat! In Tampa, Fla., we found a neglected Cal 48 yawl.

This boat had been raced hard and put away wet for too many years, and Karlene and I had our doubts as we motored out into Tampa Bay for our sea trials. We hoisted the baggy, tattered, but fully battened, main in a warm, 13-knot breeze, and off she skipped at 7 knots. We unfurled the jib and were stunned as she heeled gently and roared off at more than 9 knots. What fun! Concealing our excitement, we made an appropriate offer that eventually was accepted. In time, our Cal 48, renamed *Koho*, landed in Pocatello, Idaho, where we started the refit.

If you examine enough old classic plastic, you will find recurrent flaws and problems that span a range of manufacturers. Our Cal 48 was no different. She was plagued with stanchion and hull-to-deck leaks, as well as untabbed and broken bulkheads, which are especially prevalent in older racers like *Koho*. Nevertheless, we felt that our time and money would be better spent restoring a swift, old, racing sailboat than a slower, more traditional, cruiser. We hoped the payoff would be in sparkling

noon-to-noon runs. The refit of *Koho* has been total, but I'd like to focus on the structural solutions changes that we made to the toerail and hull-to-deck joint.

Sealed holes

We stripped every piece of hardware off the hull and deck and sealed all the holes with epoxy. Nevertheless, steady rains revealed persistent leaks from one end of the boat to the other that were coming from the toerail. Our toerail was an attractive piece of teak, 1¼ inches by 2½ inches, laid on edge and secured every 4 to 6 inches with ⅝-inch stainless steel machine screws covered with teak bungs. The teak toerail also covered the hull-to-deck lap joint. A first-generation mystery sealant bedded the joint.

Near the cockpit, a genoa track was bolted to the top of the toerail and secured by nuts and washers below deck. Under the genoa track, virtually every bolt leaked because of the substantial loads on the track from the huge sail. Reluctantly we took the Sawzall to our beautiful toerail. We made attempts to save the 4-inch stainless steel bolts, but most of them were severely corroded

in the anoxic environment of the leaky toerail. We then lifted the deck off the hull, using dozens of wedges. Most of the bulkheads released the deck with minimal fuss.

Once the joint was free and the deck was lifted up a few inches, we could clean and blow out the gap and apply 3M 5200 marine adhesive sealant, rebolt the hull to the deck, and reattach the bulkheads with multiple layers of biaxial cloth and epoxy resin on both sides of the bulkhead. Critical, highly stressed bulkheads — such as the main bulkhead near the cap shrouds and the ones under the lowers — were given additional layers of fiberglass and epoxy.

Overkill, perhaps

On the main bulkhead, a laminated deckbeam was epoxied and bolted to the upper face of the bulkhead and epoxied to the underside of the deck. Stainless steel carriage bolts from the top of the deck were then fastened through this laminated beam. Strong? You betcha! Overkill? Perhaps, but I used this technique on a 39-foot boat I built some years ago. During a bad blow that boat was thrown sideways off a large wave and landed with a shattering crash on

her port side and sustained no structural damage. The only downside to this technique is the time it takes.

The critical bulkheads also received additional aluminum angle reinforcement where they contacted the hull/deck joint, and bolts with backing plates and/or washers were placed around the perimeter of the bulkhead to mechanically reinforce the joint.

We next turned our attention to strengthening and sealing the hull-to-deck joint. The upper hull and decks on these Cals are thinly constructed, in keeping with their racing heritage. We concluded that the only feasible fix was to fiberglass the joint from the outside. To do this, the watertight but rough-appearing hull/deck joint was faired with filled epoxy and sanded, then multiple overlapping layers of biaxial cloth and mat were laid over the hull and deck joint to a thickness of nearly a quarter-inch. More fairing, compounding, and sanding was done to ease the transition between old and new glass.

Prohibitive cost

The next task was to design and build a new toerail. We looked at many options. Commercial aluminum toerail was feasible but the cost was prohibitive and what about all those holes every few inches in our now watertight deck? Hal and Margaret Roth, on *Whisper*, used a clever method detailed in their book *After 50,000 Miles*. They brazed Everdur (silicon bronze) plates to the outside of the stanchion bases and then attached a 1-inch by 4-inch teak toerail outside the stanchions to the Everdur plates. They raised the teak $\frac{3}{4}$ inch off the deck for water drainage. This seemed like a good idea. Reapplying a wood

toerail or bulwark remained an option, but I wanted to avoid the leaks and maintenance associated with wood.

Years ago I worked on commercial salmon boats in Alaska. I remembered how the aluminum gillnetters used $\frac{1}{2}$ -inch by 2-inch flat bar stock as a toerail. It was welded edge-up to an angle extrusion at the deck edge to stiffen that vulnerable area from impacts with tenders and rough docks. I have long believed that aluminum is the best material for cruising boats, but we were unable to find a suitable aluminum boat that we could afford, and I began to wonder if aluminum and fiberglass could be married during *Koho's* refit, thereby gaining the advantages of both materials.

We considered having aluminum angle bent to match the outside curve of our hull and deck. We had different angle extrusions bent at a local fabrication shop, but the differing and constantly changing angles of the hull and deck made this idea unworkable. We rejected welding as well.

Screwed and bolted

Eventually we settled on overlapping flat bar stock screwed and bolted together. In some areas, the aluminum was prepped and epoxied together, but the bulk of the construction used 3M

5200, $\frac{1}{4}$ -inch screws, and stainless steel bolts attaching the plates to each other and to the hull. The most useful and crucial part of the design is the $\frac{1}{2}$ -inch by 2-inch flat bar stock that becomes the toerail. The sections are 12 feet long with $\frac{1}{8}$ -inch gaps on the ends for expansion in the severe climatic changes we experience in the Rockies. The toerail is stiffened at the joints where these flat bar sections meet with brackets made from $\frac{1}{4}$ -inch aluminum angle, band-sawed and sanded to a pleasing shape, and bolted to the toerail and deck using oversized holes.

Holes are drilled in this flatbar in key areas in a manner similar to the commercially available perforated aluminum toerail. The toerail is supported at about 3-foot intervals by the support brackets. Every other support bracket has a stanchion base. Bolts fasten through the stanchion base, toerail bracket, and the deck to aluminum backing plates beneath. Once bolted or tapped and fastened together with machine screws and 5200, the whole assembly is astonishingly stiff and robust.

After installing the toerail, we attached a $\frac{1}{4}$ -inch by 4-inch aluminum plate to the hull so that it fit directly under the toerail and in contact with it. This served to cover the fiberglass

overlap and strengthen the joint. We called this piece the "hull plate."

Rigid structure

A final $\frac{1}{4}$ -inch by 2-inch flat plate was tapped and screwed to the toerail above and the $\frac{1}{4}$ -inch by 4-inch hull plate below. This effectively joined the toerail to the hull plate, making a very rigid structure that could not have been cold formed in place if it had been a single piece.

A $\frac{3}{4}$ -inch by 2-inch section of white UHMW (ultra-high molecular weight) polyethylene was

fastened with flat-head machine screws into tapped holes in this bar to form a rubbing strake. Tapping the aluminum allows replacement or repair of the UHMW in the future. I considered wood, aluminum, and PVC. We felt that UHMW offered a durable material that was a more friendly surface against the tender topsides of fellow yachties. I have high regard for UHMW. I've used



The toerail with genoa track "under construction" on Page 25. Some of the brackets used, above. Clamping up prior to final mounting, at left.



it wherever friction needs to be reduced. For example, I lined a chute with UHMW to feed our anchor chain into the chain locker. The anchor chain glides into the locker as if sliding on Teflon. We also used it in front of our deck cleats in lieu of deck chocks to reduce chafe on the lines.

The aluminum bar stock and extruded angles that I used were alloy 6061, which is the normally available alloy for extrusions. This 6061 is commonly used in aluminum yacht and workboat construction, but it is best used in above-water applications. It has less corrosion resistance than the true saltwater alloys such as the 5000 series. We plan to paint the aluminum for the sake of an improved appearance.

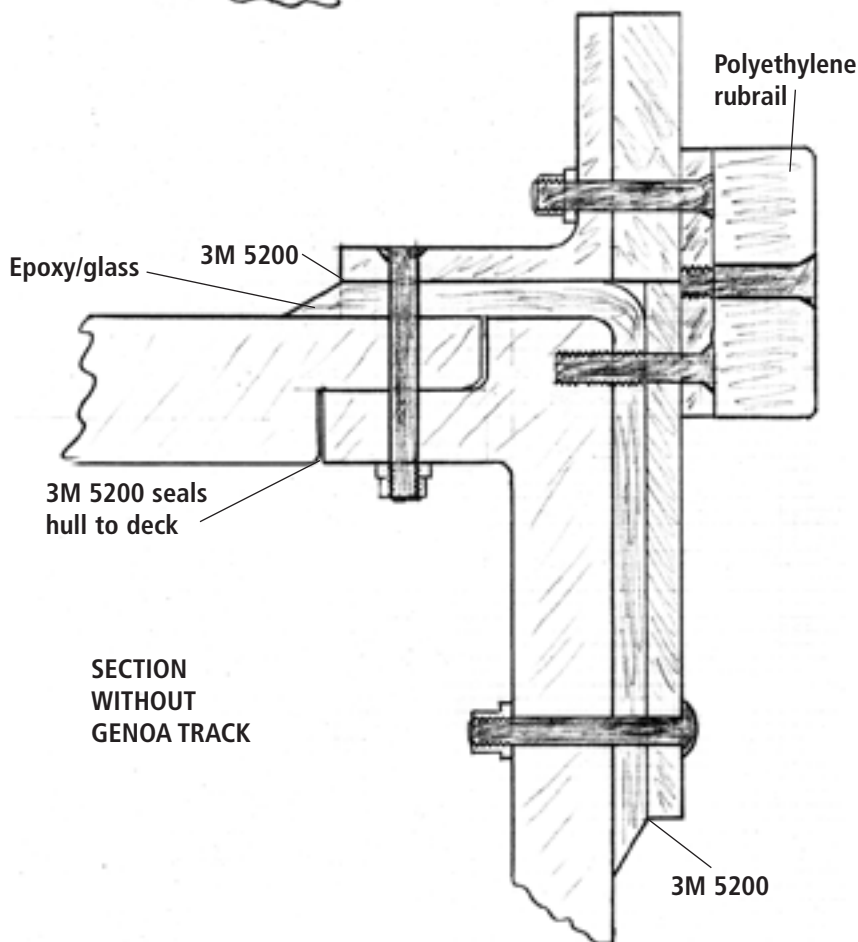
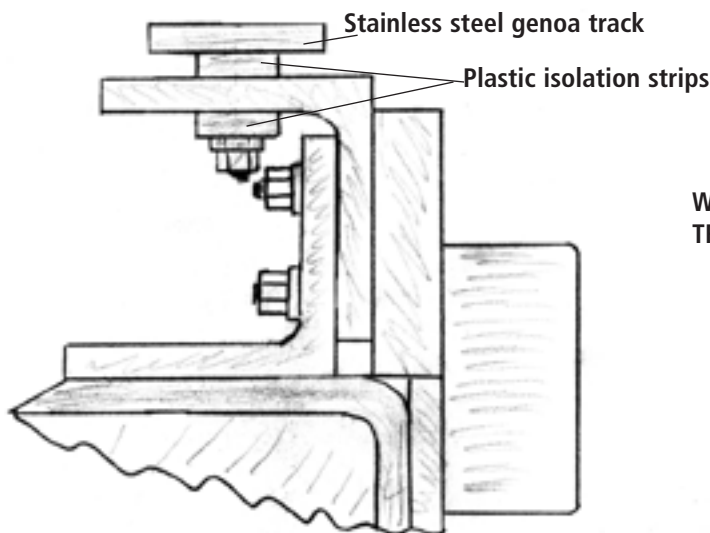
Plastic spacers

We took great care to make sure no copper containing alloys came in contact with the aluminum. Our stanchion bases are made of either bronze or 316 stainless steel. They were made locally and they have a thin plastic (UHMW) spacer isolating the stanchion bases from the aluminum bracket beneath. The aluminum was painted with epoxy and linear polyurethane paint, and while that is probably sufficient isolation from stainless, it's not that much more work to put in a little polyethylene spacer.

We attached the genoa track to a 2-inch by 2-inch by 1/4-inch length of aluminum angle bolted to the inside of our aluminum toerail. This tactic alone saved almost 100 holes through the deck. The aluminum angle was bent using a plywood template by a local steel shop to conform exactly to the curvature of the deck. The track angle is braced additionally every 4 feet with aluminum angle bolted to the deck and glued with 5200. The finished track seems sturdy and superior to what it replaced.

In our most heavily loaded bulkheads I placed the toerail aluminum angle brackets over the interior structural bulkheads. Additional aluminum angle pieces were bolted to the bulkheads and fastened to the angle toerail brackets above to tie all these components together. The oversized deck cleats were bolted over the bulkheads to the aluminum angles below. This is considerably stronger than just using conventional backing plates.

The majority of vessels I'd examined



weren't husky enough to cope with the boisterous high-latitude offshore sailing conditions we expect *Koho* to encounter. I think that aluminum construction is superior to all other boatbuilding methods if you want to wed lightness and strength. My concept during this refit was to use this superb material to strengthen and stiffen an older fiberglass sailboat, utilizing one of the most abundant elements in the earth's crust.



Hugh, an anesthetologist in Idaho, is completing a total refit of Koho, a 1966 Cal 48. He and his wife, Karlene, formerly lived and sailed in Alaska on their 40-foot home-built sailboat, Endurance. They are preparing Koho for a voyage to Antarctica and New Zealand.



No fear mast

*No trained elephants?
Here's an alternative*

of, or been personally involved in (read, responsible for) over the years, due to a moment's inattention, insecure footing, or errant gust of wind at some critical moment. All of this becomes a thing of the past with Gerry's no-nonsense bridle arrangement.

While systems may differ slightly as far as materials and fittings go, the basic tackle remains the same: a six-foot length of 1½-inch aluminum tubing, two 2-inch stainless steel rings, enough low-stretch ¾-inch yacht braid for the bridle runs, a few stainless steel eyebolts, some snaps and, of course, a boom vang to take the place of the elephants.

The critical thing to understand about this mast-raising technique is that in order for the mast and gin-pole lines to stay tight and keep the mast and gin-pole centered over the boat, the bridles must have their pivot points located on an imaginary line running through the mast pivot bolt. If the bridle pivot points are located anywhere else, the supporting lines will be too tight and/or too loose at some points during the lift.

There are two bridles. Each bridle consists of four runs of line, one end of each terminating in the same stainless steel ring, which forms the central pivot

In a previous article (November 2000), I touched upon the use of a quick and easy way for the lone sailor to raise or lower the mast on the typical small cruiser. Ensuing months brought a number of inquiries clamoring for more details regarding rigging. In truth, ponder as I might, I could never come up with a suitable mast-raising method on my own. However, I have a good friend, Gerry Catha, who is an airline pilot, aircraft builder, and fellow Com-Pac 23 sailor. He grew tired of my whining and worked out the following solution. I am grateful to him for redefining and perfecting the hardware involved and generously passing along the method to be adapted by his fellow sailors.

The instability of the stand-alone gin-pole has long made its use fraught with many of the same safety concerns associated with the use of trained elephants in mast stepping. The greatest fear factor involved in the process has always been the tendency of the mast-gin-pole combination to sway out of control during the lift. I can't tell you the number of "wrecks" I have heard

Eyebolt installed

My own gin-pole has a large eyebolt installed in one end, which can be attached by a through-bolt (with a nylon spool cover) into a matching eye at the base of the mast's leading edge and secured by a large wingnut. This is the pivoting point for the gin-pole, which,

of course, supplies the leverage. On the upper end of the gin-pole, two smaller, opposing

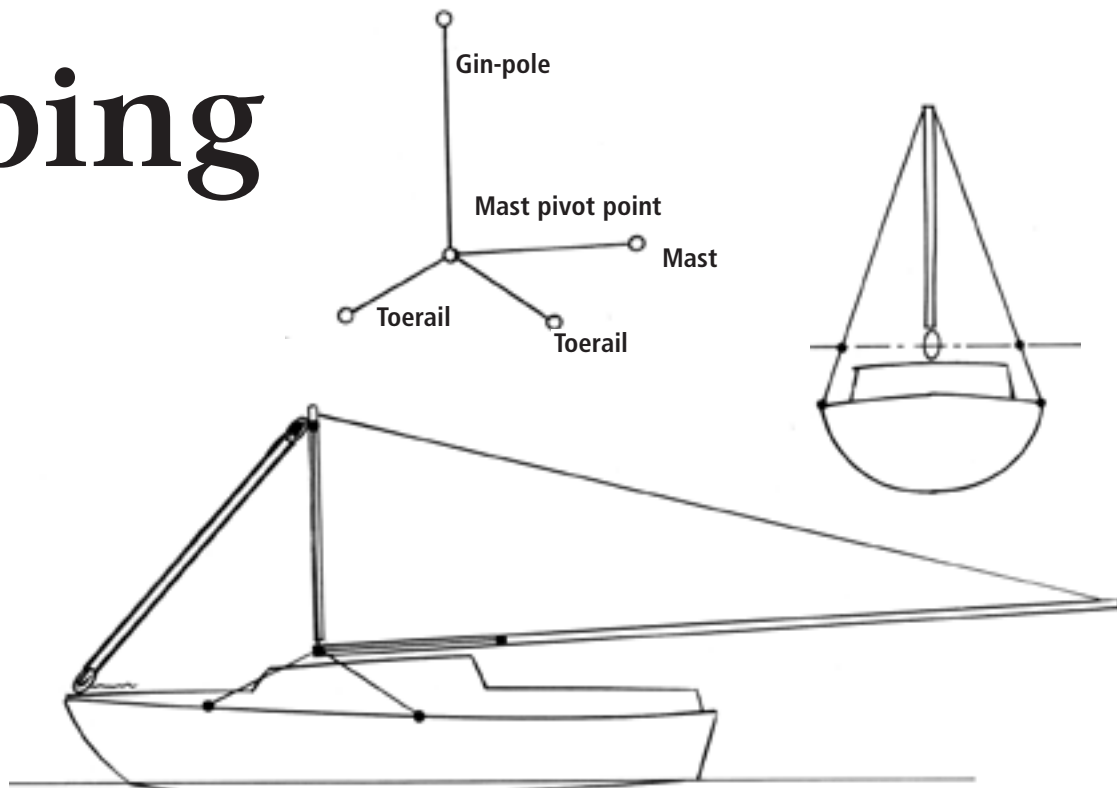
eyebolts provide attachment points for bridles, halyard, and boom vang. Again, I must say that I have already heard of a number of different variations regarding attachments, hardware, and so on, as each individual adapts the idea to his particular boat, budget, and attention span.

Terrel Chappell used to attract sympathetic onlookers to help with mast raising by appearing to struggle with the problem alone. These days she and Ron can raise the stick without help, and they prefer it that way.

by Ron Chappell



stepping



point of that particular bridle. In operation, this ring must be centered directly across from the mast step pivot bolt. The longest of the four lines will go to a point as high as you can reach on the mast (secured to a padeye using a stainless snap). The second longest run attaches to the top of the gin-pole, snapped to an eyebolt.

The two bottom runs, your shorter lines, are attached fore and aft to stanchion bases, though a toerail will work as well. It is imperative that the steel ring be centered directly in line with the mast pivot point when all lines are taut. This is accomplished by the location and lengths of the two bottom lines.

Clip the jib halyard to the uppermost eye on the gin-pole and bring it to an approximate 90-degree angle to the mast and tie it off. Next, secure one end of the boom vang (cleat end) to a point as far forward on the deck as possible and the remaining end to the top of the gin-pole opposite the jib halyard.


At your leisure

With all bridle lines taut and the mechanical advantage of the boom vang facilitating the lifting, you can slowly raise the spar at your leisure. Since the mast and gin-pole are equally restrained port and starboard, they will go straight up or down without wandering from side to side. Using the auto-cleat on the boom vang, you can halt the process any time shrouds or lines need straightening or become caught up. This reduces the stress factor tremendously and allows for a calm, orderly evaluation and fix of the problem.

I might note that, due to variations in shroud adjustment and slight hull

distortions, you may find the port and starboard bridle will be of slightly different dimensions, making it necessary to devise some sort of visual distinction between the two sides. I spray-painted the ends of the lines on each side, red or green, for instant identification. Stainless steel snaps on the rigging end of these lines make for quick and easy setup. I find that it takes us about 15 minutes to deploy the entire system and only 10 minutes or so to take it down and put it away. Each bridle rolls up into a bundle about the size of a tennis ball for storage. The bridles go into a locker, and the gin-pole attaches to the trailer until next it is needed.

Granted, launch time is extended by a few minutes, but the safety factor gained is immeasurable, especially for sailors who must perform

the entire operation by themselves. I have used this method on masts up to 25 feet long and in quite strong side winds with no problem and have found it to be the most expeditious way to raise or lower a mast should trained elephants not be readily available. 

Ron and Terrel have retired from ranching. They sail their Com-Pac 23 in the Northwest in the summer and more moderate climates in the winter.



This photo, printed in the November 2000 issue of Good Old Boat, drew dozens of requests for more information about Ron's mast-stepping process.

Indeed, they also sail . . .

When the subject of sailing arises, one thinks of great vistas of blue water with endlessly marching crests of waves, and wind-blown foam and froth beneath skies stretching to the limits of one's imagination. Tales abound of the morning watch hauling that sheet and tweaking that sail and dressing those lines on a well-found vessel tracking toward that ever-distant horizon.

Tales don't abound of the inland sailor moving out from Gus's Marina, Bait Shop & Fender Repair, out of the creek and onto the lake where points and peaks, surrounding hills, spiny ridges, and vegetation twist and turn, swirl and funnel every gust and cat's-paw into a puzzling panorama to befuddle the unwary sailor. Even the skills of Sinbad would be challenged to still that rattle overhead and to keep those telltales flying aft for more than the time it takes to open that next beverage of choice.

"Now wait a cotton-pickin' minute," say members of the Greek chorus of briny tars at the other end of the smoky bar, "if it ain't salt, it ain't water!" Yes, and most inland sailors agree with eyes downcast and mutterings humble as they concede the inherent superiority of those cruising sailors who go down to the sea in their sailboats. But is it so . . . and is it so for all the skills of the sailor? Must one ride brine in order to be the Compleat Sailor and earn that respect which comes only with challenging experiences? I think not, say I defiantly!

You probably already know I'm not talking about those

Freshwater sailors need just as many skills as their briny counterparts

*by Bill Martin
illustrations
by Dave Chase*

Great Lakes . . . that water's pretty blue, even if it don't taste funny. Nope, I'm talking about them more mediocre lakes, even those teeny lakes, where bunches of sailboats live . . . big 'uns and little 'uns.

These inland cruising sailors could probably tell you much about their demanding avocation, and they probably would love to, but they are too distracted, having to stop so very often to tend that rattling sail or to tack to avoid running into the shoreline. There's little time to finish the thought, thus much of this wisdom has never been shared outside of those land-locked marinas deep in the heart of the hinterland.

Let's take a moment to review the skills needed by those humble sailor types who challenge the inland freshwater lakes, and see if their inventory of tasks and skills is indeed different from those displayed by their salty mates, so very much higher up in the food chain of those who sail.

Provisioning. For a 60-day passage at sea, one should probably take enough food, spares, clothes, and recreational materials. The tanks should be topped off and the batteries hot. Now for a weekend on the lake, let's see . . . there's food, recreational materials, clothing, recreational materials, food, recreational materials, and maybe even some spares. The tanks should be topped off and perhaps the batteries will be hot.

Well, that all seems pretty much the same. It certainly looks the same as one observes family crews trudging down the dock, wheeling cartloads and armfuls with coolers, sacks, and bulging bags. "Yes," cries the chorus, "but this is not the same planning nor the same amounts." Well, true the planning is frequently a bit skimpy, but as for those amounts . . . did I mention the cluttered burden of those families



...those who only

trudging down the docks? After making the third trip to the family vehicle and having been below when the Horn of Plenty is upended over the open companionway, I wonder if the volume is indeed all that different.

Initial boarding and inspection. Now, boarding and inspection of the boat is certainly important. I've seen those detailed inspections both on that drinkable body of water and on the briny stuff: "Boat wet ... feet dry ... OK, cast off dem lines," and the adventure begins anew.

Leaving the dock and rules of the road. Well, how about boat-handling in the marina and in the road ("... and wave at the nice man blowing that horn")? I'm sure we agree a competent sailor needs to know these rules. In ports, harbors, marinas, and anchorages along the coast, one can see the oh-so-very-orderly movement of ships and boats all carefully orchestrated by the Rules of the Road and choreographed with a discipline that inspires awe.

Yeah, right! From the very first, tentative movement of the throttle, the frantic outward-leaning glances starboard and port, and the anxious "Are we clear?" shouted to anyone who cares to answer, getting out of that marina is an iffy proposition. This is both high drama and high adrenaline stuff. No marina, coastal or inland, was laid out with any intent of having those boats ever move again. The intent was to park the most rent revenue into the most constricted space, allowing for the most photogenic brochures (in the better marinas, of course) and, as an afterthought, let's put in a fuel dock, too.

We pretend there is never an errant gust of wind in the marina and that we have full control of that bowsprit at all times. Sure! Not much difference here between salt and fresh water, at least not to these strained eyes. And even after exiting the marina, after safely reaching the road, we can — seagoing and inland sailors all — feel secure in our knowledge of the ever-present Rules of the Road, can't we?

Sailors need to know those rules ... primarily so we can anticipate how others will probably not act. This is what I understand to be the essential guts of the Rules, the living, breathing core of the intent. In synthesis, there are three: Rule-1, The Big boat rule (biggest boat has right of way); Rule-2, The "Don't steer close to nuttin' " rule; Rule 3, "Don't forget Rules One and Two." These simplified rules seem to work whether the sailor is a salty type or a freshwater denizen aspiring to sail.

There are tricky and dangerous conditions encountered only on the coast. "For example," the salty sailor asks, "how about the danger from tows, barges, and tankers? You guys inland don't have to contend with that, do you?" "Sure that's bad," I answer, "even worse at night, but have you briny tars ever tried to evade a big, I mean really big, houseboat lit up like a shopping mall and being steered by Ralph Roadrage who can't understand why those darned sailboats keep going in front of him?" Houseboat owners seem to feel that light arrangements and wattage expended are both opportunities for self-expression and indices of success in life. "Reason ain't in it," I say, "and rules seem more a suggestion than a fact of life out on the water, regardless of that water's chemistry."



tack,
and tack,



and tack,



and tack

Buoys and marks. Here the salty dogs have it. They see them, may even recognize them and know that such things direct boats to go this way or that (“Myrtle, are we red right returning or going?”). Most of the time, the saltwater sailors respect those buoys and markers, and they don’t even run into them very often. We know they respect them . . . seaborne sailors never get out of the channel and never run aground, do they? The freshwater boys just don’t see many of these marks, and the ones they do see say “Shallow Water” in very small print or “No Wake Zone,” which is seldom very important in a sailboat making 3 to 5 knots as it races across the water. Interestingly, the shapes and colors are the same for both of the above examples. The marker invites caution, but you must closely approach in order to discover the threat you are being warned about. Hmmm . . . ?

Sail selection and trim. OK, we’re out of the harbor now and into the road. Time to make this boat into a sailboat. The salty version of sailing has the captain carefully reviewing the sail inventory, today’s likely weather, and the boat’s sailing characteristics, right? Decision having been made, the seagoing captain announces from the quarterdeck, “Get those sails up, turn into the wind.” Sails are raised, sheets tightened, and lines dressed. All aboard share a contented smile, perhaps a chorused “All right!” and then lounge in the cockpit, just like all those pictures in the sailing magazines, while awaiting colorful lunches served on beautiful china by gorgeous people, accompanied by the wine of their choice.

If it’s true that we get better at anything practiced over and over again, then it must also be true that the lake sailor has extraordinary skills in sail trim, well beyond the experience of those of the typical saltwater sailor lulled by the simple routine above.

The inland lake captain announces from the quarterdeck, “Get those sails up, turn into the wind.”

“Oops! There’s a mess of trees growing right there,” says the mate.

“OK, turn starboard,” says the Captain.

“Oops,” says the mate, “another land mass. In fact, captain, we seem to be surrounded by those pesky things.”

“OK, OK. Try a neat circle, and we’ll mill about smartly while I pull on this thingee here.” Finally got them up and trimmed. Where’s the telltale? “Quick, tack! Ready about (puff, puff, puff). Gotta get back on that Nordic Track,” says the captain under his breath.

“Good,” says the mate, “they’re trimmed now, but don’t we need to tack again?”

Finally, on a reach with wind steady, well mostly steady. “Come up some . . . there . . . no, too much . . . fall off . . . yes, I know the wind is shifting.”

“We just passed that point where the tall trees block the air,” said the captain, who also knows that within 20 yards the next point will lead to a veer of at least 90 degrees and is already loosening that sheet for the sail so perfectly trimmed just moments ago. “Now meet it,” he urges, as the predicted shift occurs. Again, the satisfaction, admittedly fleeting, of a perfectly trimmed and balanced boat until that pointy hill with the bare rocks on top passes to port, and the gusting, swirling wind backs the headsail and rattles the main. “OK,” he calls, “that was fun . . . ready about!” No one has time for lunch and the beautiful people are now looking decidedly harried.

Navigating and piloting. At sea, especially coastal sailing, you have to stay alert and keep a good running plot. On inland lakes, the same skill is necessary so you know

whether you can go 30 or 40 yards this time or must tack immediately. There’s also the intended course, of course. Have to watch those landmarks carefully. “Turn left at the third ramp on the right where the blue Chevy truck usually parks,” is essentially the same piloting process as “Come right to 045 after taking the sea buoy on our starboard side.” No real differences there. “Honey, isn’t it getting pretty shallow here?”


“Oops, turn quick . . . tacking!”

Anchoring (and don’t forget retrieval). Now sailing isn’t always about moving across the water. There is a set of skills associated with getting the hook down and up again, although the latter seems more optional on many boats. The saltwater sailor has to know the ground tackle is balanced with the boat, know the bottom structure, tide, and current, and he has to take this into consideration along with the weather when anchoring. The holding characteristics of various anchors in various conditions are endlessly discussed and so they should be given their importance.

Well, inland sailors also have to know their ground tackle is balanced with the boat and it is, of course, else why would the captain have it on the boat? Inland sailors also must take into consideration the bottom structure and current, if any. But more frequently the crucial issue to consider inland is whether their scope will still allow the Jet Skis and waterskiers enough room to circle the boat freely, effectively creating their own maelstrom of converging wakes from 360 degrees simultaneously. Now

what sort of anchor and bottom structure best tolerates that abuse?

Any discussion of anchoring, or its mate, docking, would not be complete without a discussion of the communications so necessary to conning the boat in these circumstances. Consider, if you will, the calm, authoritative voice of the captain announcing, “Let go the anchor,” or “Secure the forward lines,” as the crew scurries about doing the captain’s bidding in a thoroughly seamanlike fashion. Now forget that picture and instead consider the “Haven’t you let it go yet?” followed by “What?” followed by “I said let it go!” followed by “Don’t talk to me in that tone of voice.” All this, of course, is closely followed by the inevitable audience of surrounding sailors with knowing glances exchanged all around.

But wait a moment. That experience clearly does not distinguish the inland from the saltwater sailor. In fact, it probably affirms the essential fraternity, the inherent commonality, of all cruising sailors everywhere. In the final analysis, I guess we really are much more alike than different and perhaps most clearly alike in our love for those boats with the rags on top. 



Bill is a former marine and naval reservist and a retired clinical psychologist. He and his wife, Shirley, were most recently located in Arkansas. However, they have escaped the tyranny of the inland lakes and are cruising the Southeastern U.S. and the Caribbean on their Lord Nelson, At Ease, which will be featured in our July issue.

Rudder renewal

A long and difficult repair made while in Mexico — was it worth it?

There are a few pieces of equipment on our boat that we are never too sure about, especially in the middle of the night in a blow. After a rough passage from Mazatlan to La Paz last year, we noticed that one of them wasn't getting any better. So, after finding a good yard in La Paz, and returning to the States for a couple of months to prepare for the battle, we finally began to pull our rudder apart.

Our boat is a 1968 35-foot Spencer sloop built in Richmond, B.C. We have owned her for five years and finally took off in 1998 to go cruising. She is a stout fiberglass boat of the same build that Hal and Margaret Roth made famous in their travels around the world. We bought her because she was a well-tested bluewater boat and built like a rock.

When we bought her in 1995, there was a little play in the rudder but none to be overly concerned about. Our rudder is of the "barn door" type, built of fiberglass with two internal bronze shafts (*see diagram on Page 37*). The upper shaft, connected to the tiller, runs through the stern into the rudder and bends partway around the prop cutout. The second shaft continues down below the propeller with three bronze strap hinges or pintles bolted and then glassed into the keel. The upper shaft enters the boat through a bronze bearing and a stuffing box and then goes through the cockpit floor where it is capped with a tiller fitting.

While back in the States, we got plans for our rudder from a friend with a 1963 Spencer 35. Ironically, after returning to La Paz, we received an email message from him saying that his rudder just fell off. Luckily ours hadn't suffered the same fate, but we began wondering what kind of project we were in for.

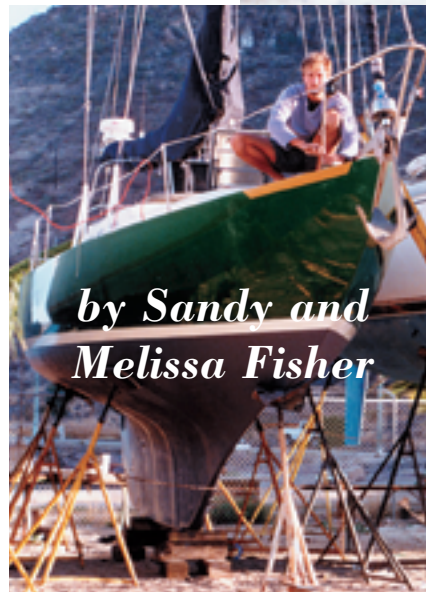
Major cracks

Once back in La Paz, we started grinding away the glass covering the

pintles. It was soon apparent that they were not salvageable. Each hinge was corroded with major cracks on the aft edge and had bolts with non-existent heads. With the hinges removed, we were able to examine more of the upper shaft and noticed that it was deeply pitted. Given the condition of the shaft and the hinges, we knew we'd have to drop the rudder.

That went fairly smoothly, although we realized we were creating a lot of work for ourselves. We had to dig a hole under the boat to allow the upper shaft to clear the bearing. Luckily, the yard was mostly sand, and this was fairly easy. After cutting off the strap hinges, we worked the rudder down but discovered we would have to cut off 3 inches of the prop shaft tube for the rudder to clear.

In order to salvage the shell of the rudder, we ground out one side to expose the shafts. We found that the rudder is actually hollow with reinforcing webs running fore and aft, made of resin and a heavy filler that appeared to be wood chips. The shafts were encased in resin, and when we cut them out there was no outward evidence of corrosion. Both of the mystery sections, the part between the bearing and the packing gland, and the glassed sections, looked fine. Besides finding tabs on the upper shaft that were not shown in the plans, the only other difference we found was that the upper shaft did not follow the curve of the prop cut-out as drawn. Instead,



Onrust ready for launch, at left, and the completed rudder, above, ready for a sea trial.

this shaft bent partly around and then continued down for another 6 inches.

Now that we knew what we had, we were faced with what to do about it. Bronze is not widely used in Mexico. So we were unsure as to whether we would need to import it and, once it arrived, would we be able to find someone who knew how to work with it? We were also a little skeptical about using the old shaft. Given the difficulty of dropping our rudder, we did not want to do this again soon. The story of our friend's rudder falling off influenced our decision. After much deliberation, we decided to change to stainless steel since it is widely available in Mexico, and there were many shops in La Paz qualified to do the work.



A corroded and unsalvageable hinge, above. Melissa inspects the empty rudder shell, at right, after chiseling out the bronze shafts for inspection.



Upgraded hinges

Making the new shafts was relatively easy for the shop we selected, since we had the old shafts to work with. We went with the same size stock for each shaft, 1¼ inches, using 305 stainless steel. Where each hinge or pintle was attached to the lower shaft, the shaft was turned down to 1 inch. We decided to go with the bomber attitude and upgrade from ¾-inch to 1¼-inch stainless for the hinges. We used wood to make templates for the hinges to give the shop the correct angle and width of each one. We also decided to change the bottom hinge to a cup or boot type to help carry the load better. We had the shop make the middle hinge. It would be cut in half and then welded together in place. On the original, tubing was used for the lower shaft with 1-inch pins brazed in where each hinge attached.

We encountered problems when we began to put it all back together. Both shafts were slightly bent, and any bend meant binding. The lower one was bent due to heat, after the shop welded the tabs and middle hinge into place. The upper shaft started its bend an inch higher than the original ... hardly noticeable, except that meant it would bind in the upper bearing. Ultimately, there was also the challenge of how to line up both shafts and slip the rudder into place.

To solve the problem of the upper

shaft binding, we ground off an inch of the upper bearing. The upper bearing was about 5 inches long, and we felt that 4 inches would be enough to hold the rudder with the addition of the three pintles below. The original bearing was actually two pieces, a bronze bushing inside a bronze sleeve. Not feeling comfortable with stainless riding on bronze, we ended up taking out the old bronze bushing and installing a rubber-sleeved Cutless bearing used on prop shafts. The rubber would enable the shaft to seat itself and also allow some water flow to the upper section to prevent corrosion. We were unable to find the correct size bearing with the same outer diameter so we found a larger size with a thick wall and had the shop turn it down.

Wits' end

Solving the problem of the lower shaft was not as easy as the upper shaft. Taking the shaft back to the shop three times was not an easy task, especially without a car. We were just about at our wits' end when a friend and fellow cruiser said he would help us out. He told us, "Oh, no problem, we will have that straightened out and in place within a few hours." He was actually going to leave the next morning for Mazatlan but promised to come over early to help us out. Rick Cummings, on *Cape Starr*, is kind of like a patron saint of cruisers in Mexico.

At 7 in the morning, we brewed a pot

of coffee, Rick showed up with his bag of tools, and we went to work. We found a new I-beam in the yard and to this we clamped two consecutive pintles to see where the bend was occurring. Finding that the lower section was out of true, we clamped the middle and upper hinges and then set the dial gauge to the lower section, above the bottom hinge. After about half an hour, and a couple of healthy whacks to the shaft with a 2-pound sledgehammer, using a Delrin block in between, the shaft was ready to install. The upper shaft was also slightly out of true and for this Rick stuck the shaft under the blocks of the boat and leaned on it a couple of times. It worked! Now confident that the shafts were true, we were ready to hang the rudder.

The only way to install the shafts was in two stages. The first stage would be to bed the lower shaft in place, remove the rudder, and do the finish glassing. The second stage would be to reinstall the rudder and glass the upper shaft in place. We couldn't simply glass in both shafts and stick the rudder on the keel. The difficulty of lining up the six bearing points (three lower pintles, the Cutless bearing, the stuffing box, and the cockpit bearing) would make things nearly impossible with the rudder not in place. Even if we didn't have the problem of alignment, it would be impossible to slide the hinges up the keel from the bottom because each hinge or pintle was of a different dimension.

A misfit

We began by sliding the upper shaft into place, and then we temporarily swung it out of our way. The lower shaft was clamped into the rudder shell with the hinges in place and then slid onto the keel. When we brought the upper shaft into its place in the rudder shell, it did not fit exactly into the original groove. Rick used a die grinder to enlarge and grind out any high spots in the shell to enable a perfect fit

Sandy, ready to bed the upper shaft into the rudder, at right. Looking for the “sweet spot” in the alignment below. The difficulty comes with lining up six bearing points: three lower pintles, the Cutless bearing, the stuffing box, and the cockpit bearing.



for the shaft. Clamping the upper shaft into place, the rudder was swung back and forth in order for us to find the “sweet spot” in the alignment.

The perfect spot was found when the rudder was adjusted to result in no movement in any of the pintles. Once the position was established, bedding compound was applied liberally to the shaft and hinges. The hinges and bolts were waxed before insertion to enable easy removal before the bedding compound completely adhered. After two hours, we pulled the rudder off and cleaned the bolts and hinges to remove any excess filler before it had set up. Removing the rudder just before the bond took place gave us an exact mold, enabling us to position it again once the shaft had been properly sealed into the shell.

With the rudder on the workbench, now came the task of sealing in the shaft and making it look pretty. We used epoxy

mixed with fiber filler to achieve a rough shape of the original rudder. Next, we laid on multiple layers of 6-ounce fiberglass cloth to strengthen and join the new area with the original shell. Content with the final fairing, it was time again to stick the rudder onto the keel.

Once the stuffing box and Cutless bearing were in place, we installed the upper shaft into the boat, using Teflon grease, and then rotated it out of the way. Next we slid the rudder into place, bedding the hinges and bolts in 3M 5200. The upper shaft was fit into the groove, and the rudder was rotated to make sure we were in the right spot. Filler was put around the exposed shaft to seal it in place. Once the filler cured, it was followed by fiber filler and fiberglass cloth, the same process used for the lower shaft.

Foam filling

There were some large voids in the upper section of the rudder that had been ground out in order to install larger tabs. To fill these voids, we used polyurethane insulation foam as a base on which to lay the fiberglass cloth. The next day we trimmed the foam and laid on layers of glass. Checking our work a few hours later, we found that there were bubbles underneath the cloth that we had to cut out and glass again. There were probably some “wet” areas on the inside of the foam that, when cut, reacted again and expanded more.

Along with fairing the rudder, we also built up the areas around the pintles to achieve a smooth surface. We decided against covering the bolts, so we could inspect them periodically and, as Rick’s motto goes, “the fish don’t care what it looks like.” The only area left to work on, was the bump out at the prop Cutless that we had cut off. For this we only filled and faired enough to cover the new Cutless bearing.

For all of the exposed metal, including the whole lower shaft before it was bedded, we used a two-part metal primer that was given to us



Sandy fills the large voids around the upper shaft with polyurethane insulation foam, above, before doing the final glassing and fairing at right.

by a friend. This was a navy surplus paint that he bought in San Francisco and has been using on his boat for years. The paint seemed to key into the metal well, along with the newly epoxied surfaces. With Rick's advice, we also filled some of the voids in the welds of the pintles by damming up the area and dripping it in. To prime the rudder, we used regular epoxy, which we had on hand, instead of an epoxy barrier coat, which was hard to find in La Paz. Everything was ready to launch except for a final coat of bottom paint and one more important part: the zincs.

Zincs installed

There was no mention of zincs earlier because there were no zincs on the rudder. The only zincs we had on the outside of the boat were the one on the propshaft and a guppy tied to the block when we were in a marina. Using the vast pool of knowledge of the cruisers in the yard, we decided to stick another zinc on the rudder shell. Rick and other cruisers in the yard advised us to use the six-foot-radius theory. The theory is: everything within six feet will be

protected by the zinc, whether it is tied into the metal or not. Rick also suggested that since our boat had gone for 30 years with nothing more than a propshaft zinc, anything in addition to that would be "gravy." (Since we have been in the water, we have now tied in the upper shaft to the external guppy that we hang over the side when we are not under way.)

prep work for installing rudder to keel, 20 hours.

- Truing and so on, 6 hours.
- Glassing in lower shaft, 16 hours.
- Cutless bearing for upper shaft, stuffing box, fitting and installation of upper shaft, 20 hours
- Bedding hinges in 3M 5200 and bedding upper shaft into shell, 6 hours.
- Glassing in upper shaft, 10 hours.
- Finish work/fairing and painting, 16 hours.

Total: 102 hours.

The shop took a total of two weeks to make the shafts and hinges.



For all of the work, our major materials list included 2 gallons of epoxy resin; 4 yards of 6-ounce fiberglass cloth; 40 ounces of West System 403 Microfibers; 1 large tube of 3M 5200; 2 gallons of acetone; assorted rubber gloves; and other personal safety equipment.

An indispensable product that was supplied by Rick was Devco's Adhesive Filler, of which we used a total of 3 quarts, mixed. This was a two-part, epoxy-based product, mixed 1 to 1, which had a consistency of peanut butter and a working time of two hours, even in 80-degree weather.

Our time spent on this project, not including the numerous days spent looking for shops and products needed, was:

- Pulling the prop and dropping the rudder, 8 hours.
- Cutting out shafts, cleaning up shell,

Not perfect

Although the cost of fabricating parts and being on the hard in Mexico was a great deal less than doing the same project in the States, we were faced with working in "mañana time." The Mexican shops do good work, but are not geared to match a part perfectly: if it looks right, it will probably work, hence our problem with the shafts. Some of our days were spent walking from shop to shop all across town looking for one specific part. If a shop didn't have it, they would give us the name of another shop that might carry it, and off we would walk in 100-degree weather. Often we gave up our search and settled for a cold beer and an alternate solution.

Finally, after a month and a half on the hard in La Paz, we launched. A few days later, we headed out into the Sea of Cortez for our sea trial. The first few days out brought us light winds with

no complaints. The real test was an unforeseen northerly on our crossing to Mazatlan. Under trysail and mostly furled jib, we headed out in 8-foot seas with 30 to 35 knots of wind and completed 140 miles in 24 hours, a great day for our boat. Needless to say, given our mileage, the rudder was strong and responded flawlessly. Although we felt a little green from being out of the water for so long, our rudder didn't seem to mind at all and has been doing great ever since.

Would we attempt another big project like this in Mexico? For us, the cost factor outweighs many of the hardships encountered, but it is definitely not as convenient as working in the States. The yard we were in had no restroom facilities to speak of. Luckily, there was a marina next door that had nice bathrooms and showers. It was a bit of a walk, but doable. We were in an area of the yard that did not have power or water. The water problem was solved by using jerry jugs to fill our tanks. Water wasn't always available, so we filled our tanks when we could. For electricity, someone in the yard bought a 200-foot extension cord that was run from an outlet on the other side of the yard. At one point there were five boats tapped into it. Now and then the power would go out in the yard, but no problem, the yard manager would come over and wire a cord into the light fixture on the street side of the fence.

Toxic dust

There was no problem when it came to digging a hole to drop our rudder since the yard was mostly sand and dirt. When the northerlies picked up however, they created huge toxic dust clouds throughout the yard. Fortunately we were upwind of most of the churned-up dust.

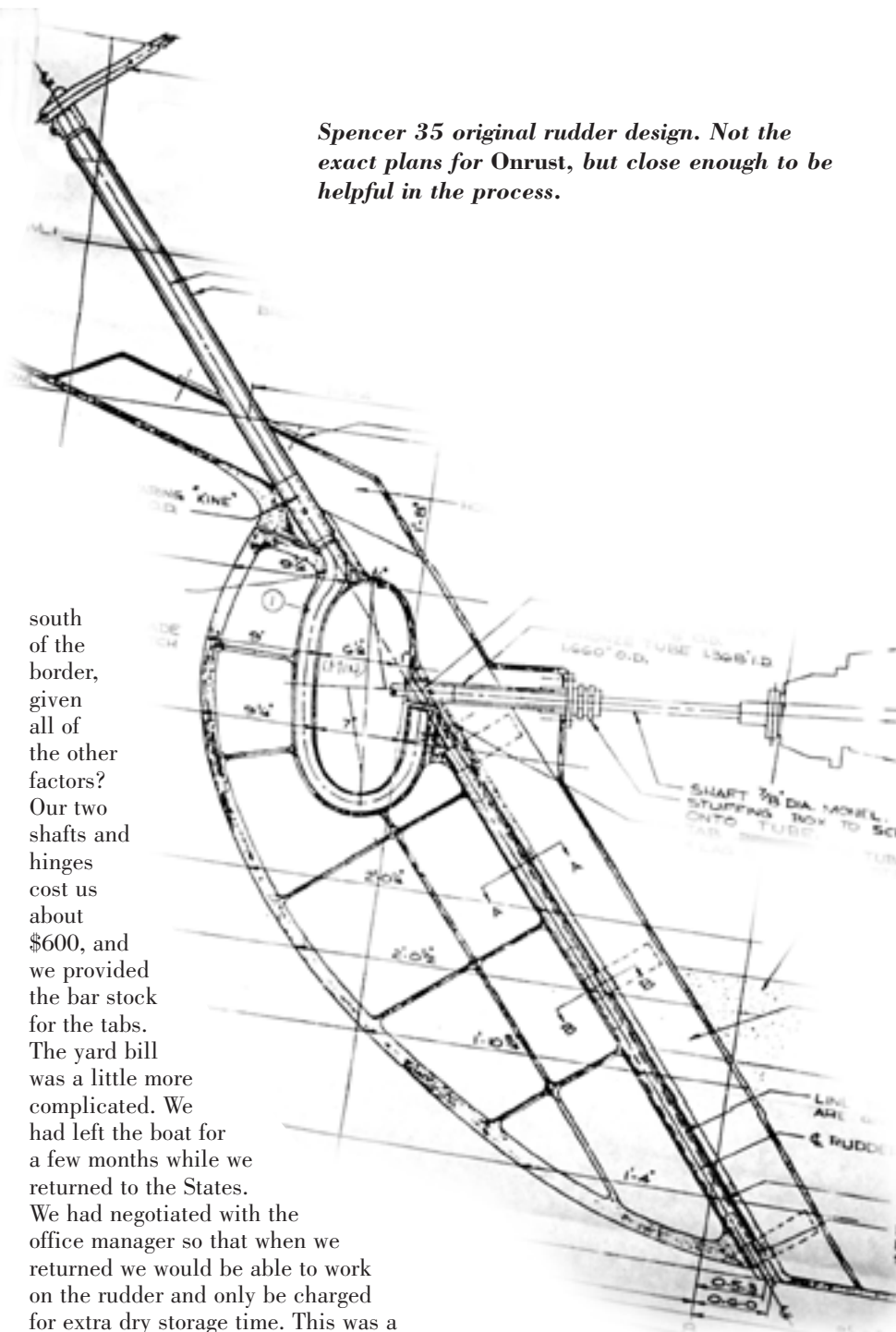
We had our share of battles with critters. One night we were attacked by a giant flying cockroach that landed in the cabin. We tore the boat apart chasing him down. Mosquitoes plagued us nightly. The absolute worst was waking up in the morning and finding that something had taken a bite of our bananas while we were sleeping. Somehow we ended up with two rats on board. We were able to catch one in a trap, but the second was larger and wiser. He ended up on the end of a Hawaiian sling, not a fun thing to have to do.


What were the major costs that might entice someone to attempt a project

south of the border, given all of the other factors? Our two shafts and hinges cost us about \$600, and we provided the bar stock for the tabs. The yard bill was a little more complicated. We had left the boat for a few months while we returned to the States. We had negotiated with the office manager so that when we returned we would be able to work on the rudder and only be charged for extra dry storage time. This was a verbal agreement, unfortunately. Five days before we were to launch, the manager quit and disappeared. All deals were off. We had to work out a new deal. We ended up launching a few days early and were charged for our extra month and a half of dry storage, plus one work day. The bill for this was \$160 for the dry storage and \$45 for the work day.

We're not sure if the aggravation involved in getting things done in these conditions would be worth it again but, the price was sure right. Our friend in Seattle who completely lost his rudder helped us keep our perspective. He said,

Spencer 35 original rudder design. Not the exact plans for Onrust, but close enough to be helpful in the process.



“At least you aren't working under a blue tarp in the pouring rain wearing three layers of clothes.” 

Sandy and Melissa Fisher have lived aboard Onrust since they purchased her in 1995. Deciding to cruise now and work later, in 1998 they sailed from Seattle to Mexico and spent a year and a half exploring the mainland and the Sea of Cortez. They sailed south from Mexico and explored Costa Rica and moved on to Panama last July. In no hurry, they continue to explore uninhabited islands in that area.

The steering gear on your boat may not get a lot of attention unless the boat stops steering. Depending on the way the rudder system is designed, it might also need your attention if it starts flooding.

My son and daughter were sailing a Catalina 27 with a group of friends one fine fall day. As chance would have it, they all were either in the cockpit or farther aft, standing by the backstay. My daughter happened to go below and found the floorboards awash in seawater. There was no automatic bilge pump.

They called me on the radio to ask my opinion. I thought perhaps all the weight in the stern had sunk the hull lower than the open top of the rudder shaft tube, letting water in. I advised my son to distribute the weight of the crew more evenly and then pump the bilge and see if the water stayed out. That solved the problem, and they were able to sail home.

Such occurrences are rare, but they do happen. Even if you don't intend to rebuild your steering gear, it is important to know how the rudder shaft enters your boat without allowing the water to enter with it. In many cases this involves a rudder tube.

Several rudder designs

The exact location of rudders and the method of their attachment to hulls involves several compromises. The transom-hung rudder, attached with pintles and gudgeons, or even a pin,

Rudder tubes

offers simplicity of construction and maintenance, but the rudder blade must be larger because it is less efficient. It can also ventilate and may be far enough aft to come out of the water when the hull pitches in heavy seas.

For these reasons, designers often choose the fully immersed rudder. If your boat has a fully immersed rudder, it will have a rudder tube and at least two bearings, and it may have a stuffing box or some other form of seal as well.

A more complicated system

In the case of tiller steering, the common approach is to glass a heavy fiberglass tube into the hull that extends from the bottom of the boat to the cockpit floor or the afterdeck.

Typically, this tube has a top bushing to keep the rudderstock centered in the tube.

Since the tube extends well above the waterline, there is no attempt to make it watertight.

The bottom of the rudder on a full-keel boat with an attached rudder rests in a shoe attached to the aft end of the keel. This is the lower bushing which prevents undue side-to-side and fore-and-aft motion of the rudderstock. In a skeg-hung rudder, the lower pintles, gudgeons, and bushings are used to support and control the rudder. In the case of a spade rudder, there must be a collar that holds the rudder up in the rudder tube to keep it from falling out of the boat. This has happened more than once and, depending on how the rest of the system is configured, can lead to rapid flooding.

In the case of wheel steering, the quadrant that connects the wheel to the rudder makes it necessary to have a much shorter rudder tube. This usually terminates inside the hull below cockpit level. The height of the tube may prevent water from entering the hull. If it doesn't, there must be some sort of sealing system. This can be a standard bronze stuffing box glassed to the top of the rudder tube or, if the tube is high enough, the top bushing with close tolerances is all that is required.

Over time, both the tiller and the wheel systems may need repair in the area of the rudder tube. My Pearson Ariel had a rudderpost and tube that

terminated in the cockpit. There was supposed to be a top rudderpost

bushing to keep the water out when under way. I noticed that at hull speed, when under power or sail, the boat would suck down, and the velocity pressure of the water would force it up the tube. The top rudderpost bushing had long since disintegrated, and all that was left was a hollow tube with the rudderpost inside. It was a pretty sloppy fit, at that. So water would exit the top of the tube and pool in the aft end of the cockpit when the boat was under way. (The cockpit drains were in the forward end.) This was not dangerous, but it was an annoying source of wet feet. Replacing the old bushing with a new one was not practical. Even when I called the Pearson Company, which was still in business at the time, representatives could not tell me what the bushing was made of or how it was fabricated.

Edson to the rescue! It seems I was not the only one with this problem, and Edson International made a rudder stuffing box that combined a top rudder bearing with a stuffing box to keep water out. It is easily attached to the top of the rudder tube with fiberglass tape and epoxy and becomes a permanent addition to the structure.

by **Bill Sandifer**



Stuffing box parts, above, and the stuffing box glassed to the rudder tube, at right. Courtesy of Edson International.



A little routine inspection can help prevent that sinking feeling

The packing in the stuffing box can be renewed and removes the slop from the rudder shaft. The assembly is not very expensive, and Edson makes the rudder stuffing box in various sizes to fit most rudder shafts.

Inspection and repair

Your rudder tube should be included in a regular routine inspection of your steering system. Is there a top rudderpost bearing, or is the rudderpost free to wander around in the tube? Is there a grease fitting in the side of the tube? Is the rudder tube terminated below the waterline, and does it have a rudder stuffing box?

Your boat may simply have bushings at the top and bottom of the tube, or you may have some variation of the rudder tubes discussed. Regardless of what style rudder tube you have, time and use may cause enough wear to require repair.


Every rudderstock needs some sort of bushing or wear ring to keep it centered in the tube and turning smoothly. It is common for these bushings to break in half and slide down into the tube. Check the top bushing for wear. If it is worn, replace it. This usually involves removing the tiller head or steering quadrant to allow access to the top of the rudder tube. If you have a rudder stuffing box, check the packing. If it is worn, replace it with Teflon-impregnated packing for easier steering and better drip control.

When the boat is out of the water, check the bottom bearing. Grab hold of the bottom of the rudder and try to move it from side-to-side and fore-and-aft. A little play is OK, but anything over 1/8 inch is too much. If it moves beyond this, check all the bushings and, probably as a minimum, replace the lower one. Bronze pipe in the appropriate

size can be cut and used as a good bushing.

The heelpiece on an attached full-keel rudder can be worn into an oval shape over time. This can be restored to round by reboring and inserting an oversize bushing or by using MarineTex to repair the damage. MarineTex will not last forever, but it will last several years.

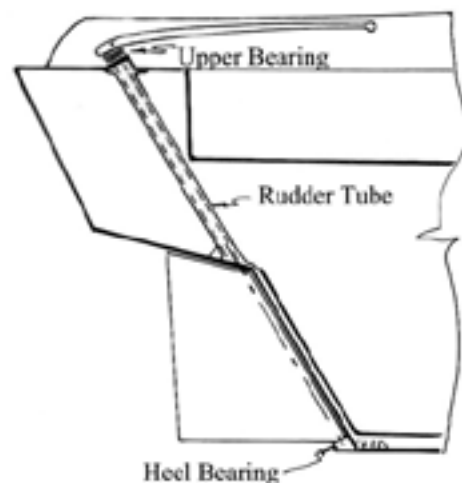
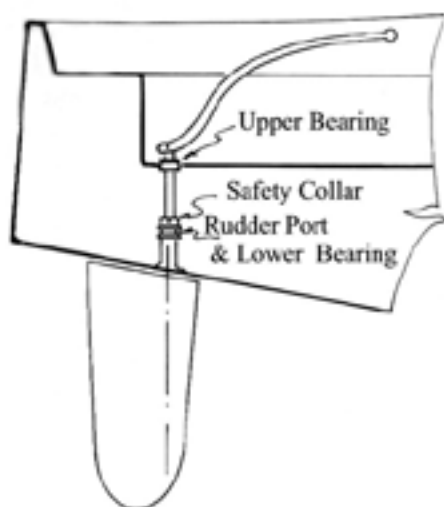
Finally, do not ignore a wheel or tiller that feels loose. The rudder may

be trying to tell you something. It pays to give your rudder tube and shaft a little attention each spring and fall for safe, carefree sailing during the summer months. An ounce of prevention can save you from that sinking feeling and give you the confidence that comes of knowing how your rudder system is built and what kind of condition it is in. 

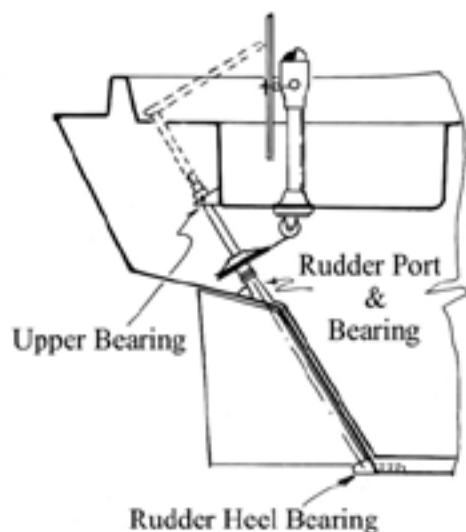
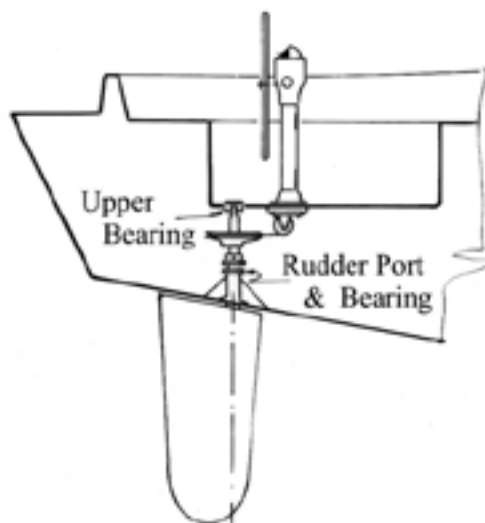
Bill is a marine surveyor/boatbuilder who's been living, eating, and sleeping boats since he assisted at Pete Layton's



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.



Tiller rudders



Wheel rudders

Illustrations by Ted Brewer



Sailors

The man

of sail

photos by



Gail Scott is a
and writer of
company of
and images
Photos. She
boating un
Hampshire



*It's all —
my faces
sailing
Gail Scott*

Gail Scott is a freelance photographer and organizer of a stock of north country photographs called North Country. She worked primarily in the Adirondacks until her move to New York City in 1996.



Good Old Boat May/June 2001



Extended-

Contrary to this myth is this simple fact: the very best sailing is anytime but summer. As it turns out, early spring and late fall are the best of times for breezes and brisk sails. In the summer, unless you're fortunate enough to be out during the few hours prior to a front, you will quite possibly do more motoring than sailing. Your ice will run low, your patience will run out, and your crew may run to another avocation. It doesn't have to be.

With a little preparation, you can double your normal cruising season. Better yet, you will enjoy the "less-than-prime-time" sailing seasons twice as much as the months of July and August. You will sail more, farther, faster, harder. You'll develop smile wrinkles from hours of grinning. You'll be more comfortable, sleep better, find shorter waiting lines, moorages that aren't buzzing with PWCs, and facilities where you can pick and choose your berth.

How, you ask, is this possible? By staying dry, staying warm, and staying fed. From a considerable amount of time adrift, mostly north of the Mason-Dixon Line, come these planning

There is a myth out on the sparkling waves that probably originated from folks gazing at summer sails through shoreside barbecue haze. It is a sweetly beckoning myth with all the power of the Sirens, calling the unwary as surely as the pitchman at a sideshow.

The myth goes thus: to every sport there belongs a season and summers are the *sine qua non* for sailing. It follows that when temperatures drop, birds fly south, and mortals huddle by firesides. It would seem the antithesis of pleasure to be anywhere near the cold, cold briny. Logic would indicate that life afloat mirrors life ashore and, since most boats are seen during the summer months, isn't that the affirmation for turning this myth into fact? Hardly.

What the casual observer on shore can't see are the slatting sails in the summer doldrums as frustrated skippers search astern for swirls to indicate movement... or the skipper and crew sitting mesmerized watching two trees ashore which are lined up and remain that way. It's also difficult to see, from a distance, the crewmembers' growing restlessness and discomfort as they fry in the direct heat of the sun or bake below in a windless cabin.

Hence, it often comes to pass that a novice sailor loses interest simply because of the belief that summer sailing is as good as it gets. The new sailor sets sail in July, is disappointed with zero activity, and looks elsewhere for ways to spend discretionary time and money. We lose an important part of our unique community: the replacement sailors who will keep our future viable. Another voice is lost when laws are promulgated or recreational sanctions considered.

*Can't wait any longer?
Stay warm and double your fun
by sailing each spring and late fall*

and preparation tips for your new-found freedom of extended sailing. I can't take credit for them, only for knowing some great instructors from sailing meccas like Newport, British Columbia, and New Zealand.

Clothing

Dress well, but not to excess. Don't wear so many clothes you can be mistaken for the Michelin man. Dress in layers. The layer closest to your skin should wick moisture away. Synthetic fibers and silk are good for this. The next layer(s) should provide insulation by preventing heat loss through air movement. Use waffleweave, Polar fleece, or bulky sweaters. Multiple layers allow for adjusting heat retention by layer removal and are much better than a single thick layer. The outside layer should be wind-resistant or waterproof depending upon the weather. That means that *all* of that outside layer should be wind-resistant and/or waterproof: coat, pants, hat, gloves, and boots. Multiple insulating layers also should apply to all of your clothing, not just the shirt, sweater, or coat over your upper body.

Do you like hats? Neither do I. However, our head and neck areas are our greatest sources of heat loss. Try a fleece cap topped by a wind-resistant hood capable of being snugged down tightly with a drawstring. A billed cap keeps rain, as well as the sun, out of your face. By the way, there's a reason why old

-season cruising

photographs of whaler crews show them wearing wool scarves: they work.

Cushions

Cockpit cushions are indispensable for extended cruising. What do you use in your cockpit? Hard, stiff vinyl-covered ones that cut into your legs and slide all over, flotation cushions you could pound nails with? All of your clothing layers will compress and lose effectiveness where you sit down and lean back. Cushions provide comfort with their softness but equally important is their insulation value. An excellent sail-slatting summertime project is making back cushions for the cockpit; you'll find the crew using them in all seasons. Warm, soft, cushions are also valuable in the saloon. If your cushions are more than 10 years old, sit on (don't just look at) some of the new closed-cell foam cushions and softer fabrics.

Weathercloths

Weathercloths around the cockpit lifelines offer many advantages. They're a not-so-subtle way of displaying your boat's name, hailing port, or anything else you wish to proclaim. If you have to be found for any reason, folks will remember your boat with its distinctive weathercloths. Besides, weathercloths give a boat a salty professional look.

Of course, the everyday value of weathercloths is the comfort they bring. With apparent wind from abeam, you will retain heat much better in the lee of these cloths. They are easy to put up, take down and stow; a minimal hassle for the increased comfort they bring. Contrary to the opinions of some club-racers, weathercloths will not bring you to a complete stop with their windage nor will they make it impossible to come about. If you're racing, take 'em down. But if you're cruising, they're definitely worth it.

Rigging

Lead your lines aft to the cockpit. Many of yours may be led aft already, but here's one you may have missed: a downhaul for your foresail. Underway, the most dreaded place to go on deck is forward. A very light line ($\frac{3}{16}$ inch) from the top of your genoa or jib to a deck fairlead and then aft will save many moments fraught with anxiety. When planning this downhaul fairlead, pick a spot near boat center (to keep the sail inboard when down) and slightly aft of the sail's clew so tension can be maintained to reduce flapping.

Food

Here's a great hot beverage plan I learned from another liveaboard couple on the inner quay at the Empress Hotel, Victoria, British Columbia. First, start with a two-quart vacuum flask. Not one quart, not one liter, but two quarts. Two quarts will stay hotter longer than a smaller amount. At home (or at anchor, if you're doing some extended cruising) boil

four quarts of water. Fill your flask with boiling water, wait about three minutes and empty it, filling it anew with boiling water. If you drink drip/percolated coffee, make a pot's worth but use one ounce of water instead of one cup. In other words, make a small amount of *very strong* concentrated coffee. Store it in any watertight container. Then, when

you're out where the wind meets the canvas, just pour a small amount of concentrate into a mug and top it off with very hot water from your flask. Instant coffee and cocoa also work. Unless you're chipping ice from the topsides, you will have hot beverages for a weekend with this ***Only early spring sailors (in the northern U.S.) catch lady's-slippers in bloom, opposite page. Late season sailors catch the fall color.***

by Bob Wood



R.L. Larson

Friday Harbor Oatmeal Cookies

3 Tbs canola oil
3 Tbs oil substitute (*Smucker's Baking Healthy or similar substitute. Applesauce also works.*)
½ c brown sugar
¼ c white sugar
1 egg white
4 Tbs water
½ tsp vanilla
1½ c quick oatmeal (one-minute cooking variety)
½ c all-purpose flour
½ tsp baking soda
½ tsp salt
½ c raisins

Stir together canola oil, oil substitute, brown sugar, white sugar, egg white, water, and vanilla. Add oatmeal, flour, baking soda, and salt. Mix well. Mix in raisins. Drop on cookie sheet by rounded teaspoon and bake about 14 minutes in pre-heated 350°F oven. Let cool completely before sealing in plastic bag(s). May be frozen for a week or two. Enjoy as many as you wish with a clear conscience! Makes about 30 cookies. Recipe can be easily doubled. In fact, we recommend it. (*Recipe was tested in the Good Old Boat "test kitchens" and awarded 3 stars.*)

method. (As an aside, the 60-ish couple who gave us this suggestion sail year-round on Puget Sound.)

Just as salty chips and similar snacks are served during the summer season with cold beverages, coffee and cocoa are complemented by cookies, doughnuts, and bagels. Their high-calorie content will keep your crew's fires burning and measurably raise comfort levels. A particularly convenient type are the tinned butter cookie assortments widely available in stores and catalogs. If you have an elevated cholesterol level, as I do, a better choice is our old sailing standby: oatmeal-and-raisin cookies. We humbly offer our Friday Harbor recipe. See sidebar above.

Another great addition to the extended galley is a vacuum flask of hot soup prepared in advance. Skip the crackers and spoons, just serve in mugs and drink as a beverage. Glorious! We routinely cruise with three flasks: the big one with boiling hot water, a quart one with tomato soup, and a wide-mouthed quart Thermos with "chunky" style soup. All of our vacuum bottles are packed in a soft-sided cooler/warmer to further retain heat.

While we're on the subject of food, watch out for alcoholic beverages. They may feel warm going down (so does an ounce of hot sauce), but they actually depress the central nervous system and lower body temperature after the quick alcohol burn-off.

Heat

Heating your cabin is the difference between ordeal and delight. Yet many cruisers, myself included, don't have heaters. Further, I'm just cautious enough to distrust something burning below as I sail. Here's one alternative method used by some cold-weather sailors. Before getting underway, place a large cast-iron pot on your galley stove, the larger the pot the better. In the pot, put at least 5 pounds (10 pounds are better) of broken

clay pots. Heat this for about 15 minutes or until good and hot. Turn off the stove, shut off the solenoid if using propane, secure the pot, and shove off. The warm mass will take the cabin chill off for quite a while.


If someone is using the cabin, do not try to make it airtight. You need circulation to carry stale air and condensation out. It's better to be a little cooler than dripping wet.

Part of your extended cruising will almost certainly be done under power. A very effective idea is hot-water heat, compliments of your motor's freshwater cooling system. Systems for marine use are available in several catalogs. For about \$120 plus shipping (winter 1999-2000 prices), these gadgets provide the heater and dual-speed 12-volt electric blower. Along with insulating your hull and overhead (much more difficult), a hot-water heater may just be the single greatest asset for off-season cruising. Remember to use high quality, reinforced, hot-water hose, double your hose clamps, and place protective grommets wherever a hose passes through a bulkhead.

Weather

I left the good part for last, just like Mom always wanted. In places that I've sailed — north, south, east, or west — spring and fall are seasons of change. With that change comes wind. Seldom will glass-smooth calms be seen on April's and May's waters, or October's. If you've yearned to bury the lee rail, to push the envelope, or just to sail without being surrounded by diesel fumes, these months are for you. From the Great Lakes to Puget Sound, I'd guess that summer zephyrs have half the strength of those you'll encounter in spring and fall, maybe even less than half. Further, since spring and fall winds are partially developed by solar warming of cool land and water, nights tend to be calmer.

Some miscellaneous advantages: your fuel will last longer with more sailing time. Many shoreside restaurants lower their prices outside traditional tourist seasons. Chilling beverages is as simple as lowering them over the side (of course, that can be done year-round in Puget Sound and some of the Great Lakes). On a per-usage cost basis, the expense of owning a boat is lowered and justified dramatically ... in case your accountant keeps hounding you for that. Lastly, you get to use the salt with little grains of rice that much longer.

And a couple of caveats: if you're really extending the cruising into frosty season, it's better to drain your water tanks and bring bottled water. Similarly, mothball your head and holding tank with antifreeze made for that purpose and use a Porta Potti. Cruising or not, fuel tanks should stay topped off to reduce condensation. 

Bob learned to sail on small O'Days more than 30 years ago. He has owned an odd assortment of sailboats and sailed them in waters from the Florida Keys to British Columbia's Gulf Islands and from New York's Finger Lakes to the reservoirs of Colorado and Idaho.



The last Cheoy Lee Offshore 40

*After an extensive refit,
she may head over the horizon
toward Sala-ma-sond*



by Michael Beattie

WHERE YOU TO TAKE YOUR DINGHY down the main fairway of the Santa Cruz Harbor, in Northern California, out on the end of E Dock you might spot the clean lines of a 24-year-old cruising boat. She flaunts a jaunty sheer with long overhangs and an old-fashioned yawl rig. *Sala-ma-sond* was the last Offshore 40 built by Cheoy Lee, and she carries hull number 3026.

She spent most of the last two decades in Santa Cruz, sitting under a full boat cover, rejoicing in the name *Flying Eagle* and accumulating all manner of cruising gear, but her owner never quite cut the ties that bind. So there the grounded *Eagle* sat until Tim Litvin came along in 1997, looking for a certain 40-foot Cheoy Lee.

Tim is the kind of guy who knows exactly what he wants, and he had been to the ends of the earth hunting for the particular one that was just right for him among the 150 Offshore 40s built. The year 1996 had been a bad one for Tim, a year when a deranged drifter had broken into his boat and driven her out of the harbor into the teeth of a monstrous winter gale pounding the California coast. *Samantha* was Tim's first boat, an Offshore 27, also built by Cheoy Lee. However, the storm got the better of the inexperienced pirate, who ended up driving her on the beach and stealing as many of Tim's personal possessions as he could stuff into his backpack. He was later arrested in downtown Santa Cruz when one of Tim's many friends spotted the man bumming for quarters, inexpertly playing Tim's guitar.

Samantha was a write-off, and with his insurance settlement Tim had to turn his back on the boat that had been his home for six years. He had put many hours into modifying the boat for his cruising plans, but he suddenly found himself literally on the beach with nothing but a bag of sodden clothes and a lot of friends made during his six years in the harbor. He got a temporary home on a friend's boat and set out to find a bigger and better replacement for *Samantha*.

The Cheoy Lee Offshore 40, like her inspiration, the Rhodes Reliant, turns heads wherever she goes. Tim Litvin's Offshore 40 was the last of the series built by Cheoy Lee.

Closer to the sea

Tim had grown up in Illinois, and right from the start knew he wanted to live someplace else ... farther from the snow and closer to salt water. He got his diving certificate, learning to scuba dive in the muddy waters of the Mississippi River, a place so murky that trainees are tied together with rope lest they get lost in the zero visibility.

He took off for Florida, where he studied marine biology and worked as a bicycle mechanic. He never imagined he might own a boat himself. Eventually, he found his place in the computer revolution overtaking Northern California in the 1980s. When he tired of paying rent instead of buying a house he stretched his imagination one more time. He wanted his future home to float, and in floating it had to look good. Tim has a very particular aesthetic sensibility: "The Cheoy Lee was the only boat that caught my eye," he says. It helped that the Offshore 27 was strong, seakindly, and inexpensive. He labored for years in his free time, honing his carpentry skills by modifying the cabin, finding a space aboard for his computer, and planning an early retirement afloat.

Boat theft is not common in California, where the coast is rugged, harbors are few and far between, and there is nowhere to take a stolen boat to resell it; thus the theft of *Samantha* was not only bizarre but also almost unprecedented. At the time it seemed a

catastrophic setback, but Tim doggedly set about finding a new home. He searched far and wide for a boat that suited his aesthetic tastes and his pocketbook, but he couldn't find any design that suited him so well as the Hong Kong-built Cheoy Lees. Tim loves the details on these boats, including the copious use of rare teaks, the handmade hinges on the furniture, and the British influence in the choice of hardware.

Special layout

Most Offshore 40s were built in a three-cabin layout, with two stern cabins, but Tim wanted a so-called E-type layout, which offers two cabins with a small quarterberth. He didn't rest until he found exactly what he was looking for, and found it ironically enough in his own backyard after using his vacation time scouring the country for the perfect boat.

"People either love maintaining teak, or else it gets away from them and the aesthetics end up looking like hell," Tim notes with a wry smile. His boat looked pretty good for a few weeks after he bought her. As he was living aboard, he preferred not to use the full boat cover she came with. Sure enough, the varnish all over the boat soon started to peel in sheets like sunburned skin. "Luckily the teak will come back just beautifully, with some attention," Tim adds.

He knew he had bought a project

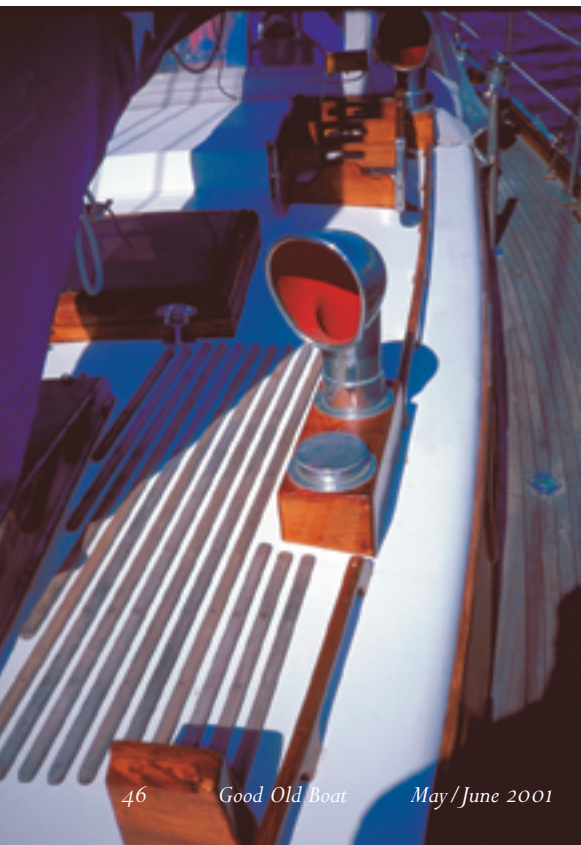
boat, and he had a clear idea of how much work he had let himself in for, because the 27-footer had consumed about two weeks a year in time spent varnishing. Even though she does have a solid fiberglass hull, *Sala-ma-sond* appealed to Tim because she looked so traditional with teak-covered decks and a fiberglass cabin with teak overlay, not to mention the two wooden masts. "I think it's beautiful, but it does drive the market value down owing to the increased maintenance," Tim says of the yards of wood exposed to the elements.

Most Offshore 40s sell in the \$30,000 to \$80,000 range, depending on their condition. In an effort to reduce the annual varnishing binge, Tim has taken to using clear polyurethane, which he describes as being essentially a pigmentless paint with UV inhibitors and anti-oxidants. Smith and Company, of Richmond, Calif., sells the polyurethane as a "five-year solution" for dealing with teak. Tim loves it, saying it looks to him every bit as good as varnish. So far he hasn't had to touch up any areas where he has applied the polyurethane, but he says when the time comes to recoat, the job is supposed to be relatively simple, using a heat gun to remove the old polyurethane.

Removing wiring

Above decks, Tim had to decide how to deal with the original standing rigging

"On the faraway island of Sala-ma-sond, Yertle the Turtle was king of the pond" begins Dr. Seuss' well-loved classic about the megalomaniac turtle who got what he deserved in the end. This Sala-ma-sond, also a classic, was inspired by the faraway island and is clearly capable of going there.





Tim's computer and related electronic equipment are remarkable primarily because he's managed to fit everything onboard, for one thing, and to make it vanish from sight, for another. Tim has removed sterile-looking metal and plastic cases and created his own handcrafted cabinetry and access lockers which blend into the furnishings of his Cheoy Lee.

and the previous owner's penchant for electronics. The electronics were badly dated, and Tim has been busy removing wiring and elderly systems that used to be state-of-the-art and now look astonishingly old-fashioned. One prime example was the vast flying saucer on the mizzen that serviced the radar. The radome was a couple of feet across, and the radar in the cabin was a huge black box, complete with rubber shades to allow the operator to see the screen in the strongest light. It was a tussle, because everything worked just fine, but a combination of windage aloft and intrusion into the living space below decks forced Tim to deep-six the radar. *Flying Eagle* was a heavy-looking boat, but *Sala-ma-sond* is returning to the sleek look associated with Cheoy Lees.

Tim removed the boom gallows that used to stand over the cockpit, noting that the fitting had the nasty habit of chewing the boom when he rested it in the gallows. A modern topping lift has replaced that. Then there were the charming teak belaying pins hanging in the shrouds. "I'm just not a belaying pin kind of guy," Tim shrugs, preferring to rely on the original, but very serviceable, winches. "I want a classic boat that is a practical vessel to sail. I like the clean lines, and I don't want the essence of the boat to be smothered." As the standing rigging is replaced, Tim is employing Norseman fittings to replace the swages.

On deck, the original teak boarding ladder has its own storage chocks, keeping it close at hand, but unobtrusive. Similarly, the original hard dinghy has its place, upside down on the foredeck in factory-supplied chocks. A dodger is a must for the usually cool, damp sailing conditions

found in Northern California, where the Pacific Ocean is chilled year-round by the frigid Alaska Current. Tim's was custom-built by Sherman's Custom Canvas of Santa Cruz, and highlights his demand that beauty not be sacrificed to practicality. The dodger comes with an abundance of handholds and offers good visibility, but at the same time it has incorporated its own particular sheer at the sides where the canvas is cut into a graceful curve, rarely seen in such canvas work. Another little touch offered with this dodger is the flexible solar panel mounted in the top; but in this case the panel is simply tucked into its own flap, a simple, elegant solution that eschews nuts, bolts, or screws.

Work in progress

Below decks, the cabin is a work in progress, and Tim's plans call for a rearranged galley with more convenient access to the sinks, moving them outboard and away from the stove. Meanwhile, his one slight modification to the V-berth has, like so many boat projects, led to an unforeseen complication. Now the berth is a proper double bed, but the insert blocks access to the head through the door that formerly gave direct access from the forward cabin. It's not exactly a huge problem, as all Tim has to do is open the aft-facing door from the main cabin. But his sense of what's proper has been disturbed, and he wants to regain that private access to the head. He is building a folding door that will ultimately slide across the V-berth entrance, opening a private access to the head and closing off the forward cabin from the saloon.

If that sounds elaborate, take a

look at the former settee that was located to starboard, opposite the deep and comfortable U-shaped dinette to port. As much as Tim is a lover of the classic, he is also thoroughly up-to-date when it comes to electronics. If you can imagine, he built a similar computer center in the ill-fated *Samantha*. He also provided a reading chair for his partner, Tai Moses, who likes to devour her books while wrapped up in her "throne." (Tim's term for the reading chair he built, not mine!) "It's a good curl-up-and-read corner," says Tai, but she notes that the seat still lacks a reading light.

That little issue highlights Tai's problem with Tim's refit. "The whole boat is such a work-in-progress; there are lots of projects for Tim to tackle," she says, acknowledging that the focus at the moment is on making the boat a seaworthy cruising vessel, not a livable home. However, Tai points out, Tim didn't waste any time making the V-berth more comfortable. She says they both puzzled for some time over the purpose of the wretched cutout that came with the boat. It kept falling out between the berths, and Tai didn't like that. "I thought perhaps it was a chastity cut-out," she says archly.

Feminine touches

Now she'd like a few more feminine touches in the somewhat austere cabin, like curtains perhaps, though Tai, a writer and editor at the *Santa Cruz Metro* magazine, is very clear she has little interest in galley arrangements. A thoroughly modern woman, Tai acknowledges Tim is the chef on board, and she is happy to let him design the cooking arrangements, which will doubtless work for her more



Tim and Tai sail on Monterey Bay when not working on Sala-ma-sond.

modest cooking style.

On deck, Tai wielded a brush with a will and helped Tim deal with the woodwork. It was hard work putting the polyurethane coat on, but Tai found the work satisfying, watching the wood become transformed by her labor. She's really excited about the longevity of the polyurethane coat, too, because traditional varnish wasn't an option, with its need for care every few months: "A girl has her limits," she says.

The computer on board is a full-sized desktop, which, as he relies on it for work, is being constantly upgraded. Tim built the wooden frame himself for the screen, which is shortly going to get a metal bracket to allow it to swing out from the side of the cabin. "I have a lot of luxuries built into my PC," Tim says, delightedly showing off the various features of his flat-screen computer. "It works as my television, FM radio, and six-disc CD stereo-recorder. Using my landline phone, the PC also gives me voicemail, and fax-modem capabilities. At sea it connects to my SSB to provide email as well as electronic navigation."

He built the hard drive's metal casing that slides into and out of its own locker, providing easy access to the components for servicing or replacement. The disk port has its own

Resources

Cheoy Lee

<<http://www.cheoyleeassociation.com>>

Rhodes Reliant/ Offshore 40 Network

<<http://nimbus.temple.edu/~bstavis/reliant.htm>>



Clearly a classic: the Cheoy Lee Offshore 40 inspired by Phil Rhodes' Reliant.

brass frame with a beveled glass window, and the hard drive slides in and out on a set of perfectly smooth rollers of Tim's design. "It took a while to get that lot sorted out, but it works really well, it looks good, and it's extremely practical."


Double filters

When I went by to look at the boat, Tim had a couple of projects he was working on, including a double set of fuel filters for the diesel engine. He recently had his fuel tanks polished and was busy getting ready to complete the refurbished fuel system with a standard double-filter setup offered by Racor. However, standard isn't a word Tim can live with, so he modified it slightly by installing the filters on their own teak backing plate and, as a final touch, installed a tiny teak accent to the filter selector switch. It's smooth, with perfect grain, coated in polyurethane of course, and looks as though it came from the factory that way.

To keep his electronics in top shape, Tim is designing and building his own primary electrical charging and monitoring system. He selects his own components and is trying to keep them in as compact a space as possible, ensuring good connections by using solid copper straps instead of cables. You or I might rest content with a simple breaker bought off the shelf, but aboard *Sala-ma-sond*, homemade is best.

If you ask Tim what his plans are, he gets evasive. Acknowledging his

weariness with the less-than-tropical Santa Cruz climate, he is willing to admit he does dream of setting off into a tropical sunset. But there's just so much work left to do! Rearranging the galley, organizing the head access, and maybe enclosing the quarter berth. The projects never end for this part-time carpenter. In the meantime, Tim and Tai take daysails on Monterey Bay and short cruises along the California coast.

I get the feeling that when this perfectionist feels the boat is reasonably ready, he will let go the docklines and finally take that journey over the horizon to complete the tropical odyssey he started so many years ago, when he left Rock Island, Illinois. Despite his unwillingness to let me know, I detected a hint in his voice when he told me what the name of his boat means. *Sala-ma-sond* is a quotation from Dr. Seuss, which means "faraway island, a place of freedom," and Tim explains the name's origin with a dreamy look in his eye. 



Michael, his wife, Layne, and their two dogs recently completed a trip from Santa Cruz, Calif., to Key West, Fla., in their Gemini catamaran, Miki G. Michael

lived aboard a Flicka 20 for 10 years, including a cruise in the Bahamas, before marrying and being faced with demands for hot running water and a larger head.

Rhodes Reliant

A classic beauty that might surprise in light weather

by Ted Brewer

WHEN YOU THINK ABOUT CLASSIC 40-foot fiberglass yachts, there are perhaps half-a-dozen vessels that come immediately to mind. Two of them, the Block Island 40 and the Bermuda 40, are from the board of Bill Tripp, and two others are Phil Rhodes' creations, the Bounty II and the Rhodes Reliant.

A fifth classic is also a Rhodes creation, in a way, as the Cheoy Lee Offshore 40 is a mirror-image plagiarism of the Reliant, and was created almost solely to cheat the designer out of his due royalties. Having had a number of yachts produced in the Orient myself, I can recall my own bitter experiences and sympathize with Phil Rhodes. How frustrated and angry he must have been when the first Offshore 40 appeared.

The Reliant is typical of the CCA cruiser-racers of the late 1950s to mid-1960s with husky displacement, moderate beam, and moderate sail area. Although keel/centerboarders such as the aforementioned BI 40 and Bermuda 40 dominated the racing scene to some extent, there were always skippers who preferred a keel boat to the slightly beamier centerboarders, and we won our share of silver aboard Bill Luders' full-keel 39-foot L-27 against the best 40-foot keel/centerboarders afloat. The Reliant figures are interesting:

Length overall 40 ft. 9 in.
Length waterline 28 ft. 0 in.
Beam 10 ft. 9 in.
Displacement 22,040 lb.
Displ/length ratio 448.2
Sail area 750 sq. ft.
SA/Displacement ratio 15.3
Capsize screening factor 1.53
Comfort ratio 44.9

Light air speed

These figures certainly indicate a seaworthy and comfortable yacht



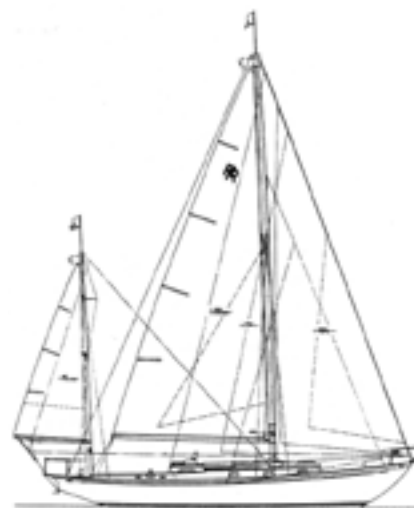
Cheoy Lee Offshore 40

although one that might be hard pressed to keep up with a contemporary beamy, long-waterline, light-displacement cruiser in a good breeze. The Reliant might surprise us in light air though. Despite her longish keel, she has a very short waterline and narrow beam by today's standards so

"No one yacht is perfect, but the Reliant comes very close to perfection in my opinion."


her wetted surface may not be much, if any, greater than the modern 40 footer. Her sail area, while moderate for her displacement, is quite adequate to move her along very nicely in a light breeze and her handsome yawl rig can quickly set a good-sized mizzen staysail or spinnaker to astound the skipper of today's ubiquitous sloops.

Still, it's in really heavy going where yachts like the Reliant begin to shine. Her high comfort ratio assures a much steadier motion and a smoother ride than any contemporary ultra-light cruiser can provide. As well, her low capsize screening factor indicates a yacht that, unlike too many of today's cruisers, will recover quickly if knocked down past the capsize point in extreme conditions. The one drawback of her two-cabin accommodation



Rhodes Reliant 40

plan is the companionway offset to starboard. The wise skipper will keep it closed tightly in stormy conditions and regulate the comings and goings of the crew. I never heard of a Reliant taking a big sea through the open companionway in a knockdown to starboard, but I suppose it could happen in a real gear buster, and an ounce of prevention beats two tons of sea water in the bilge.

No one yacht is perfect, but the Reliant comes very close to perfection in my opinion. In any case, her truly classic beauty more than makes up for any minor quirks she may have. She is definitely a yacht that will receive approving gazes from knowledgeable sailors in every port she visits. 

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.

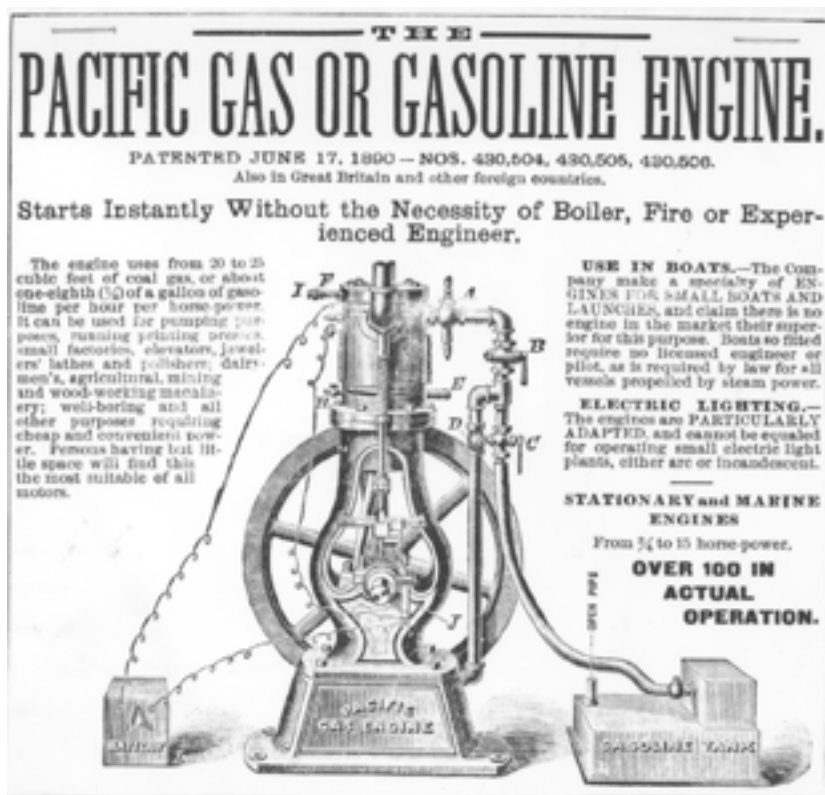
The Halcyon days

Each time I am becalmed in the Sargasso Sea when single-handing my virtual ketch around the world in my best Walter Mitty style, I fire up my ultra-reliable diesel auxiliary engine and look for trade winds. Others would hear the steady, smooth somnambulant hum of the four cylinders doing their thing. But like Walter, I hear “ta-POK-eta, ta-POK-eta,” which is the sound of a vintage three-cylinder engine that was all the rage early in the last century.

Perhaps it's the result of my inherent Walter Mitty-ness, but I find it fun to reminisce about the old days of marine engines and some of the salient steps in the development of the engines we enjoy today. To me at least, there is a nostalgic hook in seeing, hearing, and smelling an old and noble engine of that era, running merrily along at, perhaps, 300 rpm.

To understand and appreciate the evolution and development of marine engines for sailboat auxiliary power, a bit of history might be warranted. Back around 1880, the steam launch had become popular, but the size and weight of the boiler-engine combination did not really lend itself to smaller sailing craft. Furthermore, it took too long to build up sufficient steam from a cold start for the small boater (except for the “steam nuts”

The beginnings of marine chitty chitty bang bang



This all-purpose engine was offered by Pacific Engine Co. in 1890. It could be run on coal (producer) gas or gasoline.

who loved steam so much they didn't care how long it took).

In 1890, the Pacific Gas Engine Company patented their version of a single-cylinder engine that was designed to run on either coal gas or gasoline vapor. Their ads stated, “Starts Instantly Without the Necessity of Boiler, Fire,

or Experienced Engineer,” and “Persons having but little space will find this the most suitable of all motors.” On a per-horsepower basis, this concept was a great advantage to the small boater, much smaller and lighter than steam plants, and ready to go (more or less).

Small-boat adaptations

The company made a specialty of adapting the engine for small boats, and for the first time a practical power plant for relatively small sailboats began to emerge, albeit in fits and starts. Within a few years, there appeared on the marine scene an estimated 200 manufacturers

of auxiliary

by Wes
Farmer

few. However, those ads that you can see in old vintage nautical magazines of the time were sometimes wonderfully naive: "Oriole Engines — Built in Baltimore, Will Run Anywhere" and "The Bridgeport Engine is Guaranteed To Run You Across Long Island Sound Without Fail." What joie de vivre!

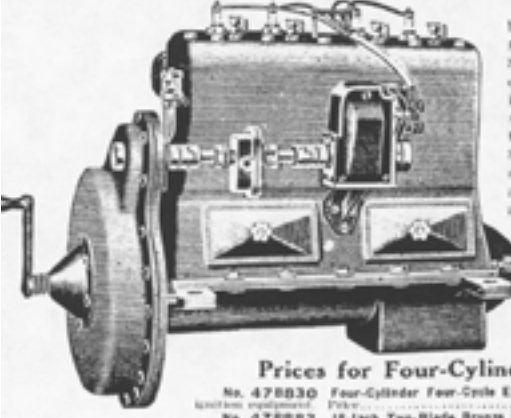
Most of the early gasoline internal combustion engines were initially of the two-cycle variety, with make-and-break low-voltage ignition. However, the German, Nicholas August Otto, who invented the basic proposition of the internal combustion illuminating-gas engine, had also invented the earth-shaking Otto four-stroke cycle in the 1800s. This design proved to be smoother, easier to start, and more efficient than the two-cycle variety, and pretty well took over except for outboard motors.

It is interesting to note that until Otto patented this type of machine, which would dramatically transform our world, his illuminating gas engine was capable of but 30 rpm and ignited from a steady flame in a box. The engine stood waist high, developed but 0.86 horsepower, and transferred the piston movement to the flywheel with a rack-and-pinion arrangement. (Otto had bypassed the crankshaft of the steam engine, considering it inefficient in its translation of piston action to rotary motion. Oh, well, Edison had some lousy ideas, too.)

Herr Diesel's engine

Rudolph Diesel, who came a bit later, invented the engine concept that bears his name to this day. His great idea was to design the engine in such a manner that the compression in the cylinder created a high enough temperature to ignite the fuel without the necessity of a separate ignition system. He must have created great levity when he first

Four-Cylinder Four-Cycle Engine



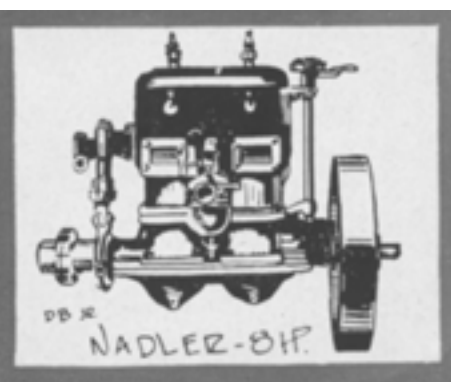
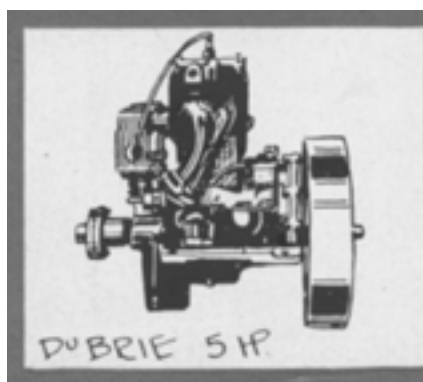
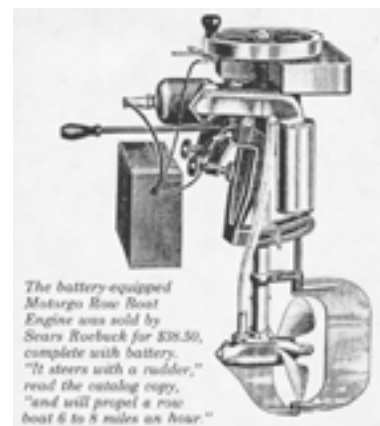
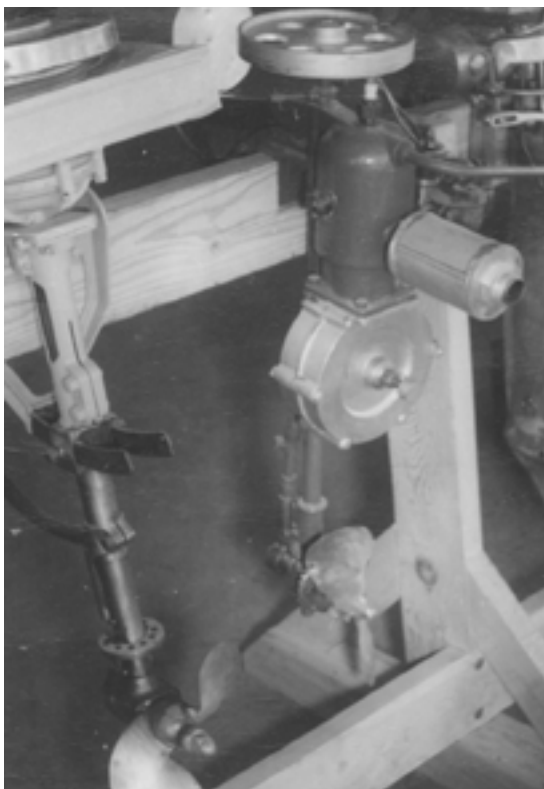
This engine is equipped with Spindorf Disk high tension magnets with cables and plugs ready for starting; no batteries are needed. Schebler model "E" carburetor with warm air connection. Exhaust and intake manifolds cast in one piece; cylinder head removable; crankshaft and connecting rods drop forged, heat treated; removable die cast ballbearing bearings. Splash and force feed system of oiling with sight feed oil glass. Engine shipped for as long a trial as you want. Satisfactory service guaranteed. Write for more complete description.

Bore, 3½ inches. Stroke, 4½ inches. Speed, 200 to 1,500 revolutions per minute. Horse Power, 14 to 20. Weight, with carburetor and magnets, about 450 lbs. Shipped from factory in JACKSON, MISS.

Prices for Four-Cylinder Engine and Equipment.

No. 478830 Four-Cylinder Four-Cycle Engine, complete with carburetor, magnets and lighting equipment. Price, \$198.00	\$198.00
No. 478833 18-Inch Two-Blade Bronze Propeller. Shipping weight, 5½ pounds. Price, \$5.65	\$5.65

Four-cylinder, four-cycle engine, above, circa 1920. One- and two-lunger engines, far below, circa 1910. Two long-shafts, at left below, also from 1910. No one had yet thought to place the cylinder horizontally. A 1900s make-and-break engine, at right below, and the Sears Roebuck \$38.50 Motorgo Row Boat Engine, below that.



power

tried his prototype; using a mixture of powdered coal and air to inject in the cylinder, he blew his engine to smithereens on its first bang. However, posterity forgives him, and his invention is ubiquitous, as we all know.

By 1905, anybody who could buy castings and cut metal on a lathe seemed to jump into the engine business. Typically, the Lackawanna marine engine was built by the Coldwell Lawnmower Co. of Newburgh, N.Y., and the Caille Perfection engine was built by the Arthur Caille Co. of Detroit, whose main business was “one-arm bandit” slot machines. Along with the bewildering variety of engines there came a concomitant bewildering variety of “options” — options for carburetors, ignition systems, reverse gears, clutches, reversible propellers, and so on. There was even the Kitchen rudder, a device that not only steered the thrust of the propelled water, but had a separate lever that could reverse the thrust — the same principle used on our modern jet aircraft today to reverse thrust when landing.

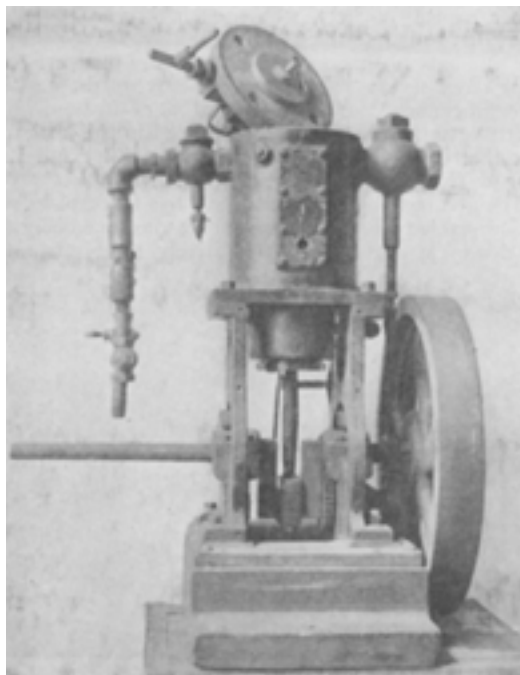
My! What carburetor should I choose? Schebler, Monarch, Panhard, Daimler, Garllus, Breeze, Holly, Kingston? You picked your own reverse gear: will it be Baldrige, Gies, Ball, Capitol, Joe’s, Tuttle, or Paragon? As far as ignition was concerned, you could choose between low-voltage make-and-break, and a high-voltage jump spark generated by either a magneto or a spark coil/vibrator rig energized by a battery. Atwater-Kent ultimately did away with the necessity of a spark coil for each cylinder by coming up with a single spark coil and a high voltage distributor. That was the ticket! (Atwater-Kent subsequently went on, of course, to fame in radio manufacturing).

Pump choices

You even had a choice of the type of water pump you wanted. Plunger pumps were best, some said, because they ran off an eccentric, and had less wear than these new-fangled gear pumps. Steam and naphtha men swore by the eccentric, and saw no reason to ever change this scheme of things.

This, then was the general scene during the years from about 1900 to

1917, when World War I came our way. For the relatively short time we were engaged, there was a hiatus in marine engine development for small craft, as emphasis was placed on the design and development of larger engines for Army, Navy, and Army Air Corps use. For example, a lot of effort went into the large V-12 engine that went into the Army Air Corps’ JN-4 trainer (the Jenny). The marine conversion version of this machine was also used in Elco’s 80-foot patrol boat, of which the company constructed 550 units in



Above, one of the first marine engines marketed. It was produced in 1884 by the Union Engine Works of San Francisco. The carryover from steam engines is evident. Notice that there is no crankcase. This first ran on illuminating gas and was later adapted to gasoline vapor.

500 working days! This engine was the Curtiss Liberty OX-5, and they were sold as surplus after the war, brand new and in crates, for \$50 each. Many of them made their way in the 1920s into private craft of various types.


It was after the war that the development of marine engines resulted in sufficiently low weight, compactness, reliability, and efficiency to make them really practical as auxiliary power for relatively small sailboats. Many new

ideas (and much new wealth) entered the scene in the 10 years following the armistice in 1918. This led to the design and development of the Atomic 4, among others, which became very popular for auxiliary power, and which in turn led to standardization that allowed mass production for the mass market. For example, the Brennan “IMP” was almost a carbon copy of the Atomic 4.

Early outboard

The first auxiliary power plants were inboard engines, of both the 4-cycle and 2-cycle variety. Then, one day in the early years of the century, Arthur Caille put an outboard engine on the market, to be attached to the transom. This was nothing more than a small 1-hp marine engine, tilted at an angle, with a long propeller shaft running down into the water behind the boat. Then Ole Evinrude decided it would be better to mount the engine essentially vertical, and transfer the rotation to the propeller by the use of right-angle gears. For sailboats, the “long shaft” was applied. (Notice in the photo on Page 51 that some of the bevel gears, the water pump, and the non-retractable, knuckle-busting starting handle on the flywheel are in evidence).

Then someone further decided that the cylinder would best be laid horizontal — this was a better orientation, and since they were 2-cycle engines, they needed no oil sump. This scheme has lasted approximately 85 years to this day in 2-cycle outboards.


Yes, those were halcyon days of auxiliary power, to be sure. At least from the standpoint of the romance of it. Those who lived through the era without a broken thumb can be proud. 

Wes Farmer is a retired engineer, now living in Deephaven, Minn., on the shores of Lake Minnetonka. He has had a lifelong love affair with small boats, both motor and sail, having owned one type or the other since he was 13. (His first boat was named the Leakin’ Zephyr.) He has a continuing interest in marine history, especially that of small craft.

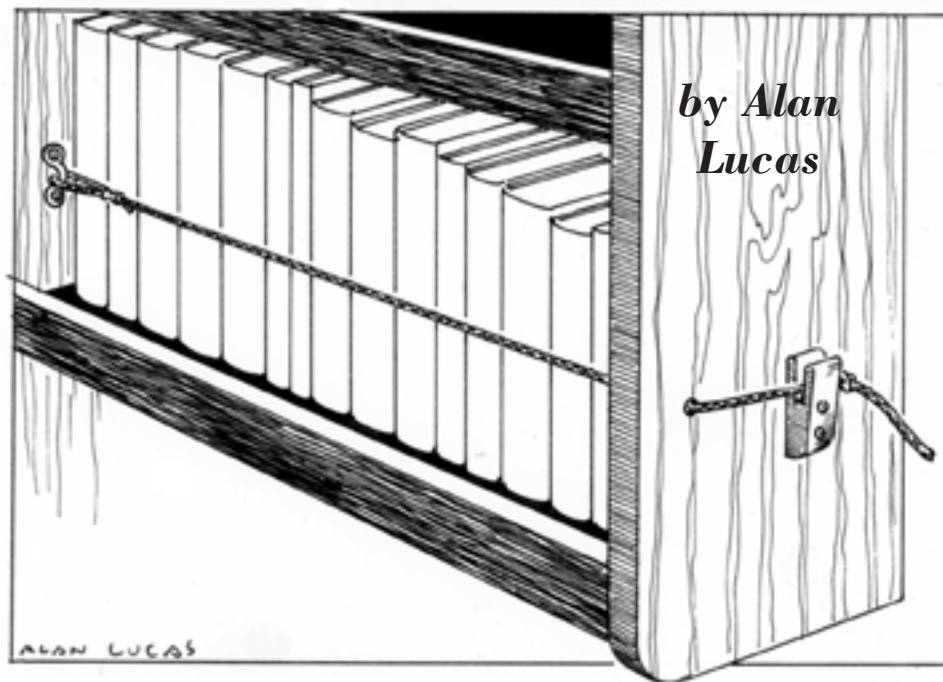


Fiddle rope

Books are difficult objects to stow in an easily accessible way aboard a boat. Low fiddles trip them up at sea, and high fiddles fight their removal. This system employs a very low, fixed fiddle and an easily removed rope or cord fiddle.

The cord is fixed at one end of the bookshelf and passes through a hole on the other side. In port it may be kept loose. At sea it is cleated tight to prevent the books from falling out. 

Alan has been cruising for 40 years, primarily south of the equator. He and his wife, Patricia, have built or restored all eight of the boats they have owned. The most recent of these project boats is a 50-foot fiberglass skipjack.



by Alan Lucas

Quick and Easy

Quick fix for a deckhead drip

I received an urgent call from an old friend with a Pearson Commander. The boat is his pride and joy, and he has kept it beautifully. The under-deck reinforcement of the on-deck mast step was weeping water. He told me he thought he knew what it was but really did not want to confirm it: osmosis.

I was immediately able to assure him it was not osmosis, but it could be other problems such as a saturated balsa core. Osmosis usually occurs where the hull is immersed in water and, while the problem may migrate within the hull laminate into the topsides, I have never seen osmosis above the hull-to-deck joint.

The next day we met at the boat. The bolts holding the deckstep for the mast and the compression post underneath it in the cabin, were dripping water onto the cabin sole. I sounded the deck area around the mast. All sounded solid; no wet balsa. My analysis was that the mast itself had filled up with rain water to a height that created enough water pressure to force water down around the threads of the bolts, past the caulking under the bolts and onto the sole.


I cut out the caulking around the VHF coax cable where it entered the mast, about six inches above the deck. Bingo! Water — and a lot of it. I was kneeling on the cabintop next

to the mast as I worked and so much water flowed out of the mast that my pants, socks, and shoes, were immediately soaked.

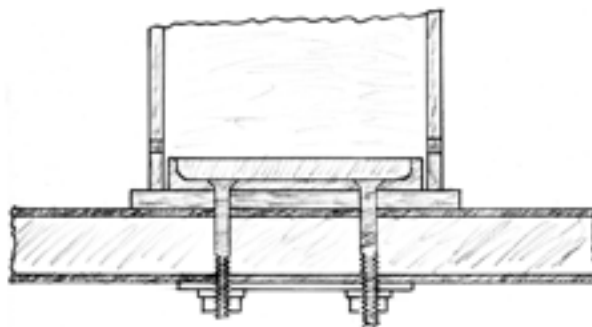
We still had more than 5 inches of water inside the mast, so the next step was to drill two ¼-inch holes, port and starboard, in the mast wall just above the inside base of the mast. Again, lots of water. By heeling the boat to port, we assured ourselves there was no water left trapped in the mast.

Going below, we removed the nuts, washers, and caulking from the mast reinforcement bolts. The area was damp, but there was no running water. I recaulked the VHF coax cable hole but left the drain holes open to permit any water that entered the mast at the masthead to drain out at the mast base.

After a week of letting the bolt area dry, I reinstalled the washers and nuts on the bolts. Problem solved. There has been no migration of water down the bolts and over the cabin sole.

Naturally, the next time he has his mast down, he will want to recaulk the mast step and mounting bolts. 

Bill's formal bio appears on Page 39. He is a Good Old Boat contributing editor.




by Bill Sandifer

Smoking to victory

by Niki Perryman

A friend once told us that, when racing dinghies, he owed his success in fluky light air to a packet of joss sticks, a box of matches, and a big dollop of bluetack. He used the bluetack to secure the base of the joss stick to the deck. Once lit, the joss stick gave off enough smoke to act as an ultra-sensitive wind detector. So while the opposition wallowed in frustration, guessing where the next puff would come from, he already knew and had his sails set accordingly.

During an overnight race in the north of Norway, we recently found ourselves struggling with similar conditions and searched *Siandra* for something remotely akin to a joss stick. We eventually found a mosquito coil which, mounted on an

enamel plate on the coachhouse roof, proved just as efficient (if not quite as fragrant!). We managed to thread our way through a supposedly becalmed fleet, and — thanks to those smoke signals — took line honors. Needless to say we shared the secret with our puzzled competitors *after* the race. 

Niki Perryman and Jamie Morrison left Australia in 1992 to cruise in their 35-foot Lion-class sloop, Siandra. After crossing the Indian Ocean, they spent several years exploring Europe, including an icy winter in Arctic Norway. They plan to spend the coming summer in Maine.

A brass sea rail

This was one of the simplest projects we have undertaken, requiring an equally low skill level. We chose brass for its corrosion resistance, ease of forming, and salty good looks. We chose the 1/4-inch rod stock that is readily available at most hardware stores, and used silver solder as a “welding” medium, as it works particularly well for brass at the comparatively low temperatures encountered on a stove.

Materials included a 4-foot stick of brass rod, a small stick of silver solder, flux, and a 1/4-inch brass ferrule, such as those used on copper tubing. Total cost: just over \$8.

It took only a few minutes to come up with a design suitable for our particular stove, and it turned out to be one I like better than the factory model, as it did not involve drilling holes in the countertop.

We started by taking our largest onboard cooking vessel (a small pressure cooker) and rolling the uncut brass

rod around the base to form a circle just slightly larger than the pot. (Form it as tightly as possible, as a certain amount of spring-back will occur.) Next, we trimmed off excess rod and placed the remaining circle in a vise with each end of the circle inserted into the brass ferrule. We applied flux and used heat from a common propane torch. It's best to use the solder sparingly and to let it cool naturally to avoid stress cracks.

With the top ring finished, we moved on to the bottom ring, which we formed around the base of the stove burner. This ring is not soldered together but rather left with a half-inch gap which can be adjusted for size and to allow some spring, which provides a bit of tension around the burner base,



by Ron Chappell




making for a tight fit.

We placed this bottom ring around the burner, placed the pot on the burner with the previously made upper ring around its base, and measured the distance between the two. This was how long our connecting rods had to be to give us the cone-shaped configuration that allows smaller pots to be used on the burner with equal security.

The most labor-intensive part of the project was next. We ground a shallow trough in the ends of each ring support

with a moto-tool (you could use a round file to hand-file the troughs) to help them mate up with the round ring sections. The connecting rods were then aligned between the concentric rings and secured with just a dab of 60-second epoxy (just to hold things together until we could make our solder joints).

What we had at this point was a really ugly, heat-discolored, flux-stained searail. But not to worry ... a few minutes with some fine-grade steel wool and a final hand buffing with a good brass polish on a soft cloth made the creator truly proud. The silver solder, by the way, will take on the patina of the brass and be invisible. 

Ron's formal bio appears on Page 29.

Beating the low-voltage blues

One thing that we can all agree on when it comes to older boats is that they never have enough battery power for all the new electronic and electrical gizmos that we think are must-haves.

We've all experienced the low-voltage blues — while starting the engine, the GPS beeps and then restarts, the autopilot goes to a new heading, and your current-usage monitor resets to 0. Other examples might be that each time someone uses the electric head, macerator, or Lectra/San, your modern electronic marvels reset, starting up as if their power had been switched off then on.

In the days when most of our boats were built, electrical usage was limited to starting the engine and powering the lights. No one cared that the lights dimmed while cranking the engine. A minor annoyance, but not something that created havoc. Nowadays, though, low voltage can create more than minor annoyances.

For our purposes, I'll define low voltage as any voltage that is out of the normal operational range of a piece of equipment. For a light bulb, the lower the voltage, the lower the light output and the longer the bulb's life. For electronic devices, low voltage generally causes them to malfunction or sometimes even fail.

Define the problem

It can be difficult to diagnose a low-voltage problem. Digital voltmeters, while wonderful for certain tests, aren't always the best tools for detecting low-voltage conditions. The reason is that the low-voltage condition is often transient. Digital voltmeters update their readings no more than a couple of times a second, which may be too slow to show the event. Also, digital voltmeters measure the average signal over a short time, which may reduce the size of the low-voltage event on the meter's display. While I'm not advocating throwing away your digital voltmeter, learn its limitations and, if need be, also get an inexpensive analog voltmeter with a needle pointer. The needle is much better at indicating transient events.

Another way to help diagnose low-voltage, especially if your digital voltmeter doesn't show a problem, is to use your other senses. For example, you may hear that the engine starter motor is turning more slowly than normal, or you may see that the incandescent lights in the cabin are more yellow than normal or that they dim when some other device switches on. You may touch a wire and feel that it's warmer than the ambient temperature or hear an occasional beep from an electronic device at an unexpected time.

VHF woes

One of my first experiences with low-voltage problems was with my VHF radio. I discovered that my radio range on high power was extremely poor,

Protect those beeping circuits from voltage drop

maybe a mile. In my frustration with the radio, I switched it to low power and found that my range significantly increased. After having the radio checked by a local repair shop without result, I looked for the problem on my boat. I ruled out the antenna, since I could still hear distant stations. Then I took my digital voltmeter and measured the 12-volt supply. Everything looked good, but when I keyed the radio, the meter went nuts! The radio transmission interfered with the electronics in the meter. Next I took out my old analog voltmeter and measured the supply voltage while keying the mike. With

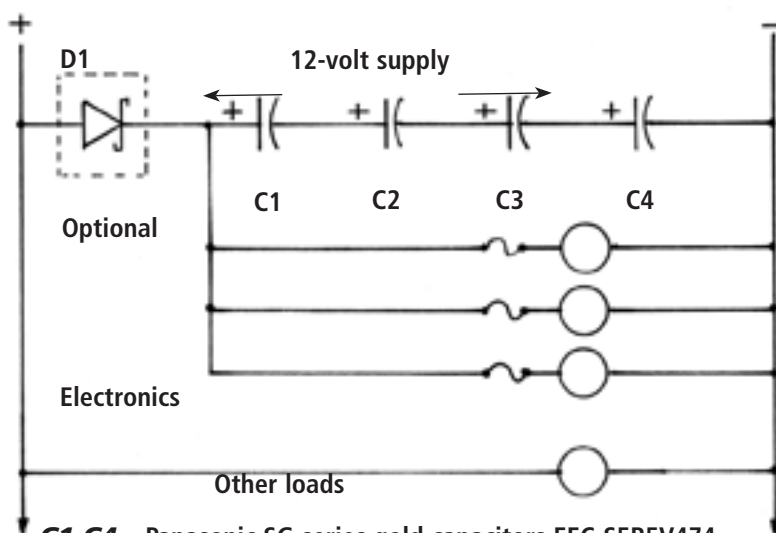
the analog meter I could see that the supply voltage dropped while transmitting on high power (25 watts), but it hardly dropped on low power (1 watt). Tracing the power supply wires, I found a corroded connection. After fixing the connection, I repeated the test, and the VHF worked properly on high power.

Electrical connections

One of the greatest causes of low-voltage problems on a boat is corrosion. We're all familiar with the white powder on connections and green or black coatings on the copper wires. Wherever you see corrosion, that is a location with higher-than-normal resistance in the circuit. According to Ohm's Law, this resistance increases the voltage drop across

by Scott Rosenthal

Capacitors to prevent low voltage during startup



C1-C4 – Panasonic SG series gold capacitors EEC-S5R5V474, 0.47F, 5.5 WVDC, Digi Key Part No. P6974-ND

D1 – General Semiconductor Schottky diode SB530
Digi-Key Part No. SB530CT-ND
5A Forward Current, 0.5V Forward voltage drop

the connection, which decreases the voltage available at the device.

There is a lot of debate about the proper way to terminate an electrical wire. Some people advocate crimping connectors on to the wire, others solder the wire into the connector, and others both crimp and solder. Crimping makes a mechanical connection to the wire, while forming a “gas-tight” connection at the spots where the connector’s inside surface touches the copper wire. Soldering has some mechanical strength (though not something I would depend on), and it does stop corrosion between the wire and the connector. Some people insist that soldering the wire to the connector creates a “hard-spot” that may cause the wire to break if it’s not properly supported.

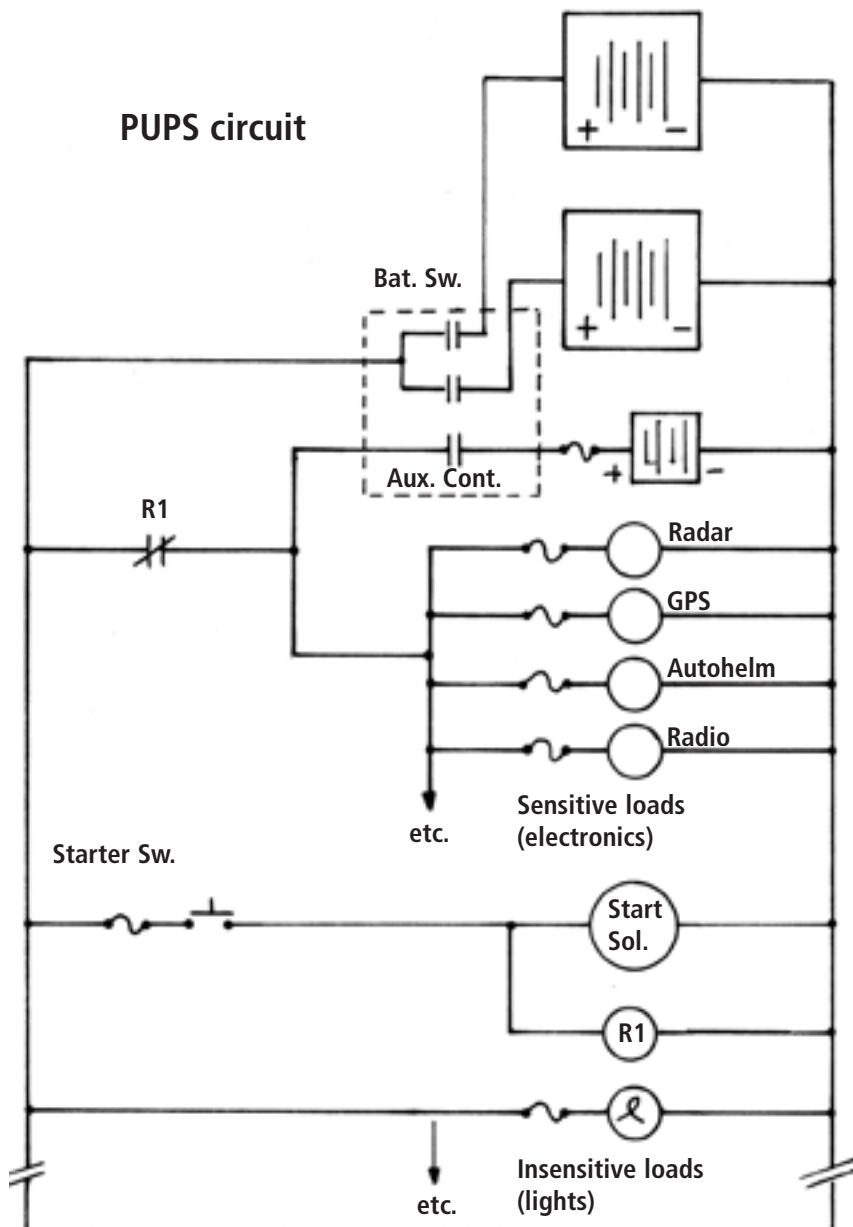
Whichever method you choose, make sure that you have a proper wiring crimp tool. Bypass the yellow-handled \$10 crimpers and invest in a ratcheting crimper. Your crimps will be better, more consistent, and easier on your hands. I crimp all connections, and I also solder those that carry significant power. I then cover every connection with adhesive-lined heat-shrink tubing to seal moisture out of the connection. Remember to use only tinned copper wire on your boat. This will significantly reduce corrosion and resistance in your wiring.

The low side

Sometimes it’s not possible or practical to eliminate a low-voltage condition. Then what? We’ve probably all had the experience of starting the engine and having an electronic device — such as an autopilot, a GPS, or a VHF — reset. Modern electronics, with their embedded microcomputers, need a stable source of voltage to run correctly. Typically, the voltage they want to see has to be regulated to better than 10 percent. Inside these “black boxes” are voltage regulators that take the 12 volts and convert it to 5 volts or 3.3 volts, which then powers the rest of the electronics. For these voltage regulators to work, there has to be a minimum “difference in voltage” between the input to the device and the working voltage inside the device. For example, some regulators require a 4-volt difference between input and output; that is a 9-volt input to regulate to 5 volts. Better (read “more expensive”) voltage regulators can handle as low as a 0.5-volt difference between the input and output voltages. However, since we all want the lowest cost in our electronic devices, don’t expect great voltage regulation.

When you start the engine, the battery voltage can easily drop low enough to go below this required differential. When that happens, the regulated output voltage can also drop outside of the 10 percent range. When this happens, anything can happen inside the electronic device. Some devices incorporate a power supervisory circuit, which will shut down the microcomputer until the voltage comes back within specification and then restart the device in a “nice” manner. Other less-expensive marine devices don’t incorporate this circuitry, and the electronics may (using the precise engineering term) run amuck. Don’t look on the box or talk to the manufacturer — you’ll never find out how your electronic instrument handles these low-voltage conditions.

PUPS circuit



A bit more

Like most things in life, there’s more than one way to try to solve this problem. The following are some things to keep in mind while looking for solutions:

- How inconvenient or dangerous is the problem?
- How much effort are you willing to expend?
- How much power does the affected device use?

The first thing to check is to make sure that the problematic device has the correct size wire for its power. To size the wire, remember that it’s not just the distance from the electrical panel, but twice the distance. The total distance is the sum of the distance from the electrical panel to the device and back to the panel or ground connection point. To find the correct wire size, consult the ABYC wire size table. You can find these tables in the West Marine or BoatU.S. catalogs. I always use the 3 percent table and not the 10 percent loss table, because I find that the cost difference in the wire size pales in comparison to the time to properly install it.

For relatively low-power devices, you may be able to add a capacitor across the power leads (the 12-volt and ground wires) near the problematic device. Use an electrolytic capacitor with a working voltage over 20 volts. Tantalum

capacitors work great, but you can also use other electrolytic capacitors. Generally, the larger the capacitor, the better for these “brown-out” conditions. Try different size ones until the problem disappears, and then add 20 percent to take care of changes in the capacitor as it ages.

Another technique is to create something similar to a battery with some super capacitors. These very-high-capacity capacitors act like a battery, but they don't have the charging issues that rechargeable batteries may have. These capacitors don't have a high enough working voltage, so you'll need to connect a few capacitors in series to obtain the right working voltage. If the device you're trying to protect uses less than an amp at 12 volts, you can also put a diode in series with the power line. This diode will prevent the super cap battery from trying to power the rest of your boat and will get you longer standby power. However, keep in mind that the diode itself will create almost a 1-volt drop in the voltage to your electronics.

UPS onboard

For more serious protection, you might consider the following. Just like at home or at your office, you can add another small battery to power your electronics during these low-voltage transients. An example of this is an uninterruptible power supply (UPS).

For your home computer, you can add a UPS that will continue supplying power to your computer during low-voltage events. The UPS monitors the power coming from the wall outlet and when the AC voltage goes out of specification (too high or too low) it will switch power from the wall to an internal battery.

Though it is possible to install a suitable UPS aboard a boat for the DC system, it would be overkill for most folks. However, you can add a “pseudo-UPS” (PUPS) to handle the voltage drops that you may experience in the electronics while starting the engine.

The requirements for a simple PUPS on your boat might include stopping the sensitive electronics (autopilot, radar, VHF, and so on) from resetting. It only needs to provide protection during engine starting, thereby reducing the system's complexity. The additional battery should be small, since the amount of power the PUPS needs during engine cranking is really very small.

The battery should be charged when your other batteries are being charged, without operator intervention. For forgetful folks (most of us), the act of starting the engine should automatically switch the sensitive electronics to the separate battery.

Two-part key

The design of the PUPS accompanying this article (on Page 56) addresses the requirements we outlined above. In addition, the complexity is low enough that most handy boatowners could easily tackle the project.


The keys to the PUPS are two different parts: the solenoid (or heavy-duty relay) and the master battery disconnect switch. The solenoid is a normally closed (NC) SPST (single pole, single throw) or SPDT (single pole, double throw) solenoid. The Cole Hersee Co. has two 35-amp solenoids available — No. 24420 (SPST) and No. 24401-04 (SPDT).

The PUPS uses the alternator field disconnect terminals on the master battery disconnect switch as a “third” battery switch. If you are using the alternator field disconnect terminals for their intended purpose, you can substitute a small battery disconnect switch.

The PUPS functionality is not difficult to understand.

On a separate 12-volt power feed, place all the sensitive electronics on your boat, but don't overdo it. For example, lights should not be on this circuit. During normal operation, these electronic devices will be powered by the boat's regular power. When you engage the starter motor (really, the starter solenoid) on the engine, the starter switch opens the PUPS solenoid's contacts. This action disconnects the 12-volt feed from the boat to the sensitive electronics. However, the PUPS battery continues feeding power to the electronics. When you release the starter switch, the boat's 12-volt rail again supplies power to the electronics.

Almost any 12-volt battery will work in the PUPS. The battery only needs to supply power for a few seconds. If all your electronics on the separate circuit used 10 amps and you had to crank the engine for one minute, that's less than 0.2 amp-hour used from the PUPS battery. It's best not to mix battery types, because ideal charging voltages may differ. For further safety, you can install a fuse in series with the positive terminal of the PUPS battery.

Low voltages can play havoc with today's electronics, but with some understanding of the causes of the problem, you should be able to minimize these effects. 



Scott Rosenthal, his wife, and three kids live near Baltimore, Md. Scott has been sailing since 1970. He and his family presently sail their 1980 Bristol 40 yawl, Willow, on the Chesapeake Bay, the East Coast, and the Caribbean. When Scott's not sailing, he instructs companies on embedded (microcomputer) design techniques with software and electronics.

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Book reviews

A sequel to classic yachting riddle

The Shadow in the Sands, by Sam Llewellyn (Sheridan House, 1999; 288 pages, \$14.95).

Review by Homer Shannon, Windham, N.H.

Reading Erskine Childers' classic marine Rspy novel, *The Riddle of the Sands*, is not a prerequisite for enjoying Sam Llewellyn's new sequel, *The Shadow in the Sands*, but it will enhance your enjoyment of it.

Set in the German lowlands on the North Sea in 1903, *The Shadow in the Sands* picks up the plot where *Riddle* left off. The Germans are planning an invasion of England using the shallow, commercially insignificant but unmonitored harbors of the East Friesland region. Carruthers, one of the two main characters in *The Riddle of the Sands*, has circulated stories of German activities in the region to the British Admiralty and English press, but there is little concern over the reports.

One person who takes the reports seriously is the Duke of Leominster. Funded by the Duke, a three-man team, disguised as bird-watching yachtsmen, is dispatched to the German coast to confirm the military activities. A complicated series of events follows.

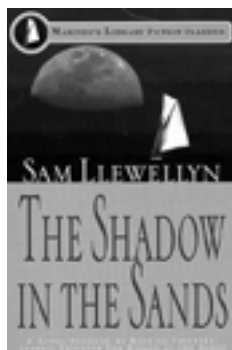
Those who read both books in sequence will recognize the dramatic contrast in the styles of the two works. *The Riddle of*

the Sands was published in 1903 about events that took place in 1902. *The Shadow of the Sands* continues the story in 1903 but was published in 1998. Literary styles and expectations for adventure stories have changed significantly in the nearly 100 years between their publication dates.

In the original, the most dramatic events are tame by today's standards. In Llewellyn's sequel, the reader witnesses a beating, a murder, two sexual encounters, and a collision with the Kaiser's yacht, all in the first 75 pages, before the real action begins.

The difference between modern morals and those of Victorian times is significantly, and somehow embarrassingly, apparent in the two books. In the original, the hero hints at longings for the heroine but never even kisses her. In the sequel, the hero manages to seduce the heroine in a lurid and unlikely affair that would never have made it past the censors in 1903. The use of casual and explicit sexual events in a Victorian setting does not seem appropriate.

The Shadow in the Sands moves at a much faster pace and has a much more complicated (if implausible) plot than its predecessor. This makes for fast and exciting reading but the gentle, almost surreal, mood of the wanderings of Carruthers and Davies in the original is largely lost. Reading *The Riddle of the Sands* before *The Shadow in the Sands* will provide the reader with a lasting mental image of this very unusual maritime region, which enhances the more dramatic images conjured up in the newer book. Or you can skip the original and read only *The Shadow in the Sands*; just accept it as a good Tom Clancy-style thriller set in an earlier age.



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Using sea anchors and drogues in storms

Heavy Weather Tactics Using Sea Anchors & Drogues, by Earl Hinz (Paradise Cay, 2000; 164 pages, \$19.95).

Reviewed by Terry Thatcher, Portland, Ore.

Several years ago I circumnavigated Vancouver Island. An experienced friend urged me to cancel the trip: "Stay inside, behind the island," he admonished. "Inside, you might lose your boat, but out there, you can lose your life." He was

right, of course; and of course I went anyway. That summer, the weather and ocean treated me kindly.


Lucky sailors have little practical experience in dealing with gale conditions. Prudent sailors prepare themselves and their boats as best they can. They have to learn what to do by reading the experts, questioning those who have weathered storms, and practicing, if possible, before a storm hits. Then they have to improvise when all hell really does break loose.

Long-distance sailor Earl Hinz has just revised and re-issued his contribution to the literature of storm seamanship: *Heavy Weather Tactics Using Sea Anchors & Drogues*. Hinz's underlying premise, surely correct, is that cruising boats are rarely big enough and rarely carry sufficient crew to confront a major storm with "active tactics." But he also knows enough about storm conditions to understand that not many boats, and even fewer humans, can withstand the conditions imposed by the often-prescribed passivity of "lying

ahull." Instead, his answer is to throw out a sea anchor and meet the waves head-on. Or, if conditions allow you to run for it, tow a drogue to slow the boat and retain control.

Of course, in practice it isn't so simple, and Earl gives us history, anecdotes, and practical direction on this critical topic. The book ought to be studied by anyone who contemplates an offshore voyage. The section on wave dynamics provides a particularly helpful summary of more detailed analyses found elsewhere. The discussion of life raft sea anchors will make you rethink your reliance on integral "ballast bags." His many practical suggestions will help you make decisions about your own storm tactics, including ideas you might have overlooked even after substantial thought or experience. Have you considered whether your wheel steering system, even if tied off, can be damaged by the backward movement of a vessel lying to a storm? Do you have a well-designed riding sail?

While you can expect to learn plenty from this book, don't expect to be entertained by a "good read." Earl's material needs organizing. He occasionally provides contradictory advice, for instance when discussing the best speed for running with a drogue.

You may be left questioning whether his prescriptions are the right ones. No scientists are on the ocean conducting controlled tests of how a tired crew on a battered small boat can best survive an offshore gale. Hinz recommends that you also read Shewmon's *Sea Anchor and Drogue Handbook* and Victor Shane's *Drag Device Data Base*. He is absolutely correct. If you want to go offshore, study them all: Cole's *Heavy Weather Sailing*, the Pardeys' *Storm Tactics Handbook*, and Dashew's *Surviving the Storm*. If you still want to put to sea in a small boat, God be with you. 

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Sailing: everything you wanted to know

The DK Complete Sailing Manual, by Steve Sleight (DK Publishing, Inc., 1999; 320 pages; \$30).

Review by Karen Larson, Minneapolis, Minn.

Steve Sleight, previously involved in creating another sailing manual, Bob Bond's *Handbook of Sailing*, has now created his own version of a sailor's how-to guide with his *Complete Sailing Manual*. Although it promises on the cover to deliver "everything you need to master the sport" there's no substitute for time spent on the water. Yet it is a book that anyone, no matter how skilled, can pick up and benefit from reading.

The first half of the book focuses on dinghy sailing and racing skills. The second half focuses on cruising, navigation, weather, boat

care, and safety. It is well illustrated, making the book valuable as a training text.

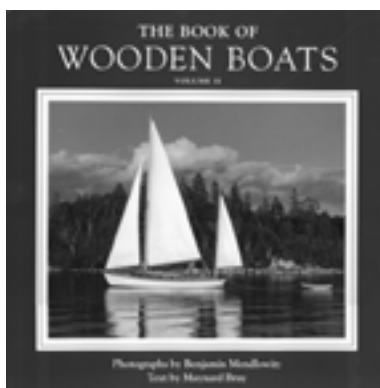
In between expected material — helmsman and crew, turning forces, tacking, jibing — are the nuggets of gold reminding us why we're out there

sailing and telling us the author is one of us: "The reality (for most of us) is that sailing sometimes involves getting wet and cold, occasionally scares the hell out of you, and usually costs more than we will admit to our nearest and dearest. Why do we do it? Because more than most other activities, it offers a reward that, if it could be bottled, would be worth a fortune. Satisfaction at learning new skills (and you never stop learning aboard boats), and being responsible for ourselves in a potentially hostile environment are just part of the reward."

And he makes this further point: "There is no doubt that it is best to start sailing young — not because it is difficult to learn to sail at a later stage, but because you waste less time missing out on the joys of sailing."

Published in Britain, this book has a few terms that remind us that we no longer share a common mother tongue, but it is clear that sailing has made comrades out of us all, just the same.

As noted, this book won't substitute for on-the-water experience. But it's a good companion. Everything you need to master the sport? Probably not, but it might be part of what you need.



Pictures to make you pause and sigh

Wooden Boats Volume II, photographs by Benjamin Mendlowitz, text by Maynard Bray (W.W. Norton & Company, 2000; \$49.95).

Review by Art Hall, Pownal, Maine

I clearly recall the occasion that triggered my love of wooden boats. It was 1967, a time before locks and "No Admittance" signs. I was 13 years old, and the place was Seth Persson's boat shop in Old Saybrook, Connecticut.

My brother and I were poking around and stepped into a room with a good-sized sailing yacht under construction. I remember standing ankle deep in shavings and peering up at the graceful thing before us, my nostrils filled with the sweet smell of freshly worked wood. The hook was set. How, then, could I resist a work so replete with the sights, sounds, and smells of wooden boats as *Wooden Boats Volume II*, by Benjamin Mendlowitz and Maynard Bray?

Open the pages and you almost expect to smell varnish, gleaming varnish, perfectly applied varnish, varnish like I could only wish to have on my own boat. But not all boats are floating palaces of perfection, and *Volume II* acknowledges working vessels that don't have the time or exchequer to attain a yacht-like finish. These boats are no less beautiful in their own way, and no harbor scene is complete without them. The writer and photographer also remind us that a finely wrought vessel does not have to be big to be beautiful. Boats as seemingly mundane as a canvas-covered canoe can excite our senses just as well as opulent Fife yachts of the Edwardian era.

All the boats in *Volume II* are wonderful in and of themselves; however, it is the talent of Benjamin Mendlowitz that brings out the best in them. He possesses a remarkable ability that balances subject, light, clouds and sea state. There's just something about those late-day, low-light pictures that make me stop and pause. I

only wish I could row my peapod around the Concordia yawl *Starlight* and admire her from other angles.

His wonderful photographs are further enhanced by the dialog of Maynard Bray. Maynard's words are always carefully chosen, well researched, and convey a certain reverence for the boat he is describing.

If the photographs and their accompanying text seem familiar, it's because they have previously graced the monthly pages of the *WoodenBoat Calendar*. If Santa has faithfully given you a calendar every year for as long as you can remember, you probably have many of these pages already tacked up on the walls of your shop. What *Wooden Boats Volume II* lacks in originality it more than makes up in its beautiful coffee-table format, perfect for those who would rather not search the walls of a dusty shop for inspiration.

Ownership of this book is a frivolity. This is a book you buy for hedonistic pleasure. So when life's little problems seem to get you down, let me suggest that you brew yourself some tea and run through the pages of *Wooden Boats Volume II*. It's the next best thing to being aboard.



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Life and times of an old fishing schooner

Adventure, by Joseph Garland, (The Curious Traveller Press, revised edition 2000; 200 pages, \$29.95).

Review by Sandy Larson, Lakeland, Minn.

The dory fishing schooner, *Adventure*, was well named, for she had many. The book begins with the description of one that was a bit too scary. The “Old Lady,” in her 22nd year, was 50 miles off Cape Cod with 105,000 pounds of fish in the hold, a frighteningly huge leak gushing into the engine room, and a 30-knot gale to add excitement to the situation. Only one of the bilge pumps worked. Still, there were coffee cans, buckets, and haddock baskets, and every crewmember worked to pour out the sea as fast as it flowed in — or almost as fast. That was a close one ...

This book describes every aspect of the *Adventure*’s working life, from the 1920s through the 1980s. While learning her history, we also learn a bit about her captains and crew, and the techniques and trials of early 20th-century fishing on the North Atlantic banks. The text seems disorganized but is well-documented, with hundreds of first-person accounts and newspaper quotes. Perhaps best of all are dozens of wonderful photographs from the period that bring the stories to life. And the stories abound.


There are the stories of captains and crew who sailed on *Adventure*. Captain Jeff Thomas had her built along the lines of his favorite knockabout schooner, a design by Tom

McManus, at the James & Son yard in Gloucester. She was launched in 1926 and sailed by Captain Jeff until he died in *Adventure*’s pilothouse in 1934. Captain Leo Hynes was next until he retired her as a fishing schooner in 1952. And there are stories about many of the crew members, even the engineroom sea-dog, Skippy.



My favorites are the tales of the perils of fishing the “spots” on the North Atlantic banks. Imagine being set into the sea with a dory filled to the top with tubs of trawl. Perhaps, if the weather wasn’t too bad, the drop might be made “on the fly,” with the schooner sailing at 8 or 9 knots. There you are, in the North Atlantic on a January day or in pea-soup fog in an 18-foot boat. These flat-bottomed craft are a treat to row. Mike O’Hearn, one of *Adventure*’s crew, felt he had the right trick, “I thought I could always keep her on her bottom unless the wind lifted her right out of the water. I could always bring her bow-to, but if it was too big a sea it was not good to bring her too sharp; just cant her to it a little.”

Once you’d baited the hooks and set out the line, you might get a smoke or two. Now the backbreaker. If you’re the bow man, you brace yourself and with every ounce of your strength, haul in the huge, writhing fish (usually haddock or halibut, sometimes cod) hand-over-hand. The stern man grabs them, sends them off into the bottom of the dory, and rebaits the hooks. Then, do it again, until you’ve filled your small craft to the top. Finally, in spite of the fact that you are bone tired, you pull yourself aboard the schooner and join the crew dealing with the slippery mess. When the last fish is cleaned, the hold iced, the last trace of the cleanings sent back to the sea, the bloody deck hosed down, dinner bolted and coffee gulped, it’s time for the second set. If you’re lucky, that’s done by midnight, and you can collapse into your bunk with all but oilskins and boots on, only to be roused at 4 a.m. to begin your second 24-hour day. The caption below one photo reads: “Do we love fishin’? Wal, most o’ the time.”

And then there was the time off Sable Island ... but it’s time to let you read these stories yourself. They are well told in this book and, along with its great photographs, give you an intimate taste of life aboard *Adventure*. You’re sure to enjoy it. 

The schooner *Adventure*, a National Historic Landmark, is being restored and preserved by Gloucester Adventure, Inc. as a tribute to the fishing heritage of the city of Gloucester, Mass., and surrounding Essex County. She is a 122-foot historic dory fishing schooner built in 1926 in Essex, Mass. Built of white oak and yellow pine, she was fashioned as a “knockabout” — a design without a bowsprit. *Adventure* is being returned to active sailing as a floating classroom for maritime and environmental education. For more information, visit the Web site at <<http://www.schooner-adventure.org>>; call 978-281-8079; or write P.O.-Box 1306,





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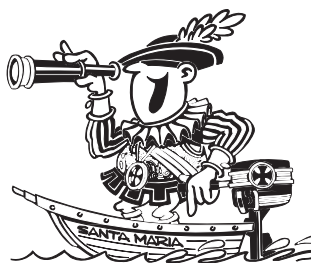
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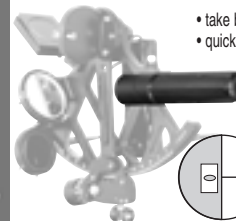
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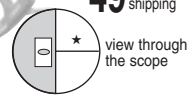


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Reese Palley, John Rousmaniere



Reese Palley's story is told simply and expertly on Page 22. In a nutshell, however, this energetic man has had several careers, ending with the one we'd all like best: sailing around the world and writing about it. Reese and his wife, Marilyn, sail a Ted Brewer-designed 46-foot cutter. Through her name, *Unlikely*, this boat tells the story. A free (even indomitable) spirit, Reese sets out to do the difficult (maybe even the impossible — certainly the improbable) and achieves his goals. Then he shares these stories in his books. He's written three with another in the works. So far, *Unlikely* has put 35,000 miles under her keel. There's no end in sight.



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John Rousmaniere (pronounced “room-an-ear”) has spent most of his life near or on the water and writing about boats. He has sailed more than 35,000 miles, including three trans-Atlantic passages and many cruises and races in boats large and small. His books include *The Annapolis Book of Seamanship* and *Fastnet, Force 10*. He is at work on a book about physical and psychological survival of storms at sea.

A recognized authority on boating safety, John frequently speaks at safety-at-sea seminars. John also writes history books and is completing a history of Columbia University, which he attended. He lives in Stamford, Connecticut, and is married to Leah Ruth Robinson, author of *Unnatural Causes* and other medical thrillers.



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Steve Baksis
810-997-4161
BilgeBone@aol.com

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Michael Parks
907-235-0714 message
354-696-5253 Iceland
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Cindy Veazie
508-457-9497
cpoof@capecod.net

Pearson Triton

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bottom, no leaks. Mainsail with 3 reefs, jib, drifter, spinnaker. Atomic 4 in good cond, serviced two years ago by Moyer Marine, recently replaced alternator and gas pump. Recent shore battery charger and battery combiner. Also available: 12v-110v converter. Usual electronics: knots, depth, Loran, VHF. Sail-away cond: fenders, lines, safety equipment, anchors. Bombard AX-2 inflatable with Nissan 3.5-hp ob available. Recent survey. Ready to take you away. In City Island, New York. Please submit offers. See: <<http://communities.msn.com/TheMalteseFalcon>>.

Manuel Borrero
212-481-6597

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1979 S2 7.3

24-ft boat, 4-foot draft. Exc. cond, looks like a 1990, same fin keel as Cal 2-27 (big for 24 feet). Exc. sailing boat. Sails well in 30 knots. 3250 displ/1300 ballast. Evenrude-8. Wood revarnished, everything rebedded. \$7,000.

Mike Yelland
410-867-9339
yelland_michael@pre.com

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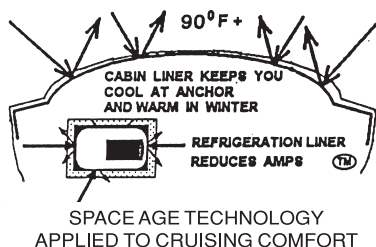
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Fred Armbruster
612-387-7546 cell
763-424-4354
fjarm@juno.com

Bristol 24

1969. LOA 24' 7". Beam 8'. Dark green hull, beige deck, white cabin. Sails 1995: tanbark stackpak full-batten main with lazy jacks, roller-furling genoa, white working jib, 1979: spinnaker with pole. Well-insulated below, new wiring and circuit breakers, VHF, depth, speed, Danforth with chain and rode, 1989 9.9-hp Yamaha 4-stroke, tank. 5 jackstands. Porta Potti. 30-amp. shorepower. \$5,900.

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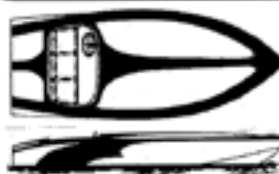
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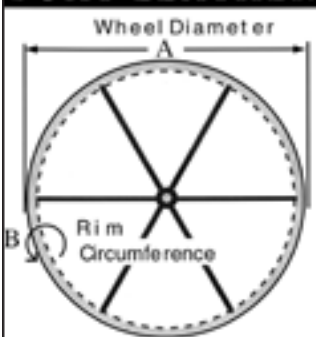
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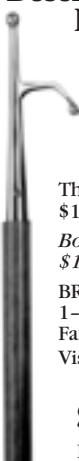
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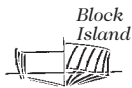
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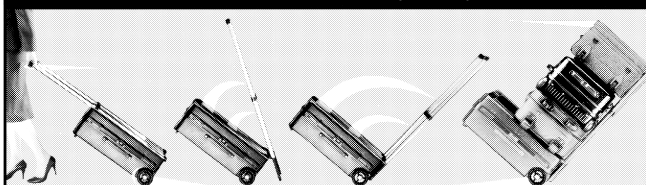
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Continued from Page 3

Tom Beard replies

All conditions leading to decisions we took cannot be exposed in a 2,000-word piece. The reason for writing the story was to explain how the EPIRB system worked. My wife and I, as partners, have been boating together for about 45 years. In this time we sailed on ocean passages with SSB radios for only about the past 12 years. This boat was wired for SSB, and one had been installed, but improper wiring damaged the set. The radio was not available for the trip.

For several years we sailed with weatherfax machines on our boats but find them more valuable for pre-departure planning when there is adequate time to receive and digest data. To us, weatherfax is not worth the time it takes to

monitor underway in our two-person watch situation. I had formal training in weather, so what I *do* find useful is the high-seas radio weather reports on HF frequencies. I draw my own charts from these reports – and though meager – they serve us well. We did have an HF SSB receiver aboard and were able to monitor the weather for the trip. I feel this is an essential piece of equipment.

Compounded circumstances make decisions much more complex than the simplistic situation illustrated by the article. First, we were in heavy weather and had been for a couple of days. Weather was no surprise nor avoidable. Forecasts were for winds to increase to 55 knots as we closed on the islands. Equipment failures had already occurred, and we made emergency repairs, leaving us a bit apprehensive as to what might next fail. Bolts holding the mainsheet traveler



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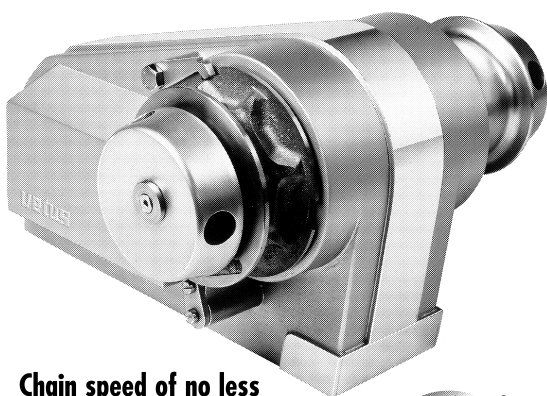
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to the deck sheared, for example. We rigged an emergency mainsheet traveler. Consequently, the severely reefed main affected performance and trim. Then the headsail furler tube separated at the uppermost section 60 feet up, ripping the genoa. We were able to furl the genny except for a loose panel at the top. The huge "flag" of torn genoa at the upper end of the headstay resulted in a critical influence on sailing performance. The shuddering vibrations from the torn sail gave us concern for the rig. Removing the genoa was impossible as the luff-tape at the separated joint wrapped around the headstay. Unfurling nearly 1,000 square feet of sail in 40 knots of wind might be disastrous. There were a couple of other minor breakages we accounted for, but the accumulation took its toll on our rest time. We had been tending to these casualties for about 30 hours without sleep at the time of the rudder catastrophe.

The manufacturer left out the key between the rudder shaft and quadrant during the boat's construction. Its absence is not detectable on visual inspection but only by removing the quadrant from the shaft. The manufacturer failed to notice it during commissioning. A shipyard worker in Japan, rebuilding the rudder steering assembly due to a non-related steering failure, did not notice the missing key. A professional shipwright in California, rebuilding the steering assembly for yet another unrelated steering failure did not spot the



Potter and Peggy Trainer of Mattapoisette, Mass., are shown sailing their 15-foot Herreshoff sloop on Buzzard's Bay soon after receiving a gift subscription to Good Old Boat from a secret admirer. It was not lost on us whose hand is on the tiller.

lack of a key. Neither removed the quadrant from the shaft. A missing key, as a consideration, was far from a commonsense thought (even to an alert mind) at the time of the event. In theory, had a key been missing, problems should have certainly shown up in the boat's previous 10,000 miles. Ironically, they did not.

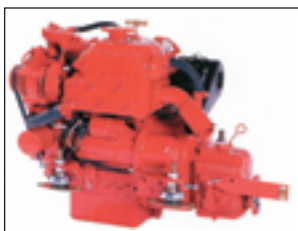
We made our analysis based on meager, confusing, and conflicting information. We concluded that the rudder shaft had sheered in the rudder when, in fact, the rudder was jammed over about 70-90 degrees (the mechanical rudder-stops are

on the quadrant which spun on the shaft). We did install the emergency tiller and found the manufacturer had built the vertical shaft portion about three inches too short, preventing the horizontal tiller handle from clearing the binnacle. Yes, I should have checked this prior to departure. So we set it up 90 degrees from the centerline (it had a square socket at the rudder shaft head) but the Bimini support tubes on each cockpit side impeded the handle. Trailing the handle astern fouled the backstay and was impossible to work from this position over the stern for lack of leverage.

I was positive the rudder was still installed due to its design, being impossible to drop off even with a sheared shaft. Any movement of the emergency tiller required

Continued on Page 76

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ships_store.html

It's been a quiet week here at Lake Wobegon.

Dave Chase, at right with his wife, Susan, is the one who designed the "work for boat parts" T-shirt and created the art in this issue on Pages 30-32. Dave still doesn't know the front from the back of his T-shirt.

Scott Kennedy, below, who penned the museum T-shirt and art in this issue on Pages 16-19, is still making like a human whisker pole somewhere in Southern California, where all the women are good-looking and the children are above-average. (Wait a minute! Perhaps we blew that last line!?)



Tom Vandervoort, below left, spent the winter working on an article for Good Old Boat on the history of the C&C company. We're sure he hasn't been sailing recently — the water's been too hard. Karen Larson's merely been dreaming about reclining on the bow. She's got the same hardwater problem Tom does.



Continued from Page 73

significant (gut wrenching) effort from both of us (senior citizens) together. Our pushings and pullings were not rapid enough for positive steering at the boat speeds, winds, and seas we were experiencing racing down big wave fronts. Under these circumstances, it was impossible to use the emergency tiller. Serendipitously, we did get the rudder un-jammed from a hard-over position, and water current moved it into a trail position. I rigged the Monitor steering vane to use as an emergency rudder. This gave us some control.

We thought long and hard before switching on the EPIRB. We definitely were going to be overdue under the conditions we were experiencing, and our float plan was going to trigger a search and rescue operation. The problem for the Coast Guard would come with considering our loss from somewhere just off the California coast to somewhere off the Hawaiian Islands for lack of any word from us over the two-week period. This is a huge search area, necessitating many ships and aircraft. If the Coast Guard were made aware of our position and situation before the

conditions of the float plan were executed, less involvement by them would be necessary. In this case, all it took was a two-hour flight by a C-130 during daylight in visual flight conditions, quite routine, to alleviate considerable concern for our dependents, the boatowners, the Coast Guard, and us. Previously, I was a Coast Guard C-130 pilot flying such missions out of Hawaii. I was fully cognizant of their decision-making processes – having been in their shoes – and therefore felt my course of action was the best under these circumstances then, and still do.

I do not know if any amount of preparation makes a sea voyage as effortless as a drive to grandmother's house. I have made many mistakes over the years and survived calamities from the unexpected. Should going to sea without engine, electricity, or radios be considered as being unprepared? I, and many others, can and have told tales of very successful voyages in these deprived conditions.

In creating the story I had one purpose in mind: to explain the use of the EPIRB and encourage that it be carried aboard all oceangoing vessels. Our story was fairly typical. In all my

experience in aviation and at sea, I learned that the victim cannot determine the point at which things are just bad and that exact moment when it turns to an inescapable crisis. Calamities generally result not from a single incident but from a combination of failures, some observable, others hidden. We were beset with a combination of accumulating problems which, united with the expected weather, our decaying physical condition and alertness, and unknown further failures, gave us a very foggy crystal ball. Our decision to light off the EPIRB then was based on all the best information we could assimilate, burdened by the bodily and emotional constraints we were experiencing. In retrospect, now on a "Monday morning," I would do the same.

Tom Beard
Port Angeles, Wash.

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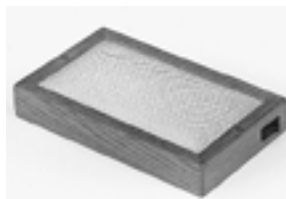
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Ken Kloeber
Boston, N.Y.

Tiny Tots

Just got the March 2001 issue. Outstanding as usual! We read with interest the article on the Tiny Tot cabin heater. A lot of Nor'Sea 27s came with heaters on board. We live aboard our Nor'Sea, *Guenevere*, and we have a Dickinson cabin heater that also uses charcoal. We have come up with a couple of ideas that make living with a charcoal heater a lot better!

First, on starting the fire: we found a bundle of what look like small sticks at the local hardware store. They are called Fatwood. This stuff is great. The sticks look like small split firewood, but each piece is only about 1/2 to 3/4 inch thick and about 12 inches long. We cut them down to about 4 inches long. They light easily as they are covered in a type of sap that smells good as it is and during burning. It takes two to four pieces to start the coals. We put a few coals on top of them. Another benefit: they keep the cabin smelling good by just being there. You can read about Fatwood at <<http://www.kindlingwood.com/fatwood.htm>>.

Second, on handling charcoal: we use a large wide-mouth plastic jar. I think it holds about two gallons. With the lid on, it keeps the charcoal dry even in damp weather. It also fits nicely in a small compartment we have close to our heater. I used that for some time. But as was pointed out, our hands got dirty. That was OK during the day. But at 0200 when re-stoking, it was a pain. Our heater takes six to eight briquettes to keep us warm for four to six hours. I bought a batch of brown paper sandwich bags. I put six to eight briquettes in each bag, roll it up, and tape it shut. I drop these into the wide-mouth container.

Now at 0200, I need only toss in one bag, and we are good until morning. It also helps when we are heading out. All I need to do is count the bags, and I know how many hours of heat we have aboard! Simple, sane, and easy.

Greg and Jill Delezynski
Redwood City, Calif.

Thanks to Bill Sandifer

I wanted to thank Bill Sandifer for his wonderful article, New Oars for Old (January 2001). We have saved our oars with his epoxy and fiberglassing idea. The article and magazine came at the best time! I had just finished sanding our companionway steps and realized we could put a coat of epoxy on them as well. With wet feet, both little and big, going up and down our steps hundreds of times a day, we are confident we have increased the life of our steps. As Bill suggested, we also added a top coat of UV-inhibitor varnish. The steps are beautiful! Thank you for adding life to our oars and our companionway.

Theresa, Chuck, Amie, and Alex Fort (and Nina: four paws added to those big and little feet)
Titusville, Fla.

Keep Ted's articles coming

Just a note to say how much I enjoy and benefit from the Ted Brewer articles. The illustrations for The Fore-and-Aft Rig (March 2001 issue) were just stunning. Wouldn't our harbors look prettier if more nice boats like those were being built? Keep Ted's pieces in the magazine until all of us understand everything about boat design.

The John Vigor series reminds us that we don't need big new boats to sail safely. Two years ago I added the second boat to my fleet, a Cal 20, and shortly afterward the issue with John's appreciation of it arrived to confirm my good judgment (actually, it made me stop worrying about whether owning two boats was a sign of feeble-mindedness).

Issue 17 had that nice ode to the coal stove, and lo and behold, the device is made just down the road from me. *Good Old Boat* is my sailing fix while the boats sit in their cradles.

Chris Campbell
Traverse City, Mich.

Not the Tupperware that will kill us

Just received my March 2001 issue of *Good Old Boat*. I have a Tanzer 22 (just finished my first year sailing it). Can't say it's *our* boat as my husband has a 29-foot Fairline powerboat and hasn't yet become as passionate as I about the sailboat. I couldn't imagine being without a sailboat after just one season. Mind you, we are in the protection of Long Point on Lake Erie in Ontario, Canada, but I *love* it! And I love your magazine. I was trying to cut back on some of our expenses – after 15 years of powerboating, you can't imagine how many powerboat magazines we have and continue to receive in the mail. (My husband always said if our house went up in flames, the fumes from all the Tupperware would be what would kill us.

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SAILTOONS

By Michael Malzone

But I know it will be from all his powerboat magazines!) Anyway, he has agreed with me that we will continue to receive *Good Old Boat*.

I've recommended it to friends. It is the very best sailing magazine for the average sailors who have a passion for their boats.

Lynne Keegan
Hamilton, Ontario

Found you in Nova Scotia

I did not know your magazine existed until I saw it on a newsstand in Halifax. When I read it, I knew this is the magazine for me. Others are OK, but yours gives me the reading I look for and need. You should try to have wider distribution.

J.W. Coffey
Sydney, Nova Scotia

For the rest of us

Just wanted to drop you a line and let you know how much I enjoy reading your magazine each month. I truly believe it is the boating magazine "for the rest of us." I have a subscription to *Good Old Boat* and one other sailing magazine. Of the two subscriptions, your magazine is

the one that never collects dust. I read it from front to back. So many boating magazines are written thinking people have unlimited financial resources. That is not the case with *Good Old Boat*. Your magazine offers real advice, great stories, and practical solutions from real people.

Dan Pitman
Hanscom AFB, Mass.



It's Spring...You can come out now!

One last thing

Dan Zilio of the Trailer Sailor Association writes to remind us that the organization is a great source of information for trailerable boats and destinations for the sailors all over North America.

The association was founded by Robert Hodgson in 1984 with a letter to the editor in *Cruising World*. The eight or so individuals who responded to his letter became founding members. The group publishes a very comprehensive newsletter called *Clipper Snips*, primarily containing information from members. Wayne Bell is president these days. Contact him at belltoil@nauticom.net, 724-794-4704.

The Web site is <<http://www.infocom.com/tsa>>. A discussion group is also available: trailsail@tgroups.com.

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

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Last tack



Sharing life's special moments

It was a day of savage and ethereal beauty. We had just gone through a fast-moving storm with racing black clouds, pelting rain, and lightning. We were left powering in little wind and large seas across the 14-mile stretch between the Canadian shore of Lake Superior and Isle Royale, a U.S. national park.


I was at the helm, enjoying our surging ride over the steep waves. Jerry was below making sense of the chaos that had resulted when all of our bookshelves had thrown their holdings to the cabin floor in the raucous storm and simultaneously the GPS had refused to update our position. Some tricky shoals lay ahead, we knew, and he had worked his way through the sea of books at his feet to the chart table, where he was unscrewing the GPS problem and bringing the Loran back to life for a fix.

A mist rolled in ahead of us. In this mist a beautiful circular rainbow formed. It looked as though we would motor right through it. It was a Kodak moment...if not a Kodak moment (since the camera was not at hand) it seemed as though I should share it with my best friend.

by Karen Larson

Through the closed hatch and engine noise, I shouted to get his attention, but to no avail. I stomped on the cockpit floor. There was no sign of being heard. I kicked the sides of the cockpit seats (lazarettes in our boat). Nothing. Then I remembered the whistles we wear on our life jackets in case of an overboard situation. When Jerry bought them, he told me they're supposed to be the loudest whistles available. We'd never really tested them. But since we always wear our life jackets, mine was handy. I blew it.

Jerry came out of the cabin so fast that he never really opened the hatch. I'm not sure my best friend ever truly appreciated that beautiful work of nature quite like I'd hoped (not even in the retelling). But I'm sure we'll never see this phenomenon again, and I'm glad he got a chance to see it.

The GPS? The books? The rest of the story? The GPS was fixed, the books were put away and a new locking mechanism installed to prevent future spills. We arrived at Isle Royale safely in a lovely sunset. And Jerry's head has healed. 

Reflections

by Jerry Hickson

Electric Fever

I must go down to the seas again, in a modern high-tech boat,
And all I ask is electric, for comfort while afloat,
And alternators, and solar panels, and generators going,
And deep-cycle batteries with many amperes flowing.

I must go down to the seas again, to the autopilot's ways,
And all I ask is a GPS, and a radar, and displays,
And a cell phone, and a weatherfax, and a shortwave radio,
And compact disks, computer games, and TV videos.

I must go down to the seas again, with a freezer full of steaks,
And all I ask is a microwave, and a blender for milkshakes,
And a watermaker, air-conditioner, hot water in the sink,
And email and a VHF to see what my buddies think.

I must go down to the seas again, with power-furling sails,
And chart displays of all the seas, and a bullhorn for loud hails,
And motors pulling anchor chains, and push-button sheets,
And programs that take full control of tacking during beats.

I must go down to the seas again, and not leave friends behind,
And so they never get seasick we'll use the Web on-line,
And all I ask is an Internet with satellites over me,
And beaming all the data up, my friends sail virtually.

I must go down to the seas again, record the humpback whales,
Compute until I decipher their language and their tales,
And learn to sing in harmony, converse beneath the waves,
And befriend the gentle giants as my synthesizer plays.

I must go down to the seas again, with RAM in gigabytes,
And teraflops of processing for hobbies that I like,
And software suiting all my wants, seated at my console
And pushing on the buttons that give me complete control.

I must go down to the seas again, my concept seems quite sound.
But when I simulate this boat, some problems I have found:
The cost is astronomical, repairs will never stop,
Instead of going sailing I'll be shackled to the dock.

I must go down to the seas again, how can I get away?
Must I be locked in low-tech boats until my dying day?
Is there no cure for my complaint, no technologic fix?
Oh, I fear electric fever is a habit I can't kick.

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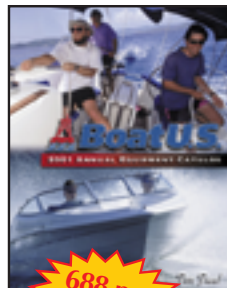
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