

GOOD OLD BOAT

The sailing magazine for the rest of us!



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This Issue



For the love of sailboats

- 4** **Santana 35**, *Racing speed with cruising comfort*, by Ed Lawrence
- 42** **Facelift for a Teak Lady**, *Beyond financial reckoning*, by Lon Zimmerman
- 44** **Victoria 18**, *As pretty a little sloop as ever...* by Karen Larson and Ted Brewer
- 50** **South Coast 22**, *Made for gunkholing*, by Gregg Nestor

Speaking seriously

- 14** **The importance of layout**, *Variations on a theme*, by Ted Brewer
- 18** **Portlight replacement**, *New light on an old problem*, by Dean Hedstrom
- 22** **Boat canvas basics**, *Custom-fitted handrail covers*, by Brian Gilbert
- 24** **KISS and make it right**, *Troubleshooting simplified*, by Suzanne Giesemann
- 29** **Cleaning out an Atomic 4**, *Temperature-rise blues*, by Hugh Straub
- 32** **Yes, you can can!**, *Preserve your own meats and fish*, by Janet Groene
- 36** **Forecasting weather**, *Just for sailors*, by Gregg Nestor
- 54** **Depth Sounders 101**, *First in a series*, by Don Launer
- 56** **Fire protection**, *Dealing with fire on board*, by Simon Hill



Just for fun

- 9** **Bill Crealock up close**, *Famed designer of ocean cruisers*, by Steve Mitchell
- 26** **Cruising memories: A roar, a wall of water — and nothing!**, *What was it that struck?* by Scott Thurston
- 48** **Photo spread: Classic beauty**, by Caryn Davis
- 61** **Good old racing events**, by Karen Larson
- 76** **Cruising memories: It's the blame game**, *The weight wars are raging*, by Niki Perryman

What's more

- 64** **Simple solutions – Shelves that breathe**, by Guy Stevens; **Gastronavigation**, by Theresa Fort; **A composting head**, by Chuck Kanter
- 71** **Quick and easy – Custom GPS mount**, by Gregg Nestor; **Double-duty divider**, by George Zimmerman; **The runaway plug**, by Don Launer; **Cruising trashcans**, by Steve Christensen
- 78** **Good old classifieds**
- 91** **Mail buoy**
- 95** **Last tack – Docking...the great intimidator**, by Karen Larson
- 97** **Reflections – Essentials of happiness**, by Madison Blackwell



Voices from everywhere

Whereabouts of good old sailors in this issue



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(and sometimes the back issues you're looking for)

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Ed Lawrence (*Santana 35*, Page 4) is a contributing editor with *Good Old Boat*. He writes about boats and off-beat subjects for several national magazines from his home base in Montana. His wife, Judy, just bought a San Juan 23. Ed is allowed to crew on it.

When not working at his job for the federal government or singlehandedly his 1989 Pearson 27 in the Annapolis, Md., area, **Steve Mitchell** (*Bill Crealock up close*, Page 9) is a part-time freelance writer. He writes for a variety of business and boating publications.



Ted Brewer (*The importance of layout*, Page 14, and *Victoria 18*, Page 47) 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.



Dean Hedstrom (*Portlight replacement*, Page 18) has been sailing the Great Lakes since 1979. He is a USCG-licensed master, pilot, registered engineer, and a self-styled "committed boat bum." His wife, Sandy Jacobsen, retired as president of a bank to take up a career in consulting. When not laboring to keep their Landfall 35 in Bristol shape, the two enjoy cruising with fine dining. He can be reached at boatbum@dkhedstrom.com.

Brian Gilbert (*Boat canvas basics*, Page 22) was a liveaboard sailor for four years in Charleston, S.C. He sold his boat to return to graduate school and get married and has been trying to get back on the water ever since. A two-year restoration of a MacGregor Venture 222 is nearly complete, with plans for a larger boat and the Caribbean in the not-too-distant future.



Suzanne Giesemann (*KISS and make it right*, Page 24) is a newly retired U.S. Navy Commander. She and her husband, Ty, began their long-awaited cruising life in June of this year and are exploring New England on their Morgan 46, *Liberty*.



Scott Thurston (*Cruising memories: A roar, a wall of water — then nothing!*, Page 26) has returned three boatyard monsters to solid sailboat status with the primary addition of elbow grease. He sails *Penelope*, a 1968 Camper-Nicholson 32, from Falmouth, Maine.

Hugh Straub (*Cleaning out an Atomic 4*, Page 29) is a former merchant marine officer, now practicing admiralty law in New Orleans. His work focuses on ship navigation problems (as he says, "collisions and the like"). His 35-year-old Easterly 30 is a popular local design and just the ticket for weekend escapes to the bayous in the cypress forest ringing Lake Pontchartrain.



Janet Groene (*Yes, you can can!*, Page 32) has published several books including *Living Aboard*, *Creating Comfort Afloat*, *Camping Digest*, *ABCs of Boat Camping*, and *Caribbean Guide*. Visit her site at <http://www.gordonandjanetgroene.com>.



Gregg Nestor (*Forecasting weather*, Page 36; *South Coast 22*, Page 50; *Quick and easy: Custom GPS mount*, Page 71), is a contributing editor with

Good Old Boat. During six years with the U.S. Air Force, he was a member of the Air Weather Service, where he achieved the position of chief weather observer. He and his wife, Joyce, sail their O'Day 222, *Splash*, out of Bush Bay on Pymatuning Reservoir on the border of Ohio and Pennsylvania.

Lon Zimmerman (*Facelift for a Teak Lady*, Page 42) retired after 25 years spent teaching in Alaska. His favorite good old boat was a NorSea 27, which he sailed from Seattle to Seward, Alaska, in 1994. These days, Lon sails a Drascombe Drifter and recently bought a Pacific Seacraft 25. Lon says his consuming passions are sailboats, books, photography, and computers.



Caryn Davis (*Center spread: Classic beauty*, Page 48) is a freelance photographer who specializes in nautical, travel, and location photography. Her images have appeared in many of the major sailing publications (now including *Good Old Boat* as well). When she's not traveling, Caryn lives on the Connecticut River in Deep River, Connecticut.



Don Launer (*Depth sounders 101*, Page 54; *Quick and easy: The runaway plug*, Page 73) is a contributing editor with *Good Old Boat*. He has held a USCG captain's license for more than 20 years. He built his two-masted schooner, *Delphinus*, from a bare hull and sails it on the East Coast from his home on Barnegat Bay in New Jersey.



Simon Hill (*Fire protection*, Page 56) is a Vancouver, British Columbia, sailor and do-it-yourselfer. His first



boat was a 24-foot plywood Van de Stadt with no plumbing, and he currently cruises aboard *The Point*, a Contessa 26, with his wife, Jenifer, and two young children.

Guy Stevens (*Simple solutions: Shelves that breathe*, Page 64) and his wife, Melissa, cruised the South Pacific aboard *Pneuma*, their good old 1973 Ericson 39. They are currently back in the U.S. and shopping for another boat.



Until recently, **Theresa Fort** (*Simple solutions: Gastronavigation*, Page 66) is a contributing editor with *Good Old Boat*. She and her family lived and cruised aboard *Lindsay Christine*, a Mercator Offshore 30. The kids have been growing lately, however, and *Lindsay Christine* has been replaced by a 1975 Van de Stadt Agulhas, *Coquette*.



Chuck Kanter (*Simple solutions: A composting head*, Page 68) obtained a Venture 15 catamaran as a demonstrator for an Annapolis dealer in 1969. By 1994 he had sailed or surveyed every production catamaran traded in the U.S. Chuck and his wife, Corinne, live in Marathon, Fla., and sail their 32-foot custom-built catamaran, *La Forza*. They are the authors of a large number of sailing books and articles.



George Zimmerman (*Quick and easy: Double-duty divider*, Page 72) moved to the Puget Sound area 13 years ago. On a ferry trip he saw sailboats plying waters of the sound and has been hooked on sailing ever since. He sails a 25-foot Yamaha sailboat, *Escape*. When not spending time with his family, working for the state, or sailing, he enjoys tinkering on his boat.



Steve Christensen (*Quick and easy: Cruising trashcans*, Page 74), a research chemist, moved from Utah to Michigan and took up sailing to replace skiing. Steve and Beth sail *Rag Doll*, an Ericson 38, on Lake Huron. They spend each August cruising the waters of the North Channel and dream of retirement as liveaboards someplace warm.



Niki Perryman (*It's the blame game*, Page 76) and Jamie Morrison left Australia in 1992 to cruise in their 35-foot Lion-class sloop, *Siandra*. They explored Europe, including an icy winter in Arctic Norway. This was followed by a cruise of the East Coast of the U.S. south to Cuba, north to Maine, and through the Panama Canal. Last we heard, they were in New Zealand.



Madison Blackwell (*Reflections: Essentials of happiness*, Page 97) is a merchant marine officer, grandfather, and a self-taught theologian who runs a small business.



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About the cover...



Caryn Davis can make
even a gray day at Mys-
tic Seaport look like art.
For more of her photos
of fine old boats, includ-
ing the Mystic Seaport
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sel, *Brilliant*, see her
website at <<http://www.cbdphotography.com>>
and our center spread
on Pages 48 and 49.

We're five!

ONE OF MY FAVORITE COMMENTS IS THAT
the people who are still standing
up when the smoke clears are the ones
who will hold the field.

When we started *Good Old Boat*
magazine, we called everybody in the
publishing business that we could
think of and asked them every ques-
tion we could think of. I remember
one fellow with a very successful and
distinguished, award-winning career
in publishing who tried to talk us out
of starting a magazine. He pointed out
that only one in 20 startups makes it to
five years. He pointed out that cash-
flow breakeven always comes much
later than people think. He offered
many other warnings. I think, in ret-
rospect, that his advice was accurate
and well-intended.

Obviously, we did not follow his
advice. Others did not want to hurt our
feelings or crush our creative naïveté
and offered detailed advice without
the warnings. A very small number
offered actual encouragement. We
launched on the basis of that.

In the beginning, Karen came to me
every two months asking for another
check. A cash infusion that would buy
another round ... another issue. At the
time, each check would have bought
a nice new car. They wouldn't pay for
another issue now, but they did then. I
thought about cash-flow breakeven
... would it come before there was no
more cash? Yes, but just. I could see
dimly through the smoke, and we were
still standing.

Growth followed. We couldn't do
it all anymore, so we added staff (see
photo in Mail Buoy, Page 91). Early on,
one person came to us and said, "Let's
don't talk about money; I want that
job." That was the beginning of turning
over difficult work to others who were
as dedicated and committed as we
were. That was the beginning of turn-



ing work over to others who could do
it better. Oddly enough, that's not easy
to do.


These days, subscriptions and
circulation are growing at 30 to 40
percent per year. We sailed along at
hull speed right through an economic
downturn. There are still thin wisps of
smoke in the air, but we are still stand-
ing, and after 31 published issues, I'm
going to call it cleared.

The point of the analogy is that it
is mostly luck to be standing when
the smoke clears. There is no magic
formula for how one does these things
that will work twice in a row. We won't
be written up in the business-school
textbooks, nor should we be. Two
people put out the first edition; about
a dozen worked on the 31st edition
you're holding. Things change fast. We
make decisions fast and execute them
with a speed that would make any
bureaucracy faint. Some good, some
bad, but none slow.

Throughout the past five years, we
have had the loyal support of a grow-
ing number of enthusiastic sailors.
Many act as though they have joined
a club. In a very real sense, what has
been accomplished so far has been
their doing at least as much as ours.

Frankly, sometimes we are steering
this thing, sometimes we are just hang-
ing on, but we constantly try for more
of the one than the other. We recently
drove a large white truck down the
middle of the country with "*Good Old
Boat* magazine" written on it. No one
commented. There was no recognition.
From this, we decided there is still
room to grow.

When you start a business in this
country there are never any guar-
antees, but I wish to report to the
members that the club is strong and
growing, the future seems bright, our
luck is holding.

Thanks to all of you who read this
magazine and have "joined the club,"
and thanks to our own good luck we
are still standing. 





Mariah's Eyes Photography

Flexible Flyer, above, owned by Leighton and Julie Quon, reminds drivers on San Francisco's Golden Gate Bridge that they'd rather be sailing. Jeff Jamieson's *CAYankee*, on facing page, enhances the view of the San Francisco skyline.

CAN YOU BELIEVE THIS YEAR'S AMERICA's Cup regatta? For starters, each syndicate spent upward of \$75 to \$100 million (pocket change when you're the biggest cable operator in the world) for one 80-foot-long boat, a spare boat, sails, crew salaries, and soft drinks.

In case you slept through the competition (which was easy), in about the same amount of time it took the bulbs I planted last fall to bloom, the Swiss relocated the Holy Grail of sailing to Europe.

But, get this: on more than one occasion I listened as, after keeping us waiting during interminable delays, the chief umpire announced, "Sorry, boys, the wind's blowing today. Guess we'll have to head back to the clubhouse." I began to wonder if the whole project was a scheme to sell beer and hot dogs.

Then, when 10-knot winds actually arrived on the Hauraki Gulf and racing began, the defender's boat came apart and flooded. On one memorable occasion, the end of the boom shattered after tons of water coming over the gunwale filled the bilge. You might call that a minor design failure. On another, in 18 to 25 knots of breeze when "seas" were 4 to 6 feet high, the Kiwis' rig came down when a shroud fitting broke. The problem? The course was "too bumpy." Ha!

All this carnage occurred on cutting-edge racers that go to weather at 9 knots! Heck, any good old boat more than 35 feet long will do seven.

Santana 35

*This stylish performer
offers racing speed
with cruising comfort*

by Ed Lawrence

Especially the Santana 35, which thrives in blustery winds, stays together in big seas, and — unlike the America's Cup boats — has a fixed head and galley.

The beginnings

Like so many builders of the era, the history of the W. D. Schock Corporation and the Santana 35 began with a kid from Southern California who enjoyed sailing and tinkering on boats. The kid grew up in the same culture that produced the likes of Hobie Alter, Dennis Connor, an encyclopedia of other skilled yachtsmen, and Ted Williams.

Wilbert Dwayne “Bill” Schock built his first sailboat in the family’s garage in Hollywood, a kit version of an International 14 he purchased at age 12. During the construction effort, a passing sailor noted his efforts, immediately placed an order for three boats, and inadvertently planted the seed for a company that is now among the industry’s longest-lasting production-boatbuilding operations.

After returning from World War II, Bill set up shop and began building dinghies, especially the Sabot and Lehman 10. When business slowed, he kept food on the table by repairing woodie station wagons and making wooden toilet seats.

Then, in the early 1950s, he purchased the company that built the Lehman 10 and became the first production-fiberglass company in the United States. (Interestingly, a claim shared by several builders of the time.)

While striving to add to the Lehman’s performance and appearance, Bill moved the mast, redesigned parts of the deck, and made other modifications. By the time he was finished, he’d produced the design for the Lido 14, which put his name, and the name of his company, in the national version of the industry’s Yellow Pages. More than 7,000 Lidos have been built and are sailing in 70 fleets. These days the company is still producing the Lido, albeit now in a 26,000-square-foot facility in Corona, not far from the Newport Yacht Club.

Tom took over

Bill’s sons, Tom and Steve, spent enough time with the boss to take an interest in the business. When Bill

retired, Tom took over day-to-day operation and still maintains a hands-on presence at the shop. His sailing career began on the racecourse as a child, where he developed into one of Southern California’s premier sailors. Mild-mannered Steve is a designer whose most noteworthy creation is the

Schock 35, a stepsister to the Santana 35 (see sidebar on Page 6).

The yang of the company’s personality is a penchant for building cutting-edge performance yachts. The Schock 50, a water-ballasted sloop with a lifting keel, was built in 1998 for Steve Black, who planned to enter the Single-handed Around the World Race.

Then, at the turn of the century, the company unveiled the Schock 40,

“When the 35 is posed docilely at a dock, a near-flat sheerline separates a modest bow overhang and reverse stern. A low, forward-sloping cabintop and extended cockpit combine to produce a graceful profile.”

a radical 40-foot lightweight (7,000-pound displacement) with a canted ballast keel, foils fore and aft, and a 7-foot bowsprit. A rocket ship, she’s now in production, but is clearly “not your father’s Oldsmobile.”

Tom is a forward thinker, yet when he looks in his rearview

mirror he sees the remnants of many of his contemporaries. The dramatic downturn of the industry in the 1980s was fatal for many production builders like C&C, O’Day, Cal, Pearson, and Columbia. It devastated his distribution network as well.

Having overcome the vagaries of the marketplace, Schock boats still progress down the company’s production line at predictable intervals.





Once you slip the docklines and hoist the sails, 8,500 pounds of fiberglass, wood joinery, and metal are transformed.



Jeff Jamieson

Well-received quarter-tonner

By the time Shad Turner was commissioned to produce the lines for the Santana 35, he'd been working with the then 30-year-old company for several years. Earlier, during the company's adolescence, he designed the Santana 25, "a quarter-tonner that was well received in the marketplace," Tom says. "We built more than 100 of them."

He then produced the Turner 30, "an elegant and very successful boat that did well on the racecourse"; the Santana 30/30, a popular family-oriented performance cruiser; and the New York 36.

Also in the design mix was Gary Mull, who designed the Santana 22, of which more than 800 were built. Both Gary and his 22-footer were legendary in Northern California for their ability to sail in blustery conditions. The 22 recently underwent a face lift, was retrofitted with a new deck, and reintroduced in 2002. Not surprisingly, the company has delivered 13 of the new millennium model.

Shad Turner's Santana 35 was introduced in 1978. "At the time, we were used to building one-design boats and had been successful, but we decided to enter the International Offshore Rule (IOR) world with the Santana 35. Meeting IOR measurement rules was like hitting a moving target," Tom recalls. "The IOR handicapping committee was comprised of architects who changed the rule every year so we'd all need to pay them for new designs. We'd design and produce a good boat and, at the stroke of a pen, the committee would change the rules. It was devastating. It was a chaotic time. Business was very

"... the Santana 35 began with a kid from Southern California who enjoyed sailing and tinkering on boats."

good, but we were always squirming."

His wife, Jane, adds, "Tom didn't need to go gambling in Las Vegas. The whole business was a big gamble."

Planned regatta win

Shad Turner's target was a 35-footer with an IOR rating of 27.5, roughly the boat's waterline length. Tom says, "To make a big splash, we planned to introduce the boat by winning a major

regatta. We planned to introduce it at the Southern Ocean Racing Circuit (SORC) in 1978." The IOR became the fly in the ointment when measurers decided she was 6 inches too long under the rule and ineligible for competition.

This decision particularly disheartened Tom, who had orders from 12 potential buyers. To avoid a total meltdown he says, "We hauled the boat to San Francisco, where she immediately began winning races." Thus a new page was written in the history of amateur yacht racing.

In the process, the company inadvertently produced a sloop with a race pedigree. She is also a stylish, comfortable performance cruiser. There's no requirement that you put up a spinnaker. That she was raced does not mean that the crew slept on a bed of nails or survived on C rations. She's very mannerly in a blow and relatively

dry, as I've learned sailing off the California coast in stiff northwesterlies. Add durable; any boat living as long as she has that is still sailing in the Pacific outside the Golden Gate or in Great Lakes conditions, should be sturdy enough for most sailors. Having weight on the rail in a blow and having a set of reef points (and knowing when to use them) are important factors.

Although she certainly didn't have a mainstream appearance at the time she was introduced, now, a quarter of a century after her introduction, when viewed from abeam the look is still eye candy. When the 35 is posed docilely at a dock, a near-flat sheerline separates a modest bow overhang and reverse stern. A low, forward-sloping cabintop and

Sisters after a fashion

"AN INTERESTING NOTE IS THAT DURING THE EARLY STAGES OF the development of the Santana 35, we realized that her $\frac{7}{8}$ rig was ideal for sailing in 12- to 15-knot breezes. But she needed more horsepower in light-wind areas like Southern California and the Chesapeake," Tom Schock says, "so we drew lines for a taller rig and a lighter boat in 1978, then stuck the plans in a drawer.

"Seven or eight years later [*actually six* —Ed.], J/Boats introduced the J/35, which was very similar to the boat we had on paper," he adds. "So we found the old plans, and Steve put the pencil to paper and created the Schock 35," which was introduced in 1983.

The Schock 35 is 18 inches longer on the waterline than the Santana 35. It is also 1,500 pounds heavier, has a taller rig, and carries about 100 square feet more sail area than the Santana 35.

"But the living spaces in the cockpit and belowdecks are identical," Tom notes.

I've sailed the Schock 35 in several regattas. A strong suit is her light-air performance, along with a spacious cockpit and deck layout. That boat is still in production.

Owner comments

extended cockpit combine to produce a graceful profile. Slip the docklines and hoist sails, and 8,500 pounds of fiberglass, wood joinery, and metal are transformed from raw materials into a pleasing and comely shape.

Lots of room

The first thing you'll notice is that the low cabintop eases visibility forward, whether you're standing or controlling the tiller from the coaming. Seven-foot-long cockpit seats mean there's room for six to eight passengers; the down-side could be that she may be the designated party boat after the sun passes the yardarm. She's a bit full in the waist (at 11 feet 11 inches) but Shad Turner designed a midsection that tapers aft to a relatively narrow stern. Her decks are wide and easy to work under sail. Shrouds are inboard at the foot of the cabintop. So, in addition to supporting the spar, they provide handholds and leave space for crew stretched out for a nap.

A critic may complain that the main-sail traveler spans the cockpit. That's a good trade-off for a control positioned at the end of the boom that produces better mainsail trim and allows the driver to trim the main. Odds are that the driver will be the only person aft of the traveler, anyway, out of the way of trimmers. That way, the crew won't be able to hear her grinding her teeth or shouting imprecations.

Let's start with the basics. Most of us can stand up under 6 feet 2 inches of headroom without banging our heads. It takes at least three paces to maneuver 11 feet from the foot of the companionway to the forward bulkhead. The Santana 35 has a full-sized galley with adequate space to cook a

- "This boat is a bargain. It has performance plus a gee-wow downstairs." *Owner, Los Angeles.*
- "Typical speed to weather is 6.5 knots, and we've hit 13 surfing downwind. We reef the main at 25 knots. Had to re-seal the chain-plates." *Owner, San Francisco.*
- "Under power, with practice, she will turn on a dime." *Owner, San Francisco.*
- "She's sluggish in light air but is known to like breezy conditions — 15 knots or more." *Owner, San Francisco.*
- "Nice boat. Lots of bang for the dollar. Will handle fairly extreme conditions. Nice interior. Would not want to cruise, though." *Owner, San Francisco.*

turkey and store a case of eight-ouncers in an icebox. An old fashioned, (pre-pushbutton navigation) full-sized chart table is to starboard opposite the galley, so chef and naviguesser both operate in the most comfortable spots when at sea. The dining area has a drop-leaf table on the centerline that seats six comfortably. If pressed, you could probably find a way to create space to cabinetize a TV-VCR, although I'd opt for a book rack.

Head with privacy

The head, located forward, spans the hull and offers the privacy of a solid door. Space for sail storage is in the

bow, not the aft cabin. After that, what else in life is there?

The 35 even looks like a cruiser, rather than a fiberglass tube. Underfoot is a teak sole. The main saloon is surrounded by an oiled teak interior and ports built flush to the cabin sides.

From a purely functional standpoint, you can stretch out on one of four berths and two convertible settees without banging your toes; the berths are all about 6 feet 6 inches long. At sea, pilot berths amidships will provide the most comfortable sleeping quarters.

"Builders seem to think sea berths need to be large but the facts of the matter are that when we're at sea on an overnighter, we tend to curl up in small spaces at the junction of the hull and berth. That way we don't move around and are better rested," Tom says.

By the time the first Santana 35 began its trip down the production line, the W. D. Schock Corporation had 20 years of experience in the production of fiberglass sailboats. In the ensuing years, the company has maintained a reputation for producing lightweight, but durable, laminates. The company managed to avoid many of the problems associated with many of the boats built in the 1970s and 1980s. "We've had no problems with delamination and few blisters," Tom says of the blemishes that plagued many builders of the era.

However, overtensioning the stays may create a crack between the deck and forward bulkhead.

Handlaid woven roving

The hull of the Santana 35 consists of a ½-inch Baltek end-grain balsa core

"We'd design and produce a good boat and, at the stroke of a pen, the committee would change the rules. It was devastating."



The low cabintop makes it possible to see what's ahead of you, and the large cockpit offers space for six to eight passengers. Wide decks make it easy to work under sail.



Jeff Jamieson

*"I propose
the formation of an
America's Cup
for Good Old Boats
and nominate
the Santana 35 as a
potential contender."*

encapsulated in handlaid woven roving bonded with polyester resins. The hull-to-deck joint is an inward-turning flange on the hull over which the deck was laid and bonded with zinc chromate tape, and fastened with an aluminum toerail secured with ¼-inch bolts on 4-inch centers. Owners do not report leaks from this joint. Deck hardware was attached with bolts through solid marine-grade plywood.

The rudder is a fiberglass shell filled with foam that is strong and light. The rudder stock on the first boats produced was a hollow, 2-inch-diameter fiberglass section sleeved with stainless-steel pipe. When San Francisco Bay sailors encountered "rudder stock bend," the company designed and provided owners with an epoxy resin that, when poured into the pipe, doubled the load strength to more than 7,000 pounds. End of problem.

The internal structure athwartships consists of Douglas fir beams encased in fiberglass; longitudinal support is provided by furniture, bunks, and the forward bulkhead.

The mast is a sturdy SparCraft section built "when that company was in its heyday," Tom says. It was an oversized aluminum section with a single set of tapered spreaders and rod rigging. Most boats are still sailing with the original rig and standing rigging.

The Santana 35 is as fast on the water as on paper. With a displacement of 8,500 pounds, her displacement-to-length ratio is 203. The ballast-to-displacement ratio is 38 percent, so she'll need weight on the rail or reduced sail area in a freshening breeze. She carries 299.5

square feet of canvas in the mainsail and 250.5 square feet in a 100-percent foretriangle. By most calculations, she's halfway between "real fast" and "average fast," but the ⅔ fractional rig means she'll struggle in winds of less than 5 knots.

Impressive performance

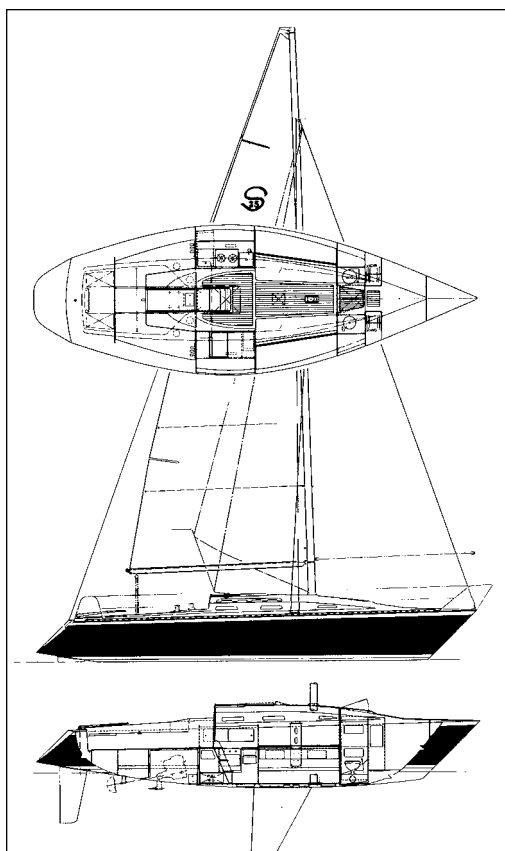
I've sailed aboard and against the Santana 35 in varying wind conditions and been impressed with her performance. Initially rated in the mid-90s under PHRF, she currently rates between 114 and 120. Close-hauled, she sails to weather within 40 degrees of the apparent wind at 5.5 to 6.5 knots. Off the breeze, on a tight reach under a spinnaker, she'll break loose and hit 11 to 13 knots, well above her calculated hull speed.

During one stretch, the 2003 America's Cup races were postponed nine consecutive days when the breeze didn't exceed 8 knots. The Santana 35 will sail in those conditions. Then races were postponed because the wind was more than 19 knots, a typical July day on San Francisco Bay. The Kiwis' boat broke twice when winds exceeded 20 knots.

Given that set of circumstances, I propose the formation of an America's Cup for Good Old Boats and nominate the Santana 35 as a potential contender.

Interested? Used boats are priced at \$25,000 to \$40,000. With proper planning you can buy the boat, hire a crew, buy soft drinks and Oreos, rent a condo for the duration of the Cup regatta, and still have at least \$75 million in the bank.

Postponements?
Fuggiddaboutit! 



Santana 35 specs

LOA: 35 feet 0 inches
LWL: 26 feet 6 inches
Beam: 11 feet 11 inches
Draft: 6 feet 3 inches
Displacement: 8,500 pounds
Fuel: 20 gallons
Water: 20 gallons



Jeff Jamieson

A full-sized nav table is situated opposite a full-sized galley (not shown here). Berths are 6 feet 6 inches. Just because she's meant to be raced "does not mean the crew sleeps on a bed of nails or eats C rations."

Resources

W. D. Schock Corp.

Corona, Calif.; 909-277-3377

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

Other Santana 35 sites:

<<http://www.jamiesons.com/s35>>

<<http://www.geocities.com/Pipeline/9547>>

Bill Crealock



*This famed
designer of
ocean cruisers
is the son
of a son
of a sailor*

by Steve Mitchell

up close

DO YOU EVER WONDER WHAT GOES through a yacht designer's mind while reading a review of one of his boats? If you're Bill Crealock, it's often this: "I'm always pleased," he says with a smile, "when a reviewer says one of my boats must have been designed by someone who spent some time at sea."

There's a reason for this pleasure. Boats have played an important part in three generations of the Crealock family. Bill also spent the better part of his 20s cruising the Atlantic and Pacific oceans at a time when almost no one else was out there. Who better to design a boat for long-range cruising than a man with salt water in his genes, one who had "been there and done that" long before world cruising was fashionable?

William Ion Belton Crealock was born in Essex County in the southeast corner of England. What year he won't say. His father and grandfather had both grown up sailing small boats,

so it was only natural for him and his brother to do the same.

"From the beginning, as little kids, we were always sailing small boats or making play boats wherever there was water," he says. "I always knew I wanted something to do with the sea when I grew up. I thought about the navy as a career, but those big ships didn't interest me much. My brother chose that as a career. Because I liked

drawing boats as a kid, my father suggested that I look into designing. That was the beginning."

In the early 1940s Bill entered Scotland's Glasgow University,

which at the time "was the Mecca for people from around the world who wanted to go into ship design and building.

"It made for a fascinating naval architecture class with people from China, Turkey, and Poland, among others. I spent two years there but realized I could never study yacht design there because at that time there

was no such thing as a degree in yacht naval architecture."

Bill soon found a small college in Glasgow that offered evening classes in yacht design, but it didn't offer a degree. He took evening classes there and during the day began a five-year apprenticeship in a ship-design office. He spent those five years working on designs for large, steel merchant ships, "which was a little boring," as he puts it. Contrary to working one's way up the ladder of success, Bill found it more to his liking "to work my way down to a firm that designed smaller commercial vessels." It was closer to his true love of yacht design.

Retire early

Then the cruising bug bit Bill in a big way. He found three other young men of like mind, and the four of them decided to take to the sea. He says, "The four of us decided the time to retire is in your twenties. Otherwise, what was the point of working all your life and being too old to go sailing?"

The group sold all their possessions and pooled their money, having just enough to buy a wooden, 40-foot gaff-rigged cutter called *Content*. They set

*"The four of us
decided the time
to retire is in
your twenties."*

out from England in the summer of 1948 with no particular destination, figuring they had enough money to last a year. "We thought that by the end of a year we could find a way of earning money en route to keep us going into the Pacific. We also were doing a series of articles for a magazine in England, and that brought in some funds."

For the next two-and-a-half years, the quartet sailed the Atlantic, spending as much time as they pleased wherever they touched port. Says Bill with his typical self-deprecating humor, "The magazine went bankrupt, no doubt as a result of our articles, and it was that money that was to take us across the Pacific. We did have some money waiting in New York from *National Geographic* for photographs of ours they had published, so we went up there."

But it was in New York that the quartet, still close friends, set off in different directions. Two returned home to England and a third stayed in the United States to get married. Bill hadn't had enough of the cruising life and was able to join a couple as crew on their boat, a husky, 69-foot wooden ketch, just before they set off for the South Pacific from Panama. According to Bill, "We went through the Pacific in leisurely fashion and ended up in Tahiti. I finally figured it was time I returned home, so I took passage on a ship to England via France."

Bill later chronicled these voyages in two books called *Vagabonding Under Sail* and *Cloud of Islands*. (Both are now out of print, but Mark Busta at Good Old Boat specializes in finding used and out-of-print books. Just call or email. —Ed.)

He spent a year living aboard a boat in England and returned to the States (as the only passenger aboard a small freighter) to visit the married member of the original quartet who was living in California. Just before he was to return to England, fate again stepped in to set up the next chapter of Bill's life.

Meet in six months

He met a wealthy gentleman who made the following offer: "My doctor tells me I must take off three months from work each year or possibly die." That man wanted to use this time to pur-



Excalibur 26, Bill Crealock's first successful racing design.

sue his hobby of shell-collecting by setting up a foundation to study seashells. He asked Bill to find a suitable vessel, locate an amateur crew, and meet him in the Western Pacific "in six months from this date, and I'll pay all costs with a little extra for pocket money."

Bill found a 105-foot steel schooner, redid the deck and rig, rounded up a crew, and off they went just two hours after the last shroud was in place. They were less than eight hours late for the appointment with their benefactor in the Western Pacific. The group spent a year exploring that part of the world, from New Guinea to Japan. The only misadventure was a huge typhoon off the coast of Japan, in which the ship lost its wooden mainmast. They made it to Japan under jury rig and secured a new metal mast very cheaply because, as luck would have it, the Emperor was a shell-collector. "All very interesting, but a trifle damp," is the way Bill puts it.

Bill returned to California with every intention of heading back to England. But once again, fate intervened: "Someone asked me to do some design work, and one thing led to another. I opened an office in Newport Beach in 1958."

Bill's first designs in California were in wood. "What I did was design boats

at night," he says, "and during the day I worked in a boatyard to find out how boats were built in California. When fiberglass came along, I gradually got into designing fiberglass production boats. I didn't specify a lamination schedule in the early days because the builders knew more about that material than I did. Gradually, we all formulated our ideas of what was required, applying engineering to it for stiffness and strength. Even Lloyd's Rules were feeling their way and watching the experience of builders."

His first production fiberglass designs in California were for Columbia Yachts, but his first successful racing design was a 26-footer for Excalibur Yachts. "It was a little different from the other boats of that era," he says. "The keel was a different shape, the lines aft were relatively fine, and it did well in racing. One year on Long Island Sound they called it 'The Year of the Sword' because the Excalibur had done so well."

First in Costa Rica

Bill designed for many of the early West Coast boatbuilders, including Westsail, Clipper Marine, Ericson, Islander, and other smaller companies. He also designed boats for Cabo Rico, which were the first boats built in Costa Rica. "They produce an excellently built go-anywhere cruising boat," he says.

According to Bill, "I was working on a larger design for Excalibur Yachts when they went bankrupt, which was not unusual. The real trouble in those days was that boatbuilding was, for the most part, a backyard business that grew very quickly. It sometimes wasn't very efficient, however."

Alas, as many builders have discovered down through the years, building boats has never been the path to riches, despite the apparent romance of a boat under sail.

Early on, Bill had another collaboration on a design that would help establish his name in yacht-design circles. "In those days [early 1970s] there was no real production cruising boat," he says. "Then a fellow who had been building a wooden 32-footer came and

Pacific Seacraft sailboat designs by Bill Crealock

Model	Production years	Re-introduced	Total Hulls
Dana	1986-1999	2001	256
Pacific Seacraft 31	1987-1999	2002	94
Pilothouse 32	1993-1999		21
Pacific Seacraft 34	1985-present		332
Pacific Seacraft 37	1980-present		369
Pacific Seacraft 40	1995-present		53
Pacific Seacraft 44	1990-present		17

asked me if I thought there would be a market for a fiberglass version of it. I said he just might sell a dozen, and I helped him convert the design to fiberglass. We kept the underwater lines unchanged because it was a William Atkin design based on a Colin Archer boat. I modified the rig, gave it a new interior, and that became the Westsail 32. Eventually they built 700 of them. It was a market no one had suspected."

Continues Bill, "Success for the company came too quickly in a way. *Time* magazine came out with an issue featuring the Westsail 32, and requests for the boat came in from all over the world. The company made the fatal mistake of taking orders at a given price with the boats to be delivered one or two years down the line. When the price of resin shot up in the 1970s, they had financial troubles. But with the success of the 32, they thought it was time to go bigger. I designed a 42 and a 43 for them that proved to be rather successful." But perpetual financial problems led to Westsail's bankruptcy in the late 1970s.

Pacific Seacraft

About this same time, Bill entered a design contest sponsored by a sailing magazine. The 37-footer he submitted "was the only chance I've ever had to design a boat that didn't have to please anyone else but me," he says. His design did not win the contest, but it did garner an honorable mention. This didn't surprise him. "The boat that won was a very modern design for the time, actually a rather hideous boat, I thought. It quickly disappeared."

A company called Cruising Consultants bought Bill's 37-foot design, built the molds and sold 20 boats. "Through no fault of their own, they, too, ran into financial problems," he says. "The molds became available, and Pacific Seacraft bought them. It's what Pacific Seacraft was looking for at the time (in the late '70s). They were a small company just starting up and had built a couple of in-house designs that were nice little boats, but they needed something new. So Pacific Seacraft and I sort of grew up together."

Bill's design, now known as the Pacific Seacraft 37, is in the Sailboat Hall of Fame.

"Time magazine came out with an issue featuring the Westsail 32, and requests for the boat came in from all over the world."

"It's funny how things work out," says Bill. "I never expected that. What was courageous of Pacific Seacraft was that the 37 didn't have as much volume as boats with the same overall length. It compares in volume more to a 35-footer. They went against the marketing practice anyway and built the boat. It's been quite successful."

So why has the 37 been so popular? "People tell me that initially it's the visual impact," says Bill, "and after that it's the boat's sailing ability and balance. I'm keen on the question of balance in a boat, especially at the helm when cruising long distances. Nothing pleases me more than hearing people say their child was able to steer the boat in 20 knots of wind without a problem. People forget about the fatigue factor when cruising."

After the 37, Bill designed the Pacific Seacraft 34. Then came the 24-foot Dana and the 31, both of which lack the canoe stern most often associated with his designs for Pacific Seacraft. On a trip Bill came across a 28-foot, William Garden-designed motorsailer that he thought was a

very attractive boat. Back home, he approached Pacific Seacraft about building a pilothouse boat that might appeal to buyers in the Pacific Northwest. The end result was the Pacific Seacraft Pilothouse 32, which was based on the 31. The Pilothouse 32 sold well, but to a different buyer than expected. According to Bill, "where they sold principally wasn't in the rainy Pacific Northwest, but in the sunny southeast. People in Florida really took a liking to them."

More performance

Next up was something larger to meet the demand for a boat in the 40-foot range. The idea had been kicking around between Bill and Pacific Seacraft for quite a while. The new design proceeded with the emphasis slightly more on performance. Pacific Seacraft wanted to go larger yet and asked Bill to design a 44-footer. It later was followed by a Pilothouse 40. The company also came out with two trawlers (not designed by Bill), expanding the product line to powerboats that sailors could move into as their needs changed.

One of the most well-known Pacific Seacraft owners is Nigel Calder, noted ocean sailor and author. A few years ago Nigel bought a Pacific Seacraft 40 and worked closely with the factory to customize it to his liking.

Says Nigel, "We were looking for a 40-foot boat, and the Pacific Seacraft 40 is the quintessential cruising boat. I knew that any design from Bill Crealock would be beautiful and well-balanced under sail, and this boat certainly is. We all get seasick and I have two slipped disks in my back, so we needed a boat that would take care of us. The boat also has excellent systems and good livability.

It's in the little details, and Bill and Pacific Seacraft made no compromises in those details for seaworthiness. There are no curves where you don't need them, leechcloths and handholds are in just the right places, pots and pans in the galley won't take off and hit you, and it has the best head I have ever seen on a 40-foot production boat."

As for performance of the 40, Nigel says, "It's a heavy boat aimed at family cruising. It handles those compromises very well. But surprisingly enough,

The Westsail 32, at right, is an Atkin design modified by Bill Crealock. The Westsail 42, on the left, is Bill's design.



the boat is a good performer in light air even though the numbers don't reflect that. The underbody is more refined than people give it credit for and gives the boat a good turn of speed.

"Pacific Seacrafts are exceptionally well built," Nigel continues. "Down below the blend of laminates and wood is just about spot on. The kids are teenagers now and able to help sail the boat. So we are selling the 40 and looking at something larger with a longer waterline for more performance since we have more hands for crew."

True gentleman

Don Kohlmann, president of Pacific Seacraft, emphasizes the importance of Bill Crealock to the company, not just as a designer, but also as a person. "Bill is one of life's characters," says Don, "a really good person and a true gentleman. His designs are always creative and interesting. He knows how to design a beautiful boat that performs well, a melding of function and aesthetics. He has a real attention to detail and a fine sense for drawing good lines. He's true to the purpose of the boat and imparts his personality onto each design. Bill is such a fine ambassador for us. He's personable and has a way of grabbing people's imagination."

It's obvious that the relationship of designer to builder is a special one in this case. "It is a symbiotic relationship," says Don. "It's a combination of his designs attracting attention and acclaim and then the reputation of the company in building quality boats." Indeed, *Fortune* magazine twice has recognized Pacific Seacraft as one of the top 100 producers of quality products in the world.

"We always fight the battle of interior volume when compared to some of our competitors," says Don. "It's true that other boats may offer more volume. But Bill's designs with lower freeboard and moderate beam for ultimate stability mean a more seaworthy boat. Plus,



Few Clipper Marine Quarter-tonners were built.

Bill can combine all those elements into a beautiful shape."

Nancy Cann, founder and president of Crusader Yachts in Annapolis, Maryland, has been a Pacific Seacraft dealer since 1986. "Pacific Seacrafts have an amazing following," she says. "It's almost a cult thing in some ways because the reputation of the boats is so good. They are purpose-built boats and not market driven, which attracts knowledgeable buyers. People buy them because of their beauty and performance and because these boats hold their value. There are very few boats built to go around the world, and even though most Pacific Seacraft buyers may never use the full potential of their boats, they like knowing that the boat is fully capable of going a lot farther than they ever intend. And if they decide to do some bluewater sailing, they already have the right boat."

Design philosophy

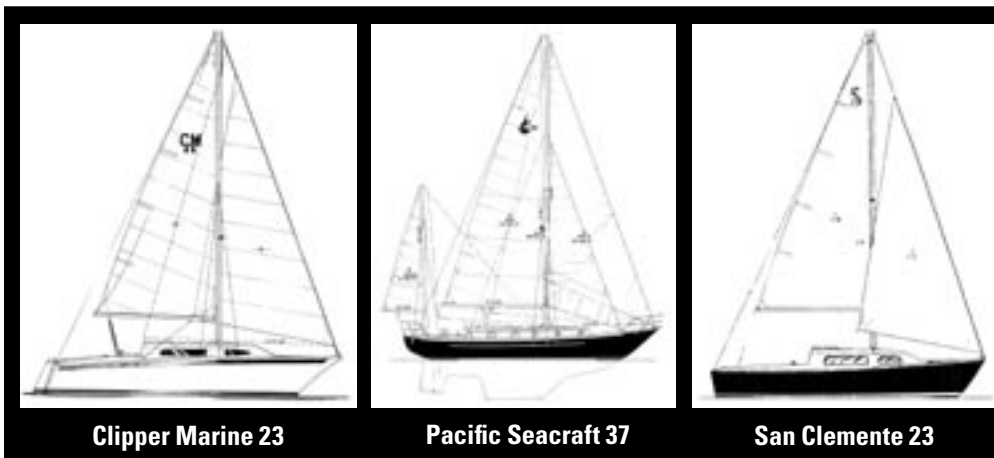
By now it's clear that Bill Crealock has a design approach honed by years of personal experience on the water and by many years of successful design

work. The end result of a Crealock design is always the same — beautiful, well-balanced boats that are extremely seaworthy.

For one thing, he doesn't follow the crowd. "I've tried in most of my boats to be a little bit different," he says. "I'm always working on new ideas. I'm lucky in having worked on a wide variety of boats in addition to cruising sailboats. They range from an 8-foot circular sailboat, which had comfortable seating capacity for six and actually did sail, to a 90-foot brigantine. I've worked with the Mexican navy on a patrol boat, on high-speed powerboats capable of 70 miles per hour, and on low-speed fishing boats. This is all in addition to my cruising sailboats. One of my favorite designs is a 65-foot wooden, gaff-rigged schooner, which is the kind of boat I'd like to go cruising on myself."

Bill also has a keen sense of aesthetics. "I'm perpetually fascinated by things like sheerlines and how an inch or an inch and a half can make such a difference in the look of a boat. I look at something in a magazine and often think that an inch-and-a-half difference in the bow or stern would be just right. For some reason an inch-and-a-half always seems to be the magic number. I get a great deal of pleasure fiddling with sheers in proportion to bows and sterns. Of course, sheer does help a boat stay dry. Probably the most logical thing is a reverse sheer with high shoulders near the forward end because usually when you take green water it's not so much over the stem as over the shoulders of the boat. I used a reverse sheer on a smaller boat but never felt comfortable with it on a larger one. It's a mental thing. I just like the traditional sheer."

Besides balance, Bill also finds that "motion in a seaway is so important, especially on a long cruise. Motion directly affects performance with a small crew." Bill's aim is to produce a shape that "neither cuts straight



through waves, drenching the crew, nor rises to every wavelet, making the crew seasick. There's no doubt that weight is the biggest single factor in comfortable motion, but clearly has to be limited." Some of his boats have narrower beams than other popular boats today, "but if you take the ratio of beam to waterline length, rather than overall length, most are about average," he says. "Yes, fat boats give you more interior volume and a little more initial stability, but if you do ever get rolled by a freak wave, the slightly leaner boat has a better chance of righting itself."

Always compromises

States Bill, "Almost every feature of a cruising boat is a compromise. The best of them keep close to the middle road. One must remember that speed on a passage is quite different from

*"Bill's design,
now known as the
Pacific Seacraft 37,
is in the Sailboat
Hall of Fame."*

speed round a racecourse on a weekend afternoon."

When asked why so many of his designs have canoe sterns, Bill says, "People always ask me about that. I don't think there's anything magical about a particular stern, although I do think the canoe has a slight advantage under some conditions. I believe it's important to have plenty of reserve buoyancy, something the pure double-ender tends to lack. As much as I admired the achievements of the Westsail 32, I felt her stern was a little cramped. To a following wave,

the canoe stern, or a modest transom stern, offers little to grab onto. But a big, wide sugar-scoop stern seems to beckon to a following sea and could lead to broaching."

Further to the subject of handling in bad weather, Bill says, "When I do a design I start with the stern and not with the bow because in extreme conditions the stern may become the bow. For ocean work I aim at a boat that will take care of its crew in the very worst conditions. Then the other conditions will take care of themselves."

Who are some of his favorite designers? Bill answers with, "The late Laurent Giles, of England, who had such a wonderful sense of proportion, and others whose boats pop up out of the page because their lines seem just right, such as German Frers, Aage Nielsen, Bruce King, John Alden, and Thomas Gillmer

continued on Page 63

Bill Crealock says

WHILE HE WAS SENDING SOME OF THE ILLUSTRATIONS USED WITH this article, Bill Crealock made insightful comments about his designs. Those comments follow.

Excalibur 26 – The very early days of fiberglass boats; we were all designing fairly light displacement boats. Perhaps her main advantage, apart from some racing success, was that she was very easy to sail and was well-balanced. A salesman said to me, "If we can just get the wife on the helm, I know we have a sale."

San Clemente 23 – One of my favorites. Well built and surprised us by doing well racing on the few occasions when one was campaigned. Not a long production run, due to financial difficulties of the builder.

Columbia 21 and 22 – Same basic hull, the 21 was an open version of the 22. Columbia 36 had some initial racing success but was somewhat heavily built and developed a following as a cruiser.

Westsail 32 – Uncovered a market no one suspected existed in this country. Main problem was convincing people that it was safe to take some small boats across oceans. An older Atkin design, we kept strictly to his lines. Though not designed for efficient windward work, she was surprisingly capable off the wind.

Westsail 42 – Proved to be a very comfortable and well-balanced boat for cruising. Some of the boats were given a very conservative sail plan for those who were still nervous about a larger sail area at sea. With her fuller sail plan, she many times sailed past some of the split underbody cruiser/racers.


Clipper Marine 21 – The first in a long line of trailerable sailboats I did for Clipper Marine, 10 models from 21 to 32 feet. Many thousands sold. Many still around.

Clipper Marine 23 – One version was twin-keel. The

Bill Crealock at the wheel of a Pacific Seacraft 37, the boat he designed to please himself.

keels were very carefully designed. The dealer refused to take delivery of #1 — having had experience with imported twin-keelers. He finally was persuaded to try it out and immediately placed an order. No difference between it and its swing-keel twin in performance.

Crealock 37/Pacific Seacraft 37 – The first in the line of Pacific Seacraft boats I did, from 24 to 44 feet. Reportedly behaves well in extreme conditions and is well-balanced. One owner complained that, whereas he could never get his wife to take her trick on the helm in previous boats, now he couldn't get her off the helm. A few yawls were built in the early years but no longer.

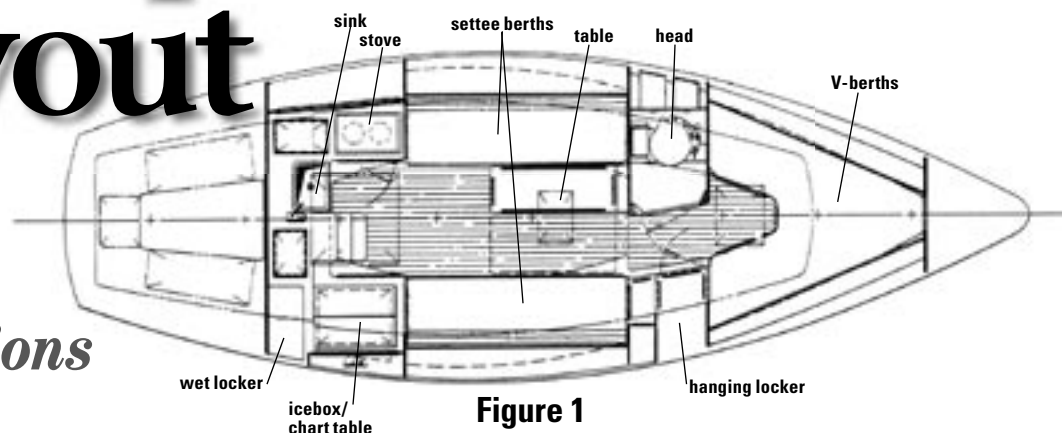
Clipper Marine Quarter-tonner – Few were built because it was introduced shortly before the company choked on its own success and folded. Did well racing against other production quarter-tonners. 



The importance of layout

An eminent naval architect looks at variations on a theme

by Ted Brewer



IN THE GOOD OLD DAYS OF WOODEN yachts and iron men, it was widely accepted that no sailing yacht under 30 feet could have standing headroom or four berths. That was perhaps a bit restrictive, but we did enjoy our two-berth, sitting-headroom, 25-foot Folkboats in the 1950s and often wondered how anyone could ask for more. If you wanted a four-berth cruiser, you made sure the cockpit was long enough to sleep two guests under a boom tent.

Then, with the advent of fiberglass in the 1960s, boatbuilding became big business. Madison Avenue got into the act, and advertising put the emphasis on headroom and the number of berths. So now we see

25-footers with full headroom and six berths. As a result of this emphasis on sleeping a mob, far too many of today's small yachts have an excess of berths and a great lack of amenities. They would be better cruisers — except perhaps for chartering to a school band — if one or two berths were given over to a larger galley, a decent wet locker, better stowage, or any of the other comforts that make cruising more relaxed and pleasurable.

Generally, one berth for each six

feet of length is the maximum that can be stuffed into a boat without sacrificing too many other desirable features. Yet I've seen 22-footers with five berths but no decent head compartment, a galley fit only for making sandwiches, no wet locker, and the under-seat stowage in the all-too-short cockpit given over to unnecessary quarter berths. You can cruise four or five people aboard such a boat, but would you *want* to?

Comfort and stowage

The standard small (27- to 32-foot) boat layout for years had two V-berths forward, followed by a small head com-

partment with lockers opposite, the saloon amidships with settee berths port and starboard, and the galley aft, usually with the icebox across from the stove and doubling as the nav table. This was pretty much *de rigeur* from the earliest small production fiberglass cruiser, the 28-foot Triton,

right up to the time when the waterlines became longer and the beam greater. Figure 1 shows a typical 27-footer with all the essentials. The 22-foot 6-inch LWL Douglas 31 arrangement (Figure 2)

is another example of that old standard, bearing in mind that the narrower and long-ended, short-waterline boats of the 1960s were not the roomiest things afloat. The 27 and 31 have two features that were common to many yachts in those days, a large icebox that does double duty as a stand-up chart table and a good-sized wet locker for foul-weather gear.

Not far from land

The icebox/chart table still makes sense for most small cruisers, as few of them ever get very far out of sight of land. As a result, the typical chart table is often a cockpit seat, and the usual instructions from the navigator to the helmsman are along the lines of, "Head for the point of that island just off the port bow." A dedicated sit-down chart table is not essential for most summer-vacation, coastal-cruising voyages and eats up a great deal of stowage space that is better given over to more important things. Indeed, the sit-down chart table is not necessary on larger yachts either. Three of my designs, a 52-foot yawl, a 53-foot motorsailer, and a 58-foot ketch, had stand-up chart tables at the owners' requests. Those owners were very experienced sailors with thousands of miles of ocean passages behind them.

A six-berth layout that has been ruined by the desire to squeeze in a sit-down chart table and quarter berth is shown in Figure 3. There is no wet locker and, when you look at the galley,

"Generally, one berth for each six feet of length is the maximum that can be stuffed into a boat without sacrificing too many other desirable features."

you'll see that, with a pot simmering on the stove, it's almost impossible to get anything out of that tiny icebox without risking a serious burn. Indeed, it has to be difficult to get at anything in the bottom of the icebox at any time — and almost impossible to clean it. It must have been terribly frustrating for the cook. It would seem that the designer of the 30-footer's interior never did much small boat cruising, but he must have been a super navigator.

In Figure 4 we see an unusual layout that works reasonably well on this chunky 32-footer. She's slightly beamier but only a foot longer on the LWL than Figure 2, yet features a very large cockpit, four permanent berths, a better head, and a roomy galley. There's no chart table but she was not designed for ocean passages so the cabin table will suffice for most coastal navigating, and she still has a useful lazarette plus two modest cockpit sail bins.

“... far too many of today's small yachts have an excess of berths and a great lack of amenities.”

Excludes sail bin

The 31-footer in Figure 5 features lots of berths and a sit-down chart table. However, one of the major problems of her sit-down chart table/quarter berth plan is that it wipes out the starboard cockpit sail bin, and the same can be said for many of the contemporary wide-sterned cruiser layouts with their “private” double-berth aft cabins. With only one sail bin and no lazarette in this six-berth “bluewater cruiser,” where in the world do you store all the gear that I've shown on the equipment list on Page 17, most of which is essential on a weekend vacation cruise as well as on an ocean passage? The reader may also note that, as in Figure 3, the icebox may be inaccessible when needed most, and neither interior boasts a proper wet locker. Presumably, the dripping foul weather gear will be dragged through the cabin and stowed in the head. How very convenient!

In Figures 6 and 7 we see two 33-footers with very different approaches.

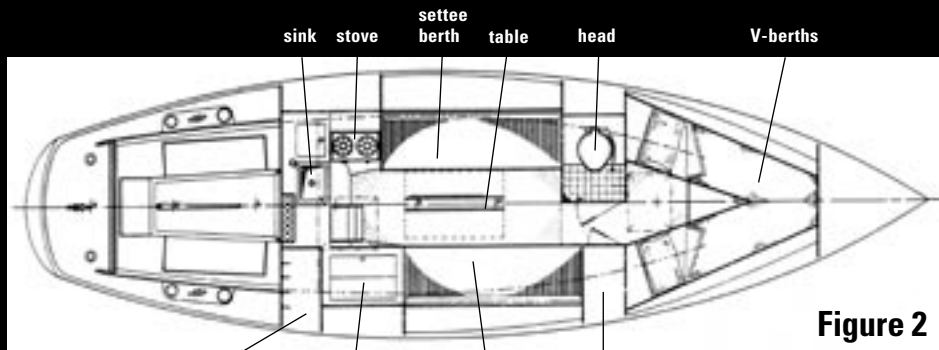


Figure 2

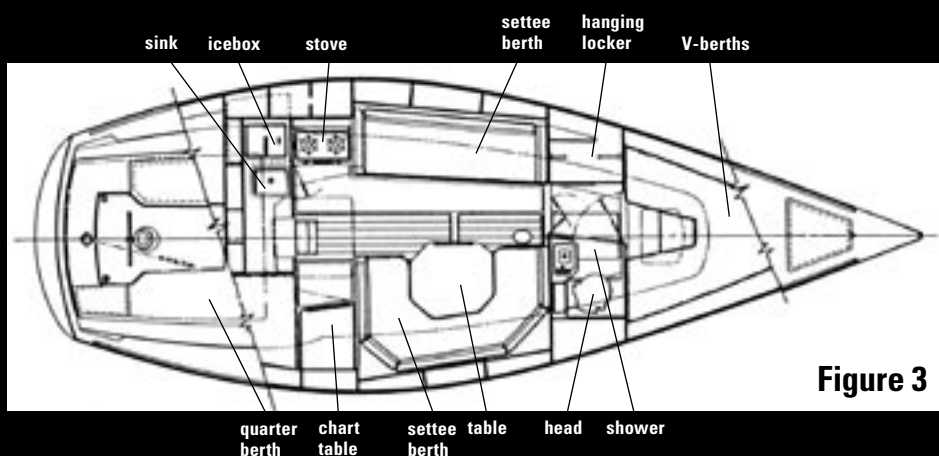


Figure 3

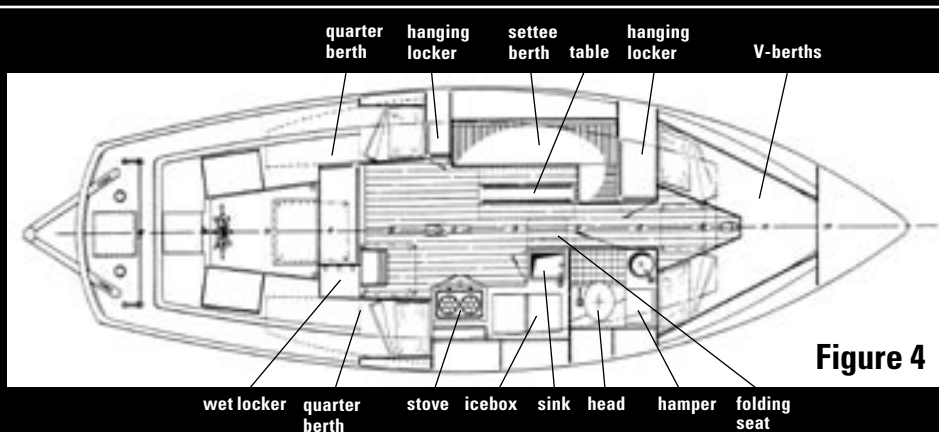


Figure 4

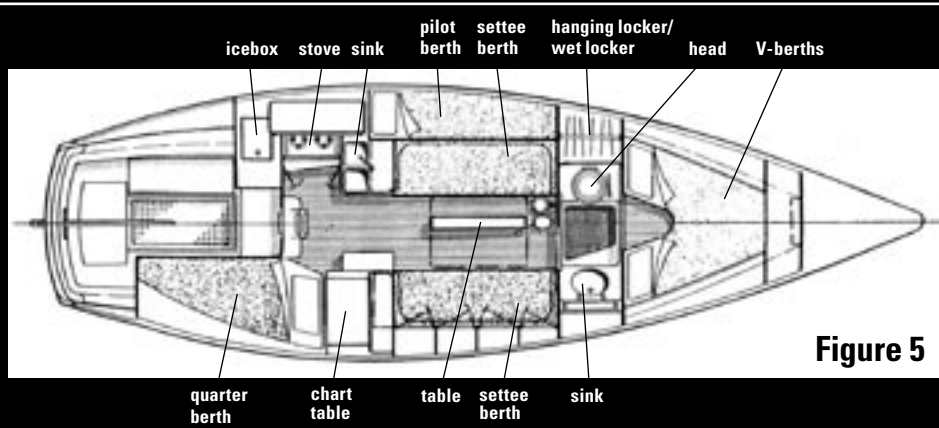


Figure 5

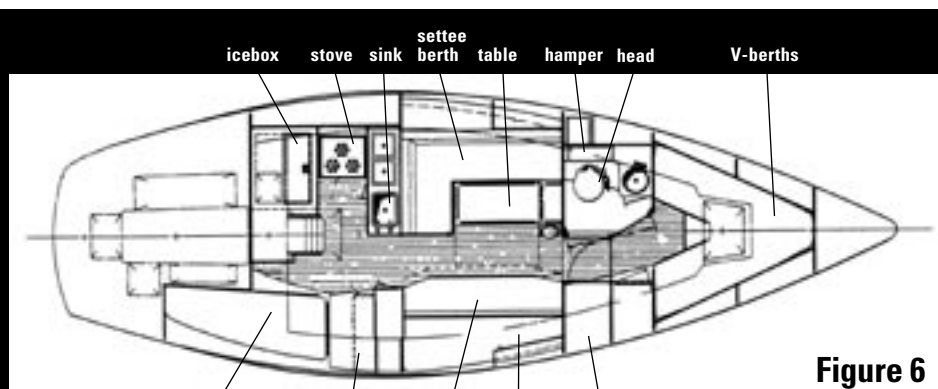


Figure 6

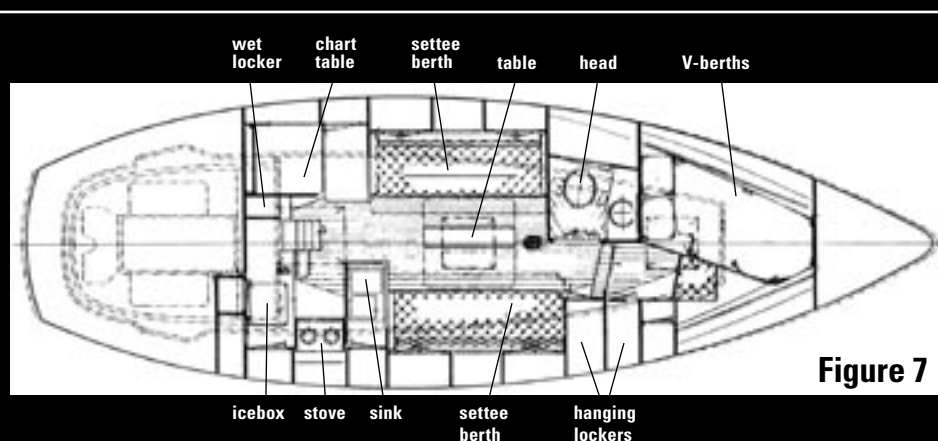


Figure 7

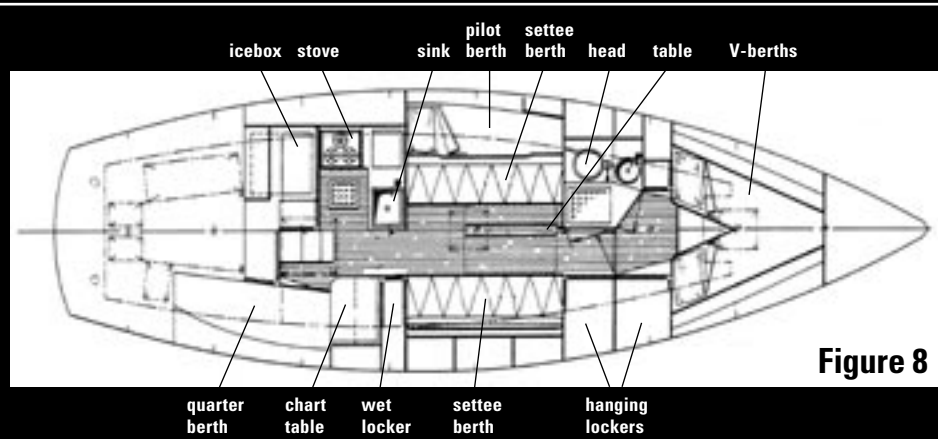


Figure 8

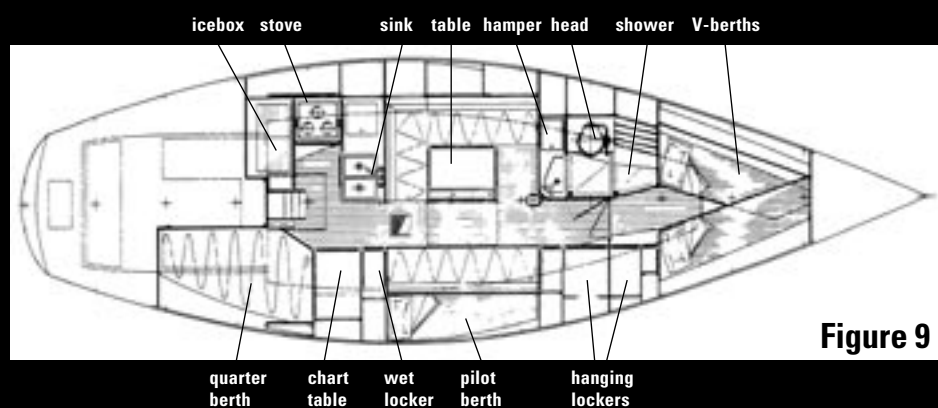


Figure 9

Figure 6 features four permanent berths with a quarter berth/chart table and an excellent U-shaped galley. Also the pilot berth above the starboard settee is very handy at sea, as it gets the sleeper out of the bouncy V-berths. The four-berth layout in Figure 7 has a large sit-down nav area without a quarter berth. But the double forward berth, while nice in harbor, may not be the best solution at sea, depending on the crew. This boat could well use a pilot berth and is beamy enough to handle it.

Two of the 35-foot cruisers, as in Figure 8, have made circumnavigations, so the layout is proven workable. The wet locker has been moved just forward of the chart table and the pilot berth eliminates the problem of sleeping in the bouncy V-berths in heavy seas offshore. The lazarette access is tight on each side of the tiller but can be widened to good advantage if wheel steering is fitted.

*“You can cruise
four or five people
aboard such a boat,
but would you
want to?”*


Useful layout

The boat in Figure 9, a 38-footer, has what I feel is a very useful layout for a yacht of her size. However, the over/under forward berths are not everyone's cup of tea, and a normal V-berth is standard. The stall shower is, perhaps, an unnecessary convenience but was certainly well accepted, and about 500 of this design were built. Again, the pilot berth and the wide quarter berth provide good sea berths while the roomy galley with its double sinks is the delight of many a seagoing chef. The sail bin and lazarette volume is reasonable, although full-length seats, rather than the T-shaped cockpit, would be my choice for added stowage. You can never have too much!

None of the foregoing layouts is perfect, of course. I have used them to illustrate the trends as well as what I consider to be good and bad features in interior design of the typical aft-cockpit

yacht. I deplore the layouts in many contemporary craft that fit jammy little dog kennels in the stern and call them “private staterooms.” The owner who needs that much privacy probably has the wrong crew aboard and, in any case, the privacy given by a thin plywood panel is purely illusory.

“I deplore the layouts in many contemporary craft that fit jammy little dog kennels in the stern and call them ‘private staterooms.’ ”

When you get down to it, the essentials on any yacht, regardless of size, are comfortable sea berths; friendly off-watch seating; a useful head; a workable galley; good access to the engine, stuffing box, and steering gear; and stowage, stowage, stowage for everything. 

Equipment checklist

Deck gear

anchor and rode
spare anchor and rode
storm anchor and rode*
stern anchor and rode*
anchor sentinel*
sea anchor*
fenders, one for each 6-7 feet of length, fat ones
fenderboard*
docklines (minimum of bow line, stern line, and two springlines)
throwing line
boathook
boarding ladder
cockpit seat cushions*

Sailing gear

winch handles
spare winch handle*
boom vang
preventer line
storm jib
storm trysail*
spare sail battens
sail ties and spares
sailbags
sailcovers
light sails (cruising spinnaker, reacher, etc.)*
light-weather sheets
whisker pole
spinnaker pole*
spare line for sheets, hal-yards, etc.*
snatch blocks*
spare telltales
bosun's chair
sail repair kit (repair tape, needles, palm, thread, marline)
rigging tape
light lashing line*
spare cotter pins, shackles, turnbuckle pins, etc.
rigging knife or two, with marlinespike

Navigation

logbook
charts
cruising guide*
dividers

parallel rule or substitute (rolling rule, pair of triangles)
pencils
tide book
lead line
echo sounder*
speed/log*
compass
hand bearing compass*
binoculars
sextant*
GPS, with spare batteries if portable model
VHF radio*
weather radio if no VHF aboard

Safety

a good first-aid kit and manual
radar reflector
foghorn with spare canisters, or mouth horn
fire extinguisher(s)
life jackets with lights, whistle
shark repellent*
life ring and line
man-overboard pole*
harnesses*
safety lines (jacklines)*
anchor light
flashlights
spare flashlight batteries and bulbs
flare gun and flares
emergency tiller
dinghy and oars
dinghy anchor (folding grapple type) and line
life raft*
emergency water and food*

Mechanical

manuals for engine and all other major equipment
engine spares (fuel filter, injector, oil filter, V-belts, impeller, etc.)
spare propeller*
tools (pliers, wrenches, Vise-Grips, screwdrivers, socket set, hand drill, hammer, etc.)
duct tape, electrician's tape

odds and ends (nuts, bolts, screws, washers, glue, gland packing, etc.)
lubricants (WD-40, water-pump grease, grease gun, Lubriplate, etc.)
spare light bulbs
spare fuses
spare engine oil, transmission oil; funnel
outboard motor for dinghy*
outboard fuel*
repair kits (toilet, water-pressure pump, bilge pump, stove, etc.)*

Galley

plates, bowls, mugs
place mats or tablecloth*
glasses
cutlery
steak knives*
serving utensils
chef's knives (paring, fillet, slicer, etc.)
oyster knife*
cutting board (fish-cleaning board)
corkscrew
bottle opener
can opener
pots
frying pan
pan lids
colander*
spatula
coffee pot and/or kettle
oven mitts
matches and/or stove lighter
spare stove fuel
staples (Pam, salt, pepper, sugar, coffee, tea, dried soups, pasta, sauces, flour, etc.)
food for the cruise, plus 10 percent
beverages, plus 10 percent
ice (if non-electric refrigerator)
ice pick
dish mop, dish towels, soap, Brillo pads
portable grill, charcoal, starter fluid*

paper towels and napkins
toothpicks
garbage bags

Miscellaneous

burgee*
ensign
foreign courtesy flag(s)
cleaning materials (wax, pine oil, teak cleaner, etc.)
mop
sponge
scrub brush
bucket, plastic and/or canvas
swim fins, snorkels, masks
scuba gear*
spare keys
deck-plate keys
toilet paper
water hose or collapsible water carrier*
shore cable*
portable radio
tapes and CDs*
crab and shrimp traps*
fishing tackle, hook remover, clam rake, etc.*

Personal

bedding or sleeping bags
pillows
foul weather gear, including small towel for neck
deck boots
gloves
toiletries, including sunblock
facecloth
hand towel
bath towel
hat
swimsuit
spare boat clothes
shore clothes
spare eyeglasses
sunglasses
eyeglass cases
duffel bag
camera and film
playing cards*
books
writing materials
harmonica, accordion, piano,* etc. 

* Items that are not essential, but nice to have and/or recommended for ocean passages

Portlight replacement

Letting in new light on an old problem

by Dean Hedstrom

AFTER 20 YEARS, THE FLUSH WINDOWS in our C&C Landfall 35 had been ravaged by exposure. They were suffering from age. One window had a minor leak that I had been battling for years. Two others had developed transverse cracks. All were deteriorating optically from UV exposure and a patina of scratches.

I consulted several sources and received many differing opinions on materials and methods for installing replacement windows. After sorting through the opinions, all it needed was a few hours in the shop and a weather-friendly day in the marina. I now have clear new windows and some new skills I hope not to use again for a long while. Anyone with modest woodworking tools, some energy, and an assistant can accomplish the same.

The original factory installation fixed the acrylic panels to a rabbeted recess around the window opening with a methacrylate structural adhesive. This is a bonding medium only; the windows were sealed with a sili-

cone caulk. The methacrylate resin is applied to the opening flange and an accelerant applied to the acrylic panel. The panel is held in place manually for the few seconds the adhesive needs to activate. Think Superglue in paste form.

The methacrylate structural adhesive used in the original window installation, while extremely aggressive in bonding acrylic to gelcoat, was very rigid. The difference in thermal coefficient of expansion between acrylic (large) and cored fiberglass (small) created a lot of stress on the bond. The minimal compliance or flexibility of the adhesive may have contributed to the failures.

Maintenance problem

The silicone caulking used in the original factory installation created a maintenance problem as well. It was difficult to reach the surfaces between the acrylic panel and recessed flange. Thus, after removal of the old caulk, cleaning was nearly impossible. Sometimes we would get lucky and

succeed in removing a long strand of silicone caulk. This was a mixed blessing because it meant the silicone had not bonded the first time. Most often we could only scrape out small pieces at a time. As you would expect, mold and slime tended to grow in the damp places. It was not possible to adequately clean the surfaces in the gap to assure good adhesion for the caulking. I tried using other materials, but the leaks inevitably returned.

I always washed the windows with clear soapy water and polished them with Meguiar's Mirror Glaze No. 17 plastic cleaner followed by Mirror Glaze No. 10 polish. The elements, helpful guests, and other hazards took a toll on the surface finish of the windows that Mirror Glaze was unable to combat. Our outlook from belowdecks took on a permanent haze. The cracking may also have been a sign of age embrittlement. Since losing a window completely would endanger the vessel and her crew, it was time to tackle window replacement.

I spoke with several boatyards,



dealers, and technicians on methods and materials for replacing the acrylic glazing. One suggested polyurethane, such as 3M 5200. The technical data sheet on any of the 3M polyurethane products specifically recommends against using these products for glazing without mechanical fasteners. An inquiry to 3M's technical support for an alternative product recommendation was unsuccessful.

Large holes

One dealer uses Dow Corning 795 silicone with fasteners every 8 to 12 inches around the periphery. He cautioned that large clearance holes need to be drilled in the acrylic to avoid cracking from the thermal expansion stresses. I was reluctant to deviate far from the builder's original intentions. Perforating the cabin trunk with holes for fasteners seemed like an invitation for leaks and long-term maintenance requirements. Moreover, we did not think the "industrial" look of closely spaced fasteners would enhance the lines of our boat.

South Shore Yachts offers a large selection of replacement parts, including windows, for old C&Cs. They recommend a methacrylate structural adhesive manufactured by ITW Plexus. Plexus MA320 is a two-part adhesive with a modest open time and relatively short cure time. More importantly, the cured resin will stretch 100- to 140-percent before it breaks. And it has exceptional adhesion to acrylic, fiberglass-reinforced polyester, epoxy, and gelcoat. It serves as both a structural adhesive and a sealant.

"Since losing a window completely would endanger the vessel and her crew, it was time to tackle window replacement."

I discussed the application with the regional manager for ITW Plexus, and he agreed this was the proper choice.

The final decision was choosing glazing material. The original windows were tinted $\frac{3}{8}$ -inch thick acrylic, commonly called by its trade name, Plexiglas. I considered using polycarbonate, trade name Lexan, which has superior strength. If the windows were large, I might have felt more comfortable with polycarbonate, but the Landfall 35 windows have less than 10 inches of unsupported span. Acrylic is much more scratch-resistant and somewhat easier to fabricate. I requested quotes from plastics distributors and South Shore Yachts on cut-to-pattern, cut pieces, and full sheets. I decided to purchase a full sheet from a local distributor and fabricate the panels myself.

Made a tracing

South Shore Yachts will fabricate finished replacement windows from patterns. For a while I was contemplating this alternative and made a tracing of the window on drafting vellum. I used this pattern to fabricate one panel in my shop by carefully following the outline with a band saw and finishing with a horizontal belt sander. It did not fit exactly; I had to sand and trim the panel before it would fit the opening.

I recommend using the original windows as templates.

I rough-cut four pieces from the 4 x 8 sheet using a 4½-inch Porter-Cable trim saw. A saber saw could also be used, but it would be slow and tedious work. I purchased a special acrylic plastic blade for the trim saw which, according to the marking on the blade, is supposed to run with the teeth backward. I challenged the factory on this and was assured this is the correct rotation. The blade performed equally poorly running in either direction. The teeth appear to have insufficient set, thus the kerf is too narrow and the blade overheats. I switched to a fine-tooth carbide wood blade and cut the remainder easily. One caution: narrow strips tend to chip and shatter. Try to leave at least $\frac{1}{4}$ inch for trimmings; it will have less tendency to shatter.

Two router bits

I also purchased two carbide router bits with ball-bearing followers on the end. One is a straight bit, sometimes called a laminate trimmer, and the other a 45-degree chamfer bit. You

Author Dean Hedstrom's C&C Landfall 35 with aging ports, top of facing page, and his efforts, at bottom, first to remove them and then to secure new ones while the sealant cures. Below left, Dean constructs the brace for the frame. His router guide is below right (wood test piece is shown here, rather than acrylic blank).





Resources

South Shore Yachts

905-468-4340

<<http://www.niagara.com/sailboat/>>

ITW Plexus

978-777-1100

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

GE Lexan

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

Cope Plastics

651-228-1448

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

Potters Industries

(glass spacer beads)

610-651-4700

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

might save a few dollars using high-speed steel router bits, but even a slightly dull cutting edge tends to perform poorly when machining acrylic plastic.

With a prayer for continued good weather, I struck the fatal blow. Actually, I selected one of the smallest of the four windows and rapped it from the inside with a dead-blow hammer. I started from the center near the edge where it had cracked. As the bond fractured, I could feel and see the acrylic flex. I continued

around the periphery, rapping firmly with the hammer until the window was free. Out of four windows, one was removed intact; the others were already cracked.

(It may be very difficult to remove the new windows installed with Plexus MA320. We have heard unconfirmed stories of laminate failing before the bond breaks. It may be necessary to grind through the acrylic and adhesive to remove windows installed by this method. —Ed.)

We traced the outline of the original window onto the rough-cut blanks with a fine-point permanent marker. Using the trim saw, we cut outside the line, leaving 1/8- to 3/16-inch of material all around. I used the original window as a router guide by clamping it to the blank and follow-

ing it with the bearing-guided router bit. To assure the pattern would not slip from the blank, I placed double-sided pressure-sensitive tape between them. The original windows

have a healthy 45-degree chamfer on the side against the cabin trunk. I had the major edge against the blank for the first window I patterned. There is a gap between the end of the cutting edge of the router bit and the bearing, and it is difficult to cut the full 3/8-inch thickness and keep sufficient engagement with the edge of

the pattern. On subsequent pieces I reversed the pattern, which was much easier to follow. After the edge was trimmed, I switched router bits and cut the 45-degree chamfer.

Large chamfer

The profile of the openings in the cabin trunk did not seem to require such a large chamfer, but I was uncertain of the requirement for this feature. In retrospect it may be a cavity to accept excess structural adhesive in the original installation. Some relief may be required, but I probably used more adhesive than was necessary to fill the space. I broke the outside edge by hand using a flat file, which trimmed away any of the paper swarf left as the router cut the protective paper. Fabricating the windows was

relatively easy, yet exacting, work.

I masked the inside of the window opening with 10-mil polyethylene to keep dust and chips out of the cabin. I used a 4½-inch grinder with 50-grit sanding disks to clean off the original adhesive and caulking. We vacuumed all the surfaces, then wiped the window flange with alcohol and inspected it carefully to make sure all the caulking was removed and the surface was sound. Next we removed the dust barrier and masked around the inside and outside of the window opening.

Building the fixturing was the most time-consuming part of the project. I lashed a 2 x 3 thin stud between the lifeline stanchions to provide a structure to brace against. Then I fashioned a frame using 1 x 3 shop-grade pine and screws. The frame is dimensioned somewhat smaller than the window and shaped to spread the compression forces evenly. With window and frame

"I lashed a 2 x 3 thin stud between the lifeline stanchions to provide a structure to brace against. Then I fashioned a frame using 1 x 3 shop-grade pine and screws."

The tools you'll need

- 4½-inch grinder with 50-grit sanding disks
- router
- guided chamfer bit
- guided laminate bit
- bench sander
- razor knife
- clamps
- cordless drill/driver
- safety glasses
- dead-blow hammer
- single-cut mill file
- trim saw

The braced window, curing, on facing page. A makeshift boatyard worktable is the collection point for clamps and cutting tools, at right.

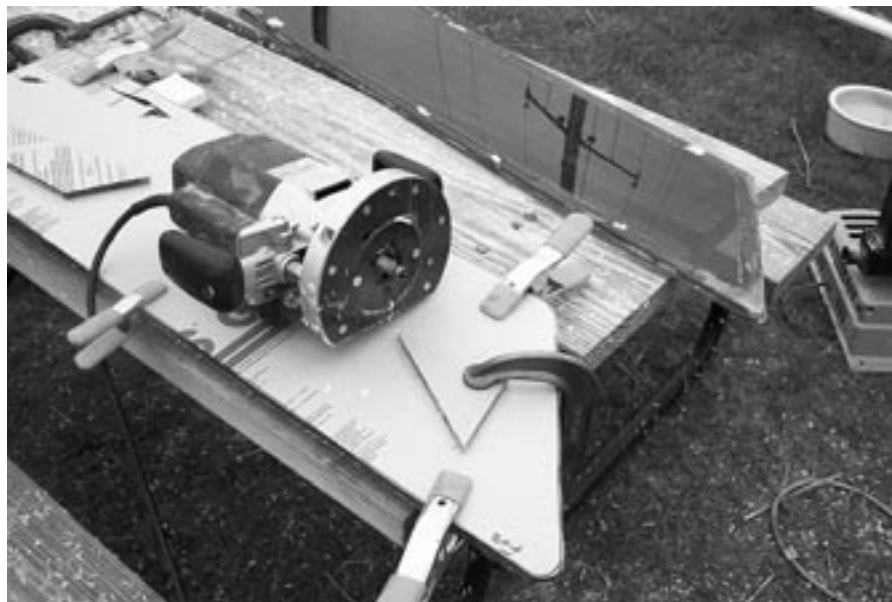
in place, I cut struts to fit between the frame and lifeline brace. The struts are cut $\frac{1}{4}$ - to $\frac{1}{2}$ -inch longer than the distance between the frame and bent brace. I also had a pocketful of wood shims to fine-tune the pressure on the frame and window. The brace flexes as pressure is applied and the struts interact. With the window in the opening and fixtured from the outside, I carefully cut the protective paper with a razor knife, following the inside opening. It is impossible to cut the paper without scribing the acrylic as well. Do not worry: the scratch does not show after the installation is complete.

Certain urgency

We double-checked the fit and confirmed that all the tools, braces, shims, and rags were ready. The process took on a certain urgency once the adhesive started to flow down the mixing tube. It was time to commit.

Plexus MA320 is a two-part methacrylate adhesive mixed 10 to 1 by volume. This ratio is metered in a special dispensing tube with a caulking-gun-like dispenser. The components are combined in a static mixer attached to the end of the dispenser. The working open time is 8 to 12 minutes depending upon the temperature. I set a timer, and my wife, Sandy, monitored the countdown as I started applying the adhesive to the window flange.

It was difficult to squeeze the



dispenser gun while tracking an even bead, so I made sure I had a goodly amount applied to the flange and tooled the adhesive smooth with

my finger before inserting the window. (*Wear gloves, don't get this stuff on your skin. —Ed.*)

A putty knife might work as well. To assure a minimal adhesive thickness, we scattered 0.030-inch glass beads on the wet adhesive. Sandy and I placed the window in the opening and erected the fixture. We inspected the gap between the acrylic and cabin trunk and added more adhesive if it was not filled. Then we tooled

the joint off with a finger and removed any excess globs with a scraper.

Fixture time is 30 minutes. A cautionary note: mask the area around the


window opening well; once the MA320 cures, it owns whatever it touches.

Forms a bead

Some adhesive extrudes to the inside of the window and forms a bead. It is easier and much cleaner to deal with the excess after the

MA320 has cured. I scored the bead by tracing the inside of the opening again with a razor knife. The protective paper acts as a release layer and carries the excess adhesive when peeled away.

I was dissatisfied with the distribution of adhesive on part of one flange; I either had insufficient clamping or too little adhesive. Structurally it was sound, but an irregular line was visible from the outside. It was clear that the flange was not completely wetted. I masked the inside of the window and window frame with low-adhesion masking tape and forced more adhesive into the joint with a 2-inch putty knife. The gap filled smoothly.

With that long day of work completed, Sandy and I can now enjoy a fresh, clear view out the cabin windows. Sandy meticulously waxes, polishes, and varnishes, but replacing the windows added a sparkle we had not seen in years. Twenty years from now we will be ready to do it again. 

"I selected one of the smallest of the four windows and rapped it from the inside with a dead-blow hammer."

Window problems

by Jerry Powlas

ALL MATERIALS EXPAND AND CONTRACT WITH TEMPERATURE VARIATIONS, BUT PLASTICS such as acrylic change their dimensions much more than metals or fiberglass. A 2-foot long acrylic window may change its length as much as $\frac{1}{8}$ inch over a 100-degree Fahrenheit temperature swing. Interestingly, fiberglass is more like steel, so a cabintop made of either material will change its dimension about $\frac{1}{64}$ inch.

Simple ambient temperature change from winter to summer will cause tremendous stresses to be set up between the cabintop and the acrylic window. This difference in the "coefficient of linear expansion" between the two materials is one of the main reasons that acrylic and other plastic windows cannot be rigidly glued or screwed to fiberglass cabins. It's critical that the adhesive or sealant be able to flex and distort enough to accommodate these stresses.

Even if the adhesive or sealant has a high elongation characteristic (percent change in length before failure), there must be enough thickness between the window and the boat, or the sealant will fail in shear. Screws will simply break the acrylic.

Boat canvas basics

Start by sewing a pair of custom-fitted handrail covers

I RECENTLY INSTALLED A PAIR OF BRAND-new teak handrails on my old MacGregor Venture 222. With about four coats of varnish, they looked fairly spiffy, but I knew from experience that after a season or two in the sun, they wouldn't look nearly so nice. A pair of canvas covers would help preserve the varnish job by keeping the sun off the teak and would look nice as well.

Looking through catalogs, I was able to find only an ugly, wrinkly cover for my boat, as well as a lousy "universal fit." Add the cost of the rails to the cover, and you've nearly got the book value of my boat. I decided to make my own and discovered a great way to learn the basic principles of marine canvaswork.

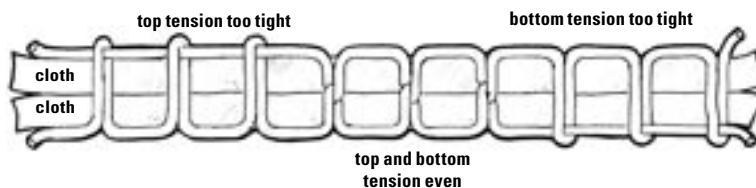
Once you've got the principles, there is almost no limit to the number of useful things you can make for your boat. They can be simple and inexpensive, like handrail covers, or they can be difficult and expensive, like a dodger. Most projects will fall on the easy/inexpensive side of the scale, once you've mastered a few techniques.

I'm not an expert with canvas. My skill level registers somewhere between Cro-Magnon and average, but I got some pretty good results. My covers are better than I could get from a catalog and at a fraction of the cost.

Tools

There are a few tools you'll need. Most are basic, like needles and thread, some good scissors, and so on, but the most important tool is a sewing

"Once you've got the principles, there is almost no limit to the number of useful things you can make for your boat."



machine. Don't panic. You don't need a special sail-making machine to do canvaswork. In fact, you don't need a machine at all to do small projects. But it does make quick work of sewing long seams.

I use an old straight-stitch machine from the 1940s. A friend bought it in a garage sale for \$10. It weighs a ton. It's pretty rugged and — with a special needle installed — it can sew through four layers of canvas (though I wouldn't try to do this all day long). I had to replace the rubber belts and some of the wiring; that took an afternoon. (For more on making an old home-style machine do the job for heavy canvas work, see *Good Old Boat*, January 2003).

Nearly all older machines use the same basic design, and they're threaded and adjusted the same way. My machine didn't come with a manual, but I was able to figure out how to thread, adjust, and oil the machine

with the help of a basic sewing book from the library. The trickiest part is getting the top and bottom thread tension adjusted properly. The top tension is usually adjusted with a knob, but the bottom thread is adjusted by a screw on the bobbin case. It's done by trial and error. I adjust the bobbin first and then balance the tension on the top thread. Sew small scraps of cloth together until the stitches look similar from both sides of the cloth (see illustration at left).

There are a few other tools you should gather together before you start. A seam ripper is really handy if (or should I say *when*) you need to remove a seam that was incorrectly stitched.

To mark up the cloth, I used colored pencils. These leave faint, fine lines so you can sew neat, straight seams. An old bar of soap, worn down to a thin sliver, also makes a great marker for sewing. Chalk and grease pencils work, but they leave a thick line that's harder to follow accurately.

Materials

You have a couple of choices when it comes to material. The industry standard is Sunbrella acrylic canvas. It holds up really well in the sun and is easier to sew than natural canvas. The downside is the cost, usually more than double the price of canvas. It's also slightly less resistant to abrasion. An alternative is treated natural canvas. Brand names are Vivatex, Graniteville, and Terrasol. In my part of the country, though, marine supplies are difficult to find. I found some canvas at a domestic sewing store at about \$7 a yard. The sales people had no idea

what brand it was or if it was treated or not, ergo “mystery canvas.” But it was the right weight. I bought two yards and have plenty left over for other projects. Depending on the length of your handrails, you might be able to get by with one yard.

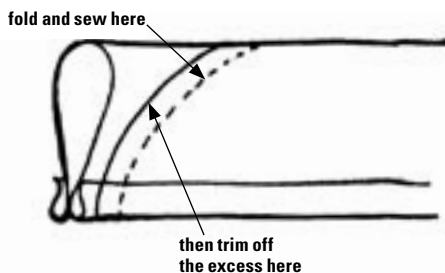
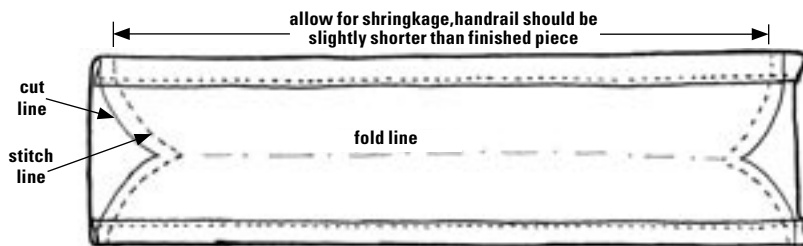
A regular cotton-covered polyester thread works well with most machines. I used a heavy button and craft thread. (*For outdoor applications, Sailrite sells a UV-resistant polyester sailmaker’s thread. It helps preserve your efforts. —Ed.*) A contrasting white thread on a dark canvas looks nice but shows off mistakes. If you’re not too confident of your sewing skills, choose thread that matches your canvas.

While you’re at the fabric store, pick up some snaps and a snap-setting tool. The large ones I bought are made of chrome-plated brass and are basically tubular rivets set with a hammer and block of wood. The special tools needed to set the snaps came in the package. The directions are easy to follow, and setting the snaps is straightforward. Marine snaps are very heavy-duty, high-quality snaps, but they’re pricey. The fabric store variety snaps have worked well for me and haven’t corroded yet.

Lay out a pattern

I made a pattern out of newspaper by wrapping the handrail and marking where it contacted the deck. If you use natural canvas like I did, don’t wrap the handrail too tightly. Natural canvas will shrink a little; allow for this in your pattern. I also marked the length of the rail, leaving extra material for shrinkage.

Armed with my newspaper pattern, I transferred the dimensions to the canvas. Remember that the pattern gives the approximate size of the finished handrail covers, not the size of the cloth needed to make them. I added $\frac{3}{4}$ inch to the top and bottom edge to make a hem. When I laid out the cloth, I marked both the “fold” line, and the bigger



“cut” line. The fold line represents the finished edge of the cover ... don’t get the two mixed up (see illustration above).

Cut and sew

Next, I cut out the cloth. The long edges are sewn first. As I prepared to sew the edges, I discovered an advantage to using natural canvas. The material had a slightly waxy coating.

The coating stiffened the cloth ... so stiff that I could fold the seam with my fingers, and the fold stayed in place like a piece of paper. Normally you will need to pin the hems. Some people have had good results using staples or double-sided tape for this step. I like plain old pins, though I was able to avoid fastenings altogether and sew the hems simply by folding them in place.

Before you sew the hems, make sure the machine is adjusted correctly by sewing some scraps. Keep your stitches as straight as possible, especially if you use a contrasting thread color.

It’s usually a good idea to “lock” your stitching so that it doesn’t unravel. By this I mean at the beginning and end of each row of stitches, lift the

presser foot, and go back and stitch over the threads you just laid down. If your machine is reversible, all you need to do is stitch backward for a few stitches, then continue as normal. Once you’ve hemmed the top and bottom edges of the cloth, you’re nearly finished with the covers.


At this point you sew the ends. There’s a trick to this. In most canvas projects, you sew the inside surfaces, then turn the piece “inside out” to finish. Here’s how this works with the rail covers: fold the cloth in half lengthwise, with the cut edges to the outside. Using the pattern, mark the curved ends of the covers and sew along this line. Trim off the excess cloth from the ends about half an inch from the stitching.

Reverse it

Now you can turn the piece right-side out. Check the fit of the covers on your boat, just to be sure your measurements were correct. If everything looks OK, mark the locations of the snaps. Optionally, you could use Velcro to secure the covers to the rails.

When I made my covers, I did a little hand stitching at the corners. I nearly always do some hand stitching on canvas projects. That’s one step that most professional lofts can’t afford to do. I can easily afford a few extra minutes to make things stronger.

The only detail remaining is to set the snaps. This involves cutting a small hole, inserting the snap and its back, and hammering the two together. There’s a nifty Vise-Grip pliers-type tool, but it doesn’t do the job any better, only faster.

Other than fastening your new canvas covers to your boat and basking in compliments, that’s all there is to it. It takes less time to make handrail covers than it does to sand and varnish them and will open the door to dozens of other projects that will improve the looks of any boat. 

Resources

Standout Yacht Fittings

If you’d like custom-fitted handrail covers done in your own Sunbrella colors and don’t want to do it yourself, call Jo Hamilton for a quote. Standout makes custom covers for \$30 and up (depending upon the length of the handrail). They make other canvas articles as well. 800-622-1877; <<http://www.standoutyachtfittings.com/>>.

Sailrite

800-348-2769; <<http://www.sailrite.com/>>.

For further reference

The Big Book of Boat Canvas, by Karen Lipe.
Canvaswork and Sail Repair, by Don Casey.
Practical Boat Canvas Work, by Lisa Carr.
The Complete Canvasworker’s Guide, by Jim Grant.

KISS and make it right

*Troubleshooting starts
with the simplest explanations*

by Suzanne Giesemann

It was just after midnight. The off-going watch was snuggling into the pilot berths while the on-coming crew adjusted to the darkness in the cockpit. We were west of the Gulf Stream, motor-sailing to arrive at our destination on schedule. Suddenly there was silence as the engine sputtered to a stop. Normally this drastic change from incessant noise to blissful silence brings a sigh of relief to a sailor, but not when it's annoyingly unexpected.

Lifting my head off the pillow, I listened for the predictable four words from my husband. He didn't disappoint me as he stuck his head through the hatch and anxiously asked the helmsman, "Did you do that?"

The negative reply propelled Ty into action, barking commands to grab the toolbox and flashlight. In the glow of the red lights, his mind was working, I knew, running through the possible causes of the malfunction. As I unhooked the leecloth and reluctantly abandoned my warm bunk, Ty peered into the engine room, shining a light on the despicable troublemaker.

"I'll bet we're out of fuel in the big tank," I offered.

The captain didn't even bother to look up. "No way. The main holds 90 gallons. There should be plenty left."

Theoretically, Ty was right. The previous owner had told us our new 1980 Morgan 46 would consume one gallon of diesel fuel per hour, and we hadn't motored more than 45 hours on this maiden voyage from St. Pete to Annapolis. But maybe the previous owner was wrong. After all, he'd never even left the pier! Why not check?



"Why don't we just check the tank?" I asked.

The clatter of wrenches as Ty rummaged through the toolbox was deafening.

Hesitant to question the captain, I tried a different tack. "You're the one who always tells me to check the most obvious solution first. So I think we ran out of fuel."

Unable to ignore his own wise teaching, Ty stood up from the engine and huffed his way to the tank. The dipstick came out like a dry twig.

Wise enough to keep any smart comments to myself, I shared in the crew's delight that the problem was easily fixed by switching to the reserve tank. Successfully bleeding the engine restored the captain's status as a master mechanic, and we clearly annotated in the log that fuel consumption was twice what we'd been told.

Engines are the bane of a sailor's existence, but they're not the only thing that can spoil a good day on the water. Just about any piece of equip-

ment on a boat that can break, burn out, clog, or corrode will demand the crew's attention at the most inopportune time — and usually in maddening succession.

To avoid the BOAT (Bring Out Another Thousand) Syndrome that plagues most boatowners, we believe in the KISS (Keep It Simple, Stupid) Principle of troubleshooting. In the case of our engine, this meant sounding the fuel tank before wasting time looking for more complicated causes of malfunction. For electrical appliances, it can be a simple check to see if the item or its power source is turned on.

Imagining the worst

The concept is basic enough but, strangely, many boatowners immediately imagine the worst. Perhaps this derives from the worn magnetic strip on the credit card in their wallet or the yellow receipts from mechanics that fill a file. Whatever the cause, failure to start with the basics can lead to costly and unnecessary visits by expensive repairmen.

A neighbor at our marina recently fell prey to this Imagine-the-Worst Syndrome and tried to drag us into the quagmire with him. In a casual conversation we mentioned that our boat's air conditioner was on the fritz. Seeing an opportunity, John's eyes lit up.

"Mine's been broken for weeks. I'll bet it's the compressor. Why don't we get a mechanic out here, and we can share the cost?"

The thought of needing a new compressor had also occurred to Ty, but being an avid advocate of the KISS Principle, he declined John's offer

until he could troubleshoot the problem himself.

The first thing to check was the power source. The shorepower cord had not come loose. Next we checked the panel down below. All the required switches were energized, but flipping the air conditioning switch caused the ammeter to steadily rise past its normal 5 amps, pegging out at 50, and tripping the breaker.

Troubleshooting is a step-by-step progression from the simplest solution to the more difficult. It requires a process of elimination. Having first determined that power was getting to the air conditioner, we next moved on to the cooling water. I stood on deck, peering over the side at the overboard discharge through-hull while Ty flipped the air-conditioner switch.

Nothing. The ammeter went through its now-familiar pegging routine, but not a drop of cooling water came out. Now we were getting somewhere!

First stop: strainer

Up came the floorboards for access to the maze of hoses and valves. First stop: the saltwater strainer. Ty closed the through-hull, noting a little resistance, then opened the strainer assembly. He removed the wire mesh basket and cleaned out a little gunk and a few barnacle particles. Putting it back in place, we held our breath as he opened the through-hull valve. Since the strainer was below the waterline, seawater should have flowed through, but there was none. The circulating pump appeared to be working, so it didn't take Sherlock Holmes to figure out there was blockage somewhere leading up to the strainer.

Joe the Mechanic might rush to grab a screwdriver, but the KISS Principle says "not so fast." Moving from simplest to most difficult, Ty went topside. With the possibility that a plastic bag or other piece of garbage might have gotten sucked against the hull, he used the boathook to sweep under the hull. Inside, I turned the valve. No flow. Now it was time for tools.

Taking a straight screwdriver to the clamps, off came the 3/4-inch hose between the valve and the strainer. A red liquid trickled out.

"Just about any piece of equipment on a boat that can break, burn out, clog, or corrode will demand the crew's attention at the most inopportune time ..."

We looked at each other, puzzled. It looked like hydraulic fluid, but that made no sense at all. Shrugging that mystery aside, Ty peered through the 2-foot length of hose. It was clear. We had narrowed down the location of the blockage to the through-hull itself.

It's always a little disconcerting looking at a valve that is the only thing standing between you and water up to your armpits, but with the handle in the closed position, Ty carefully unscrewed the elbow connector on top. I shined the flashlight onto his work area, and the two of us leaned in for a closer look. Off came the connector, and the cause of the blockage was revealed.

Unexpected stench

The shock of the unexpected and a stomach-turning stench sent both of us tumbling backward in a scene straight out of Laurel and Hardy. Two pairs of wide eyes gaped with revulsion into the single beady eye of a slimy, dead eel that had managed to swim a full four inches past the through-hull before becoming irrevocably stuck. The puzzle of the lack of cooling water was solved, as was the mysterious red liquid and the resistance Ty had felt when he initially closed and re-opened the valve.



Our slimy intruder had done as good a job as the emergency wood plug lying in the bilge next to the through-hull.

Using a paper towel, Ty pulled out the offending eel. Unfortunately, what remained of the carcass continued to block the through-hull. We shoved a second paper towel down and out through the hole in the hull with a long screwdriver. We now had water — lots of it — gushing through the inlet. A quick turn of the valve and all was well. High fives were the order of the day, as we congratulated ourselves on successfully solving the problem at no expense and with no outside help.

Self-sufficiency is a laudable goal for any sailor, but it's a necessity for those who plan to go cruising. Murphy loves to visit remote and exotic locales, and equipment won't wait until landfall to fall apart.

Get owners' manuals

Common sense can solve many a malfunction, but owners' manuals are the next best things. At the back of most instruction books are troubleshooting guides to walk owners through most common problems. A good onboard reference library is also essential for dealing with breakdowns. Two indispensable books for every sailboat are Nigel Calder's *Boatowner's Mechanical and Electrical Manual* and *Marine Diesel Engines: Maintenance, Troubleshooting, and Repair*. Both contain explanations simple enough for laymen to understand, with excellent troubleshooting sections.

Malfunctions that appear to be major often turn out to be easy fixes. Before abandoning ship in search of professional help, start with the basics and work your way through all possible causes. If the problem proves to be beyond your capabilities, then it's time to call in reinforcements.

I've always thought the "Stupid" part of "Keep It Simple, Stupid" is rather crass. But stupid would have quite accurately described our feelings had we paid a mechanic to tell us our fuel tank was empty or there was a dead eel in our through-hull. Smart boatowners start with the easy answers.

Keep it simple, skipper!

A roar, a wall of water — and nothing!

*What was it that struck
in the dead calm of the night?*

by Scott Thurston

WE WERE ABOUT 500 MILES SOUTH and a little west of Bermuda, midway on a delivery trip from the United States to the Virgin Islands, smack dab in the middle of the doldrums. To say that it had been a slow sailing day was an understatement — we were dead in the water.

The complete lack of wind, coupled with a broken alternator belt and its missing replacement, meant that we were engaged in a drifting race with the sargassum weed and losing badly. The vane on the Aries self-steering gear had taken on a bewildered “search me?” air as it lay slumped to port, as if to say that it had no idea of what had become of the wind that had blown so steadily since leaving the

North Carolina coast.

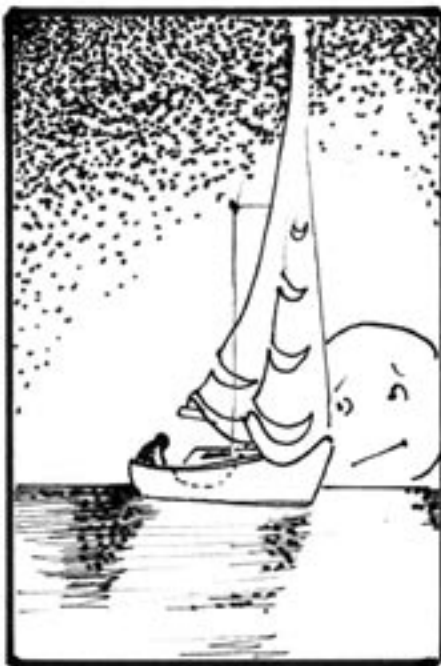
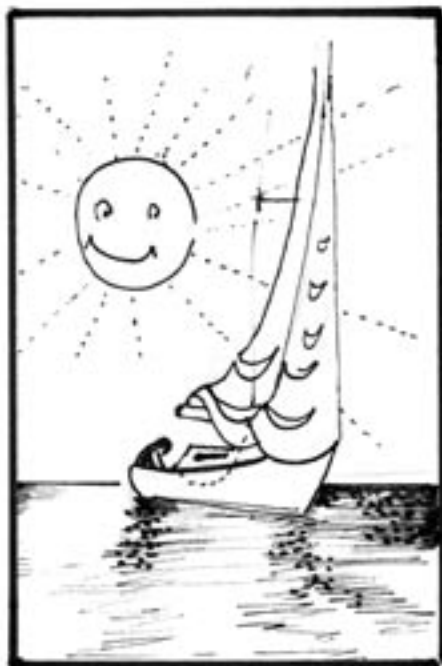
The main and the big genny were up, trying heroically to capture any passing zephyr, but the folds were deep and long in the Dacron as they hung straight down, unable to get up the energy to support even themselves. The only positive thing was that the sea was inordinately quiet, without even enough motion to drive that annoying “whump!” of sailcloth battling to balance ballast. The sea was still, the earth was flat, and we were the only thing in sight.

Earlier in the day, Dennis had taken a sun sight and, as Barry and I gathered in the cockpit for sundown socials, he started to fiddle with Venus. The sunset was incredible, with the

puffy tropical clouds glowing rosily in the dying rays of the day. With the sea so still and the light just right, the horizon was extremely well defined, and Den was exulting in his ability to kiss the stars with his sextant. As Barry and I sipped soft drinks and worked our way through a can of peanuts, he danced around the cockpit, shooting the stars as they appeared, peering down from the warm blanket of darkness that quickly enveloped us. Below, the stereo softly sang.

Five-minute sinking

A can of nuts has a habit of evaporating once the lid has been removed, and Barry and I performed an experiment. As the last limb of the sun



Dave Chase

slipped behind the world, we dropped the empty can overboard, and with Dennis' stopwatch, timed how long we were able to see it. For well over five minutes we watched each flip as it sank below us, sending back just a little less light through the crystalline pelagic water. It had a motion similar to a fishing lure; I kept waiting for the ghostly silhouette of a shark to interrupt the progress of science. *Laissez-Faire* was so still, we were able to monitor our research from our seats in the cockpit.

After a while, Barry went forward to adjust something on the foredeck, while I stayed in the cockpit "on watch," and Dennis finished up his sight reductions down below. A few minutes later he came on deck with the announcement that we had just set a new record for the trip: nearly seven miles sailed in just over eight hours. Shortly thereafter, I left the two of them in the cockpit, prognosticating over the duration of the trip at that speed and went below to sleep a bit before my midnight-to-four watch.

When I returned a few minutes before midnight, Barry was snoring away below, and Dennis' boredom had become an entity unto itself. Nothing had changed except that we were pointing northeastward, toward home, with the rudder hard over to starboard, and the Aries vane still perpetually slumped to port. As I climbed up the ladder, Dennis quoted, "Sighted nothing, reporting same!" I told him he'd been working on that one for far too long. "If that's the way you're going to behave," I said, "we'll turn this boat around right now and go home!" His haste in leaving the cockpit should have prepared me for what was to come.

Dragging hours

The first hour wasn't too bad, except it seemed to be three. I may have been responsible for its passing, mentally forcing the hands of my Timex around the dial. It's surprising how a little forward motion seems to carry your thought processes along with it, how the thoughts and ideas slip by like bubbles in the wake of the boat's passing. Even a *little* motion gives you a goal to chase as you try to tweak that

*"Being becalmed
is like being a kid
again, banished to
a corner where you
know the whole world
is still going on
around you, and you
can't be a part of it."*

last little bit of speed out of the sails, by hand steering or trimming the sheets. Being becalmed is like being a kid again, banished to a corner where you know the whole world is still going on around you, and you can't be a part of it. It's one of those instances where time takes on a dimension even Einstein couldn't fathom.

The problem was that I had nothing to do. I had prowled the boat three times in the first hour. Nothing was out of place or needed attending to. Dennis had seen to that. I couldn't read, as the moon hadn't risen yet, and the stars were obscured just enough not to cast enough light. With the alternator belt broken, we weren't running the lights to conserve the batteries. We felt safe enough. We hadn't seen a ship for days and were off the beaten path, so we weren't particularly concerned about being seen until we could see something. The idea of colliding with something was definitely not a concern at the rate we were not moving. At that point, I think I would have almost welcomed one of those semi-submerged containers you keep reading about — I would have taken the opportunity to moor *Laissez* alongside and gone for a walk.

Temptation wins

The idea first crept into my mind sometime early in the first hour, but I quickly put it right out again, or tried to. Like temptations and character flaws, bad ideas creep silently into the front stage of your mind, where they begin to speak softly and eloquently, try as you might to drag them back to the wings. Man is ultimately a weak animal, and force of will isn't as well implanted into the genetic code as, say, the desire to breathe. Confront me long enough with the last cookie or

one more beer and, like most people, I'll eventually succumb.

Aboard *Laissez*, down in the galley, we had a neat little timer. It was small and had a pleasant little tone to let you know when the time was up. It could time things from a minute to a day. Its cheery face and big numbers were easy to set, easy to read, and easy to fit into the palm of my hand. It was also easy to reach from the cockpit.

I also knew, from previous experience, that the designers at Camper & Nicholson's had built *Laissez'* bridge deck with me in mind. It was just the right length and just the right width. With the dodger up, I could be as comfortable stretched out there as I would be in my own bunk.

I struggled valiantly, but in the end the gremlins of temptation were too much for me. Reaching below, I found that cute little clock. With the battle of wills over, I took a last long look at the boat, a long look at the horizon, and then looked again. Finally, I stretched out on the deck, propped my head on the coaming, and set the alarm for 15 minutes. Aries, keeping his thoughts about the matter to himself, looked on with his permanent shrug.

Really just resting

My inner voice wasn't at all convinced that this was the right thing to be doing, that I could just as adequately protect myself and those below, innocent in their slumber, in a horizontal position as in a vertical one. I answered the little voice that I wasn't sleeping, I was just "resting." After all, hadn't I opened my eyes at least 10 times before the alarm sounded? And hadn't I thoroughly checked things out, both *before* and *after* the alarm rang? At the end of the first interval, the only thing that had changed was that the earth was a quarter of an hour closer to sunrise.

At the end of six cycles, my outer voice was spinning smug little "I told you so" circles around my inner voice, which was grumpily reminding me that it's just inherently *wrong* to be sleeping on watch, when there was a roar louder than words, louder than any freight train caught in an earthquake, shaking the whole boat!

I leapt to my feet and was met by a wall of water, coming over the starboard rail! Instantly drenched, instantly awake, I looked a hundred directions at once for the approach of the end of the world.

It never came. There was no ship looming clifflike, about to smash *Laissez* into a billion pieces, death churning at its bow. There was no squall line, a mass of clouds blacker than the inside of a witch's heart, swallowing the horizon. There was no giant squid, tentacles twining about the rigging like some denizen of a Jules Verne fantasy. There was nothing. Nothing but *Laissez-Faire*, quiet on an empty sea, and me, standing in utter disbelief, unequivocally dripping in a puddle in the middle of the cockpit, with a pulse rate racing into triple digits.

Hiding the mystery

One of the marvelous things about the sea is that she can hide her mysteries instantly, and she hides them so well, giving them up only to the greatest of efforts on the part of the discoverer, and only then if she wills it. Standing there, soaked to the skin, starting to shiver from more than just cold, my numbed senses were useless to explain my condition — all clues had disappeared in the instant before my


*“Instantly drenched,
instantly awake,
I looked a hundred
directions at once for
the approach of the
end of the world.”*

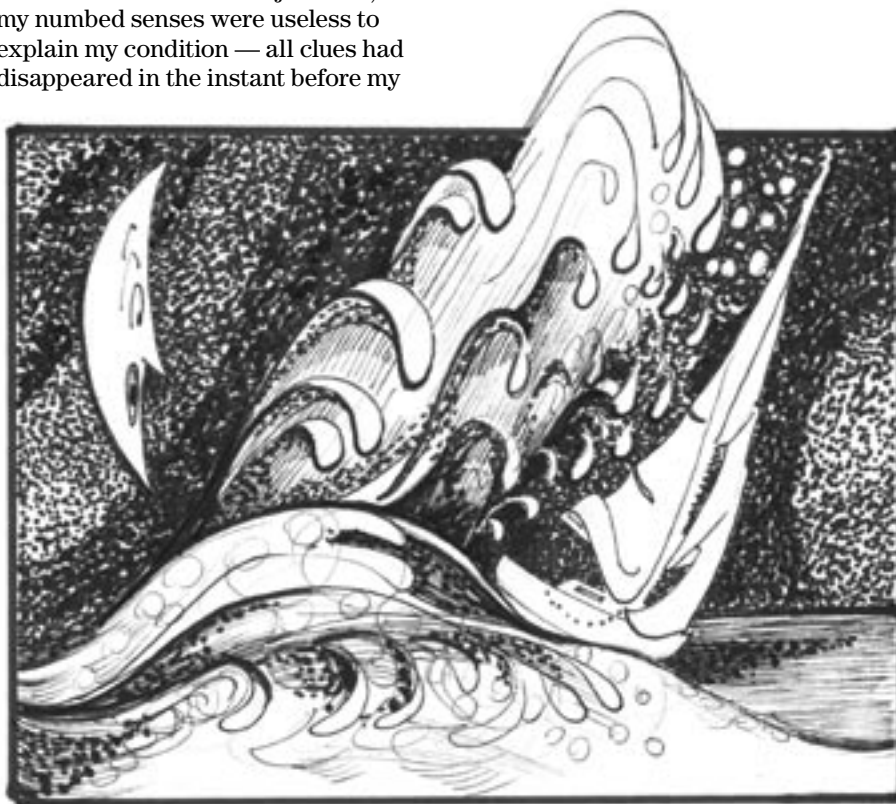
eyes opened. I could see no excited tracings of plankton in the water, hear no sound of blowing or splashing that might indicate the passing of a whale. Neither Barry or Dennis were standing there, bucket in hand, grinning and saying, “There, now, let that be a lesson to you.” Despite our location, I didn’t have even the dubious pleasure of the company of a little green man standing behind the wheel, promising fame and fortune in the supermarket tabloids. What I did have was a set of wet clothes and a serious case of confusion.

Decidedly awake now, with my heartbeat returning to near normal levels, I eventually slipped into the cabin for dry clothes and a warm Pepsi to settle my nerves. I *literally* slipped

below, sliding in a puddle at the foot of the ladder. With fresh shorts and a towel through my hair, I climbed back on deck and sat out the rest of my watch and part of Barry’s, scanning the water around the boat for help in easing my confusion. Hours later, with the late rising of the moon and the first rays of the dawn, the wind finally started to fill in, and soon we were footing our way slowly south again.

Ever since, I have found myself searching the surface of the sea, seeking insight into what awakened me that night. Part of me, the logical left-brain side, knows what it must have been, knows all the standard answers. But my inner voice keeps asking, “What was it? What was it, *really*?” Since then, I’ve never been tempted to sleep on watch, and to the end of my days, I’ll wonder what I might have seen had I stayed awake one night in the middle of a quiet sea.

Even today, years and other ocean passages later, there is still a mysterious, magical quality about sailing at night that intrigues me. When sailing with friends, I usually tell a sea story, softly, after the sun has gone down and there is that luminous quality to the sky, when the pen-and-ink water is reflecting its mysteries back to the Technicolor of the sky. 



Dave Chase

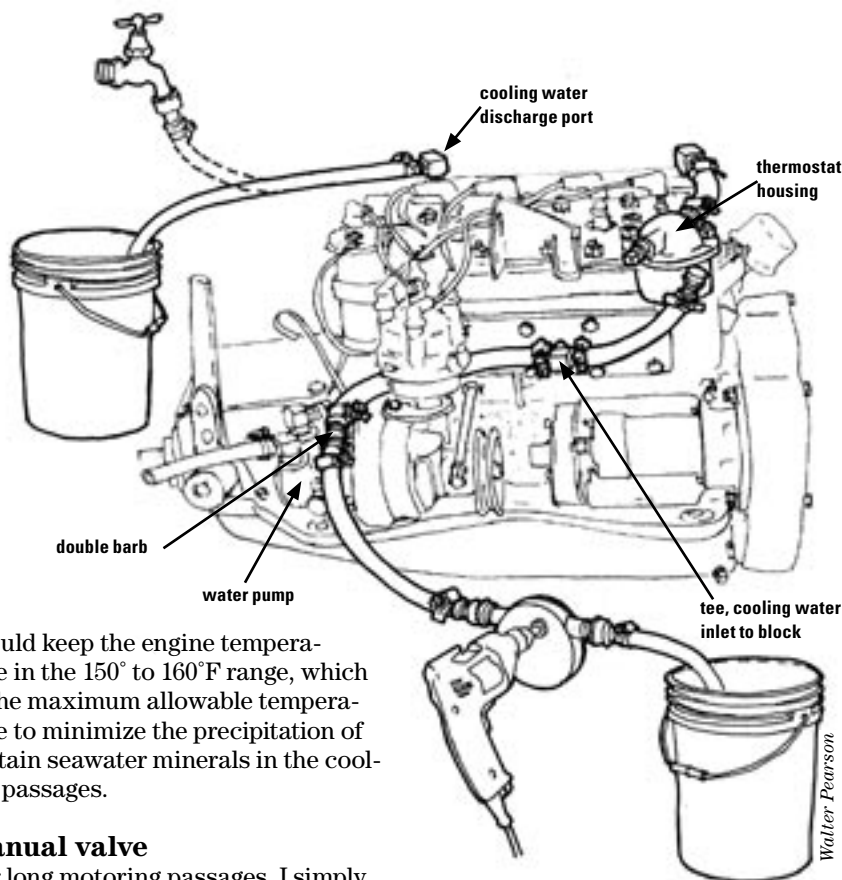
Cleaning out an Atomic 4

Acid can cure those temperature-rise blues

by Hugh Straub

I GUESS I'M NOT MUCH OF A SAILOR. AFTER racing in doldrums for a large part of my life, I find irresistible joy in turning to my reliable Atomic 4 whenever my GPS reads less than 4 knots. A friend gave me a drifter for my Easterly 30, but I gave it to someone very much more committed to wind power than I. So you will appreciate my consternation as I watched, over a period of months, the normal operating temperature of my ancient, raw-water-cooled auxiliary climb from the optimum 150° to 165°F. Some might say the temperature increase is normal, considering Lake Ponchartrain water temperature ranges from below 50°F in winter to more than 90°F in late summer. And they have a point.

My Atomic 4 has a manual thermostat. I removed the spring-loaded automatic thermostat that never seemed able to cope with our lake's temperature fluctuations, and I installed a simple manual valve in its place. The thermostat (whether automatic or manual) works by opening a cooling-water bypass line. When the engine is cold, the bypass is open and cooling water bypasses the engine block and head. As the engine warms, the thermostat gradually closes the bypass line, forcing cooling water through the block and head. The 140°F thermostat recommended for raw-water operation starts opening at its rated temperature and generally



should keep the engine temperature in the 150° to 160°F range, which is the maximum allowable temperature to minimize the precipitation of certain seawater minerals in the cooling passages.

Manual valve

For long motoring passages, I simply adjust the manual valve in the bypass line to get precisely the needed cooling to maintain the preferred temperature. (The acknowledged Atomic 4 guru, Don Moyer, recommends against removing the automatic thermostat even if a manual valve is installed in the bypass line. I've not followed his

advice on this point and to date am pleased with my arrangement.)

But, lately, instead of my usual

precise temperature control, the engine temperature had been rising, and I guessed it was time to clean the engine-cooling passages. I needed to clear away the accumulated rust scale, mineral deposits, and assorted crud that was insulating my engine from the meager cooling capability our hot lake water otherwise provides. Here's how to do it.

The plan is to introduce fresh water mixed with muriatic (hydrochloric) acid into the inlet side of the engine and remove the water/acid/crud-laden mix from the cooling-water discharge at the engine-exhaust manifold.

Close the cooling-water through-hull valve. Locate the water pump. See the hose leading from the pump to the


"I needed to clear away the accumulated rust scale, mineral deposits, and assorted crud that was insulating my engine . . ."

Before you start ...

by Jerry Powlas

THE PROCEDURES OUTLINED IN THE accompanying article are for flushing raw-water-cooled Atomic 4 engines. They are not for cleaning cooling systems with heat exchangers, and they may or may not be appropriate for cleaning other makes of raw-water-cooled engines. The problems are in compatibilities. The cleaners must be compatible with the metals and gasket materials in the engine. The reader is encouraged to research this matter further as it pertains to other raw-water-cooled engines. Engines with any aluminum parts should be treated with particular care in this regard.

Do not clean a raw-water-cooled engine and then immediately fill it with antifreeze to winterize it. This leaves the potential for residual acid to be mixed with the antifreeze. Clean the engine and then use it for several hours before winter layup, if it may involve storing it with antifreeze in the cooling passages.

There are commercial engine-cooling passage cleaners that might be used as an alternative to muriatic acid. Contact your engine manufacturer before using muriatic acid or any of these in your engine. A good way to finish up an acid flush is to neutralize the residual acid with an alkaline solution of 2 ounces of sodium carbonate mixed in 2½ gallons of water. Then follow with lots of fresh water. You absolutely must get all the acid and alkaline materials out of the engine with the final flush. This is particularly true if you are trying to clean out the antifreeze side of a block or heat-exchanger circuit. Nigel Calder cites a situation in his book, *Marine Diesel Engines*, in which antifreeze was added back before the cleaner was completely flushed clear, and the chemical reaction of the antifreeze and cleaner made a goop that nobody knew how to remove. In this area, only do things that you know will work. 

engine block? Disconnect the hose from the discharge side of the pump and carefully measure the hose diameter.

Now go to the point where the cooling water comes out of the engine. On the Atomic 4, the cooling water exit is at the left rear of the engine at the back of the exhaust manifold. Disconnect that hose and carefully measure its diameter as well.

Think about it

Now before going to the store, think about what's needed. Every hose connection will need a hose clamp

*"I find irresistible joy
in turning to my
reliable Atomic 4
whenever my GPS
reads less than
4 knots."*

tell you how long your hoses need to be. Remember you need a hose clamp for every connection.

What's the best way to power the solution through the engine? A cheap way is to buy a Jabsco rotary pump that chucks in to your hand-held drill like a drill bit. Marine chandleries sell them for about \$15. But don't hang around too long at the marine store or you'll buy expensive stuff you don't really need. Instead, off to a hardware store for the rest of this project.

For very few bucks, the local hardware store will sell you two 5-gallon plastic buckets, a gallon of muriatic



because this cleaning is going to be done under pressure. A double-headed hose barb will be needed to connect the hose carrying the acid solution to the cooling water hose you disconnected from the water pump. A hose of the right diameter and length will be needed to connect to the cooling-water discharge port at the rear of the exhaust manifold. Think about where you'll put the 5-gallon bucket holding the acid solution. Think about where you'll place the 5-gallon bucket receiving the acid and goop coming out of the engine. Those thoughts will

acid (30-percent solution), and hose clamps (at least two clamps for the two-headed barb, two for the drill-pump intake and discharge barbs, and one for the discharge-line connection to the engine). Get hoses of the right diameter for the connections and of the right length to easily reach your buckets.

While at the hardware store, get a female garden-hose connector that fits the acid/crud discharge hose. Also, pick up the right-sized two-headed barb to fit the hose on the engine's cooling-water inlet side.

Clear it away

When you get back aboard, carefully clear away anything that might be damaged by an acid-solution spill. Clear your cushions and other stuff well away because this job can be a mess. Put the female garden-hose connector on the discharge hose and clamp the other end of the discharge hose to the cooling-water discharge stub by the exhaust manifold. Install and clamp one end of the double barb into the engine-water inlet hose. Connect one end of the hose from the drill pump to the double barb and clamp that connection. Finally, clamp the hose connections on the inlet and discharge sides of the drill pump.

When you're done clamping, you should have hoses leading from the bucket that will contain the clean acid solution to the drill pump to the cooling-water inlet. The other hose runs from the cooling-water discharge to the waste bucket. Charge your dock hose with fresh water and keep that water source running and ready just in case you have an acid spill.

In order to have the acid solution pass through the engine block and head, you must plug the rubber bypass line leading to the thermostat housing on the forward, right side of the engine. You must also open the thermostat housing cover and take out the thermostat so that all the engine passages will be open to the acid solution (see illustration at right). Re-secure the thermostat housing cover before you start pumping the acid.

Mix the acid

After all connections are clamped, you are

The Jabsco rotary pump, facing page, turns your power drill into a pumping device. Thermostat housing cover has been opened and thermostat has been removed, at right above. Note the manual valve on the Atomic 4 at right.

"But, lately ... the engine temperature had been rising, and I guessed it was time to clean the engine-cooling passages."


ready to mix the acid solution. Put on your safety glasses and fill one bucket with about 5 gallons of fresh water. Slowly and carefully pour $\frac{1}{3}$ gallon of muriatic acid into the water. This is the proportion recommended by Don Moyer. (**Caution:** the chemistry prof. says always pour acid into water

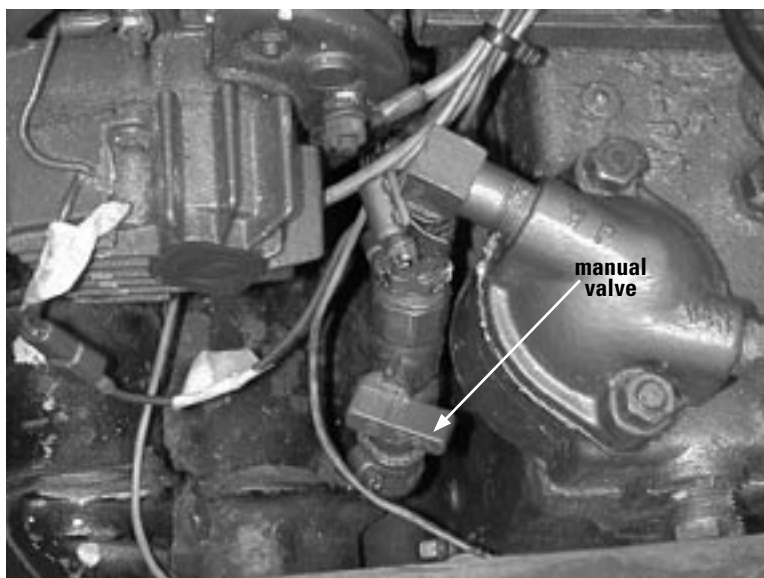
— never, never pour water into acid. When you pour water into concentrated acid, it can "explode" and get the acid all over you. —Ed.) Start your drill pump and let the acid solution pass through the engine block until the clean acid bucket is about empty. Then stop and wait 15 minutes as the acid solution in the engine block dissolves the rust and mineral deposits.

You can use this interim period to remove the dirty acid that has passed from the engine to your discharge bucket. Rinse both buckets, filling one with clean fresh water. Before you dispose of the dirty diluted acid/water mixture, be a good guy and mix it with common household baking soda at the rate of $\frac{1}{2}$ pound of baking soda to 5 gallons of water. It is going to foam when you do that, so put it in a little at a time and don't put your face or other skin parts over the liquid while you are neutralizing the dirty acid.

After 15 minutes, flush the block with fresh water using the drill pump, with the acid and crud passing from the block to the empty discharge bucket. Empty the dirty bucket and refill the clean bucket again with fresh water and repeat the freshwater flush.

Now hook up your dock hose to the female garden-hose fitting on the discharge hose and disconnect the drill pump from the inlet line. Back-flush the engine with fresh water moving backward through the engine under hose pressure as even more crud is discharged from the inlet hose to the buckets.

After removing about 20 gallons of back-flushed fresh water and crud, disconnect your flushing hoses and reconnect the usual engine-cooling water hoses. Start your engine and see if you didn't knock about 25°F off your engine's operating temperature. If you've a manual thermostat, just dial in whatever operating temperature you like. 



Yes, you can can!

Here's how to preserve your own meats and fish



by Janet Groene

CENTURIES AGO, SCIENTISTS DISCOVERED that sterilized foods in a sterile vacuum-sealed container do not spoil. Since then, frozen, freeze-dried, and irradiated foods have come into the marketplace, but it's still hard to beat the simplicity, low cost, safety, and reliability of canned foods for cruising — the canning process creates its own vacuum. Home-canned meats have always been on our provisioning list, yet I continue to meet people who are amazed that beef, poultry, pork, lamb, and even organ meats can be canned for the

long haul. Yes, meats can be canned much like tomatoes or peaches (with some caveats) and, no, you don't need salt, pickling spices, or saltpeter.

In fact, that's the beauty of it. I fill jars with nothing but meat — no fat, skin, gristle, bones, salt, or chemicals and none of the heaven-knows-what else that is found in commercially canned meat products. Later, I can add herbs, sauces, gravies, and vegetables to create whatever dish suits a chef's whim.

Best of all, canning jars are reusable. We've arrived back from a cruise with a supply of mahimahi canned in the same jars that were filled with meat when we left months before. In 10 years of full-time, liveaboard cruising, I never had a glass jar break or a jar of meat go bad.

To can your own meats, you need a large pressure cooker or pressure canner. As a liveaboard without enough space to carry a canner, I used the same, four-quart pressure cooker that was also my galley saucepan, stovetop oven, stewpot, and rice cooker. It

holds four pint jars, or the equivalent of four pounds of meat at a time. If you have a home base with plenty of space, invest in a 22-quart canner large enough to can large

batches of quart, pint, or half-pint jars. Forget the water-bath canning kettles (1) that grandmother used unless you'll be canning tomatoes or making jelly and pickles. Water-bath canning is no longer considered safe for canning meat and fish.

No substitutes

You'll also need a supply of canning jars (2) and two-part lids (3). No substitutes. Ordinary jars can break from the high temperatures involved; new lids are essential to getting a good seal. You also need a tool called a jar lifter (4) because it's difficult and dangerous to handle hot, wet jars with oven mitts. I also have a wide-mouth canning funnel (5) for easier, cleaner filling and tongs (6) for handling hot, sterilized lids.

Buy boneless, skinless, well-trimmed meats, such as chicken or turkey breast or thighs, rump roast, lean ground meats, stew beef or lamb, and pork chunks. If you like them, liver and heart meats can also be canned. So can venison, elk, or moose from the hunt, as well as fish and other fruits of the sea. Don't can corned beef or ham. These are available from commercial canners. And steer away from expensive cuts of meat, which will



Kuhn-Rikon

A good can opener is essential to the galley cook. One type leaves a smooth edge on the lid; conventional openers leave a smooth edge on the can.

be reduced to mush in the canning process.

Yes, you can buy cheaper cuts and whole chickens, but you'll end up spending a lot of stove fuel and time to stew, de-bone, de-fat, and otherwise strip out the pure meat for canning. In this case, it pays to buy cuts that are cheap (because they are tenderized in the long canning process) but also lean and boneless. I recommend against canning whole chickens, bone-in chicken breasts, or drumsticks because tiny bones are almost impos-

sible to fish out after the chicken is canned, and they pose a choking hazard. (Small fish bones, by contrast, dissolve in the canning process.)

Now it's a simple matter of stuffing raw meat into hot jars that have been washed, then heated in the oven for 30 minutes at 250°F. Neither salt nor water has to be added, although you could add salt and a little water or broth if you like. Don't add herbs; it's better to add them to the final dish. Leave an inch of "head" space for expansion, top with a flat lid that has a rubber seal, then screw on the ring. (The flat lids and rings should also be sterilized by boiling 10 minutes; leave them in the hot water until used).

Bring to boil

Place the filled jars on a rack in a pressure canner or cooker with hot water as directed by the canner manufacturer.

Lock on the lid and bring to a full boil, allowing steam to escape for 10 minutes. This assures that no air remains in the cooker. Then put on the gauge or weight, let pressure rise to 10 pounds, and start counting the canning time. For meats, it is 75 minutes for pints and 90 minutes for quarts. Cook fish for 90 minutes for either pints or quarts.

When the time is up, turn off the heat and let the pressure cooker normalize on its own. Then open the lid very

Canning in tin

EVEN LESS FAMILIAR TO AMERICAN KITCHENS THAN CANNING IN JARS IS CANNING IN tin, but it's still possible to buy cans, lids, and can sealers. The process is somewhat different. Meats are put into clean cans, where they are cooked, or "exhausted," before they are sealed with a special tool, then processed in a pressure cooker. The process takes much longer than canning in glass.

On the plus side, cans can be exhausted in the oven, where meat develops more of a roasted flavor. Cans can take more punishment than glass, so they can also be used to seal up non-food items that you want to protect. The downside is that cans and the lid sealer are expensive, and cans can't be reused for canning (although they make good disposable baking tins for bread and small cakes). Empty cans are bulky to buy and store. They rust easily at sea and, unlike jars that have screw-on lids, they can't be used for grains, nuts, and other foods you often need access to, but also want to keep safe from vermin.

Can sealers, cans, and lids are available from Nitro-Pak, <<http://www.nitro-pak.com>> or 800-866-4876. Or check with your county home extension home economist. In some areas, do-it-yourself canneries are also available. Cans and processing are supplied.

carefully to avoid steam burns and, using the jar lifter, place jars on the counter on a folded towel (to avoid shock to the glass jars), assuring good air circulation around them. Tighten the rings if you like, but don't strain yourself. In the old days of zinc lids and rubber rings, more torque was needed; new canning lids don't rely on a powerful grip. Let the jars cool undisturbed.

You'll soon hear the "pop" as the seals seat in. Boiling inside the jars may continue for up to an hour; don't be concerned. Your meat is now in a vacuum and the lower the pressure, the lower the temperature at which water boils. When the jars cool, you'll see a slight cupping in the lid, indicating a vacuum. Sealed jars also sound different when tapped with a fingernail. Try it. You'll soon recognize the difference.

Rings can be removed after the jars cool — lids are held in place by the vacuum — but I leave them in place for added protection against the jostling they receive in the boat.

Your meat supply will now keep

"One of the pluses of having a supply of canned meat on hand is that it's already cooked, so dinner is only a few minutes away."


for a year or more. Label and date the jars and stow them carefully (to avoid breakage) in a cool, dry spot away from engine heat or direct sunlight. Wetting, especially with salt water, should be avoided because corrosion could eat away enough metal to break the seal. If lids swell or fall off, you know gases have formed in the jar and the meat must be discarded.

Boil it again

When jars are opened, you'll hear a reassuring pop. If the meat looks or smells bad, discard it without tasting. If it looks and smells good, it is additional insurance to boil it for 10 minutes. Botulism, which is tasteless,

is extremely rare in properly canned meats but it is killed by heat.

One of the pluses of having a supply of canned meat on hand is that it's already cooked, so dinner is only a few minutes away. If you have fresh foods, just add them to complete the dish. If not, add a can of spaghetti sauce to a jar of ground beef, and you have a meaty "homemade" sauce. Add fresh and canned vegetables plus seasonings to beef cubes, and you have beef ragout. Add canned carrots, a can of potatoes, a jar of gravy, and a jar of boiled onions to lamb chunks, and you have Irish stew. Make soup, lasagna, hot roast-beef sandwiches, chicken and dumplings, and much more. Add eggs, minced onion, and bread crumbs to canned fish and make into patties to fry to a crusty brown.

The possibilities are positively uncanny. 

For liveaboards, the best compromise is a pressure cooker small enough to use as an everyday saucepan but large enough to can four pint jars.



Kuhn-Rikon

Some canny tips


- Unless you have a home garden with a surplus of free food, don't can foods that are available commercially such as fruits, vegetables, pickles, jams, and relishes. Commercial canners whisk foods straight from the harvest to the cannery. It costs less and is more nutritious. Read labels if you're cutting down on sugar and salt or have allergies. Know what you're getting.
- Most canning failures are immediately apparent when the lid doesn't seat-in with a thunk. At this point, the meat must either be reprocessed, eaten right away, or frozen. The chief cause of seal failure is a tiny bit of meat on the jar rim, so don't overfill jars, and be sure to wipe rims clean before adding lids.
- Long-distance cruisers who rely on freezers are in double jeopardy because everything can be lost if the freezer mechanism fails or its energy source (engine, batteries, propane tank) packs up. Carry empty canning jars, lids, and a pressure cooker for backup.
- Pressure canners are often found at yard sales. Stick to familiar brands and styles because gaskets and other spare parts may not be available for orphans. It's a plus if the original book is with the canner. Each model has its own quirks.
- It's safer, more space-efficient, and resulting meals taste better when you can 100-percent meat rather than combinations such as soup or stew. These meats can be combined later with whatever canned, fresh, or frozen ingredients and seasonings you have on hand.
- Don't can processed meats such as hot dogs, bacon, or sausage. The texture will be lost, and spices in the meats can develop an off-flavor.
- Although canned whole chicken is available commercially, it isn't recommended for home canning because of all the small bones, which are hard to remove and can be a choking hazard. Fish bones, by contrast, dissolve in the canning process and add calcium to the finished dish.
- Handle hot jars gingerly, avoiding temperature shocks, because they break more easily when hot. Always use the rack; don't set jars on the floor of the pressure cooker.
- Start saving worn-out crew socks and cut off the ribbed top. It's the perfect size to slip over a canning jar, adding extra cushioning when jars are stowed in the boat.

"Long-distance cruisers who rely on freezers are in double jeopardy because everything can be lost if the freezer mechanism fails or its energy source packs up."



Gordon Groene

Use a jar lifter. It's safer for the jars and for the cook.

- For long-distance cruising, carry an extra supply of lids. Jars can be reused indefinitely, and rings can be used several times before they rust and should be discarded.
- A pint jar holds a pound of meat, which is enough for four servings and even more if you add enough stretchers. A quart jar holds two pounds, or eight servings of four ounces each.
- Canned meat and fish have been cooked for a very long time, so they're ideal for making soup, chowder, stew, sloppy Joes, fish cakes, casseroles, and chicken salad. They are not, however, a substitute for a grilled steak or chop.
- The Internet is a good source of canning advice. See <<http://www.ball.com>>. Reliable help is also available from your county home extension home economist, who will know the best way to can local foods (salmon, trout, bear, pheasant, sunchokes, pecans) that aren't usually found in general canning cookbooks. Get a good, general cookbook, and follow the directions that came with your pressure cooker or pressure canner. 

Forecasting weather

A basic overview just for sailors

*by Gregg Nestor
photographs by Joyce Nestor*

ONE FACTOR DRAMATICALLY AFFECTING the performance, comfort, and safety of a sailboat is weather. Sailors can observe, record, and plot weather. However, unlike most other variables that affect one's sailing, the best one can normally hope for with weather is to attempt to understand it.

In spite of this, even the most casual sailor can recognize common situations heralding weather changes when armed with a knowledge of basic weather phenomena.

Changes in weather, from relaxed, tranquil seas to the most violent storms, are caused by the interaction of different air masses. The leading edge or boundary between two different air masses as they move around the world is called a front.

Fronts, warm and cold

A warm front forms when warm air

gradually rises over colder air and begins to cool. Moisture contained in the warm air begins to condense and results in the formation of clouds (see illustration below).

The first clouds to appear, well ahead of the warm front, are delicate, wispy strands of cirrus. This high-level cloud is normally followed by layers of middle- and lower-level stratiform-type clouds (stratus), which are usually thick and cover a large area. These produce widespread precipitation, which may be accompanied by fairly strong winds. Weather of this type may last 24 hours or more, depending upon the

rate at which the front is moving.

Cold fronts are generally associated with low-pressure systems, and tend to produce more volatile weather than warm fronts. A cold front forms when cold air moves into an area of warm air. The warm-air mass, which is less dense, is forced sharply up and somewhat over the cold-air mass. This action creates instability and very powerful convection (see illustration on facing page).

Very large cumulus clouds and even the "king of clouds," cumulonimbus, may develop, triggering storms along the entire front. Also, an area of low pressure is created, strengthening the localized winds. The rain showers will be heaviest and the winds strongest along the front. As the front passes, additional showers may develop as clouds form in its wake. The showers are generally short-lived, with dry spells between showers usually lasting longer than the showers themselves.

Pressure, low and high

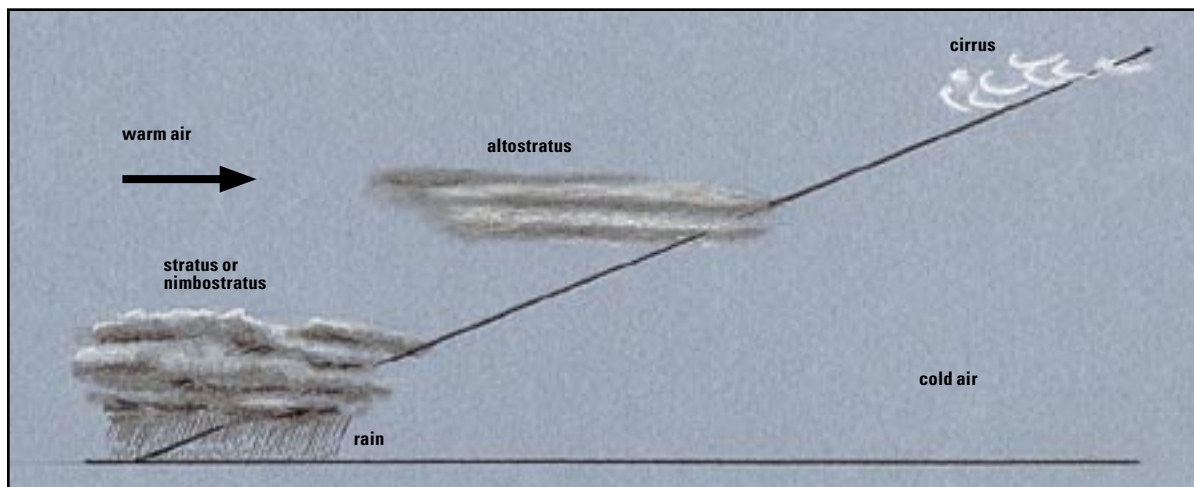
Air is composed of billions of molecules in constant movement and

collision with each other. These molecular collisions are known as air pressure.

When an air mass is warmed, it expands and rises. This expansion reduces the number of molecular collisions, creating an area of low pressure.

Conversely, as air is cooled, it becomes denser, causing the air

"Weather is dynamic and is always changing, much like a 'motion picture' that shows scene after scene after scene."



Walter Pearson

molecules to collide more often. This dense air sinks, resulting in an area of high pressure. Since nature works to restore equilibrium, air moves from high-pressure areas to those of low pressure. This movement is what we know as wind.

As air rises and creates an area of low air pressure, water vapor in the air begins to condense and form clouds. Cooler, sinking air generally means no condensation can take place, and the resultant high-pressure area usually gives rise to clear skies. Fluctuations in air pressure often indicate pending weather changes. For example, rapidly falling air pressure indicates that a low-pressure system is approaching.

While localized high and low pressures can affect weather in a small geographical area, large areas of high or low pressure, called systems, are responsible for more widespread atmospheric changes (that is, brief afternoon showers vs. hurricanes).

A low-pressure system is usually the result of a warm-air mass being forced upward by colder air, such as occurs in the formation of a cold front. Low-pressure systems are usually associated with unstable weather conditions.

More air drawn in

As the warm air rises and pressure falls, more and more air is drawn into the system. This movement of air results in strong winds, which blow counterclockwise around a low in the Northern Hemisphere and the opposite way in the Southern Hemisphere.

In a high-pressure system, cool dense air sinks to the earth, and the resultant winds rotate clockwise around the high in the Northern Hemisphere. Highs are normally associated

“Even the most casual sailor can recognize common situations heralding weather changes...”

with stable conditions and clear skies.

If a high is located to the west of a given position, the winds will be blowing generally from the north or northwest. Conversely, if it's a low to the west, the winds will most likely be coming from the south or southwest. Should a system then track to the north of that same given position, anticipate the wind to shift from a northerly to easterly direction with a high and from a southerly to westerly direction with a low.

Weather-watcher's toolbox

In addition to having a basic understanding of common weather phenomena, a sailor needs a few simple tools with which to measure and record weather observations:

- A barometer, preferably one with an adjustable reference hand, with which to measure air pressure, as well as to determine a stable, rising, or falling trend.
- A thermometer to measure air temperature.
- Something to measure wind direction: a Windex or telltales and a compass, or a proper windvane.
- An anemometer and/or Beaufort scale to measure or estimate wind speed.
- A cloud chart with which to identify weather-heralding clouds (see section beginning on Page 38).

- A ship's log or notebook in which to record weather observations.

With these items, a sailboat becomes a fairly well-equipped weather observation/forecasting center. Remember that one or two or even three consecutive observations do not make for an accurate forecast, however. Individual observations are mere “snapshots” of a greater picture.

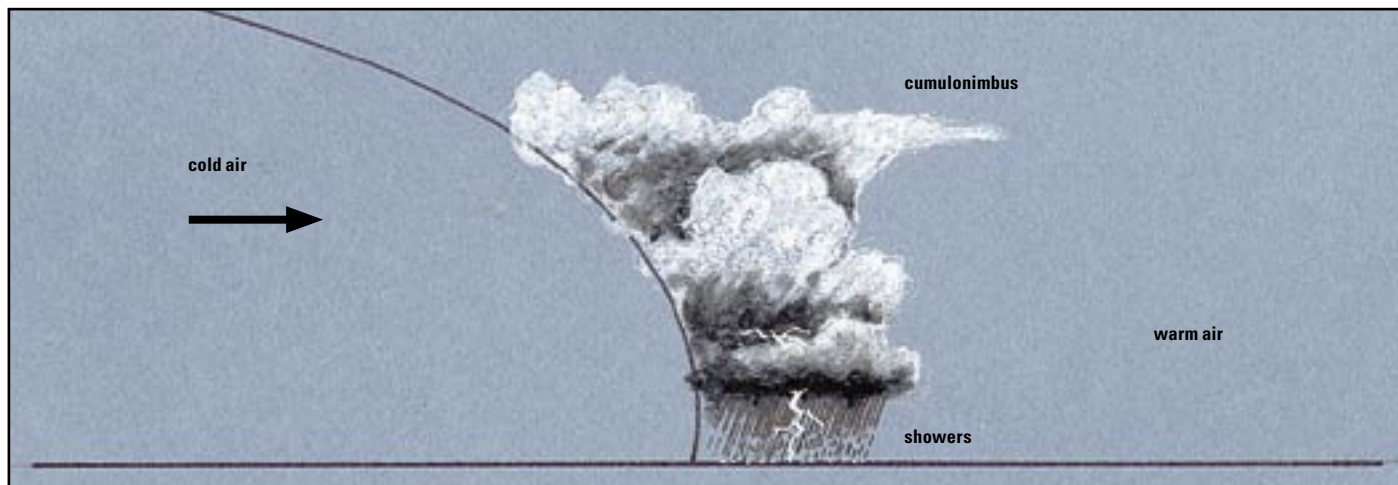
Weather is dynamic and is always changing, much like a “motion picture” that shows scene after scene after scene. As such, an accurate forecast, is based on what has been happening and what is happening, as well as an abundance of “cause and effect” historical data.

One of the most significant and helpful tools in a sailor's weather forecasting arsenal is a cloud-identification chart. This is a high-powered “cause and effect” (or, more correctly, a “cause and *anticipated* effect”) tool.

Formation of clouds

Simply stated, when condensation takes place above the earth's surface, clouds form. Normally, air temperature decreases with increasing height. Therefore, clouds that form at high levels tend to be made of ice crystals, while those forming at the lowest levels normally consist of water droplets. Middle-level clouds may be composed of a mixture of water droplets, ice crystals, and supercooled water droplets. The exact type of cloud depends upon such factors as the amount of moisture in the air, the amount of uplift, and the degree of atmospheric stability.

High-level clouds form above 16,500 feet. They are called cirrus or




have a “cirro-” prefix. Middle clouds occur between 6,500 feet and 16,500 feet and usually carry the “alto-” prefix. Low clouds form below 6,500 feet and have no prefix. They have their own names, such as cumulus and stratus. One exception is cumulonimbus, which inhabits all three levels of the atmosphere. It is included with low-level cumuliform-type clouds because it develops out of such formations. The sky can be embellished with more than 100 cloud combinations, making for endless possibilities and a host of atmospheric events. This vast array of clouds has been distilled here to less than a dozen “predicting clouds.”

“Sometimes the weather suggested by the look of the sky will develop true to form, sometimes not.”

Summing it up

When the sky overhead has a certain look, quite often a sequence of atmospheric events, or “weather,” follows. However, there is nothing certain about it. Sometimes the weather suggested by the look of the sky will develop true to form, sometimes not.

Remember, weather is affected by myriad things including seasonal factors and local topography. If bad weather is anticipated, it's better to assume it will arrive sooner than expected rather than later, especially if you're on the water. 

Cloud chart

(Note: Asterisks following captions indicate ancient weather proverbs.)



Cumulus (humilis). *“Woolly fleeces deck the heavenly way, make sure no rain will mar the day.”**

Cumulus clouds usually appear in the late morning or early afternoon. They develop as the result of weak, localized convection, in which surface air, in contact with the sun-warmed earth, warms up and rises into the atmosphere. In this cool upper environment, the water vapor in the previously warm air condenses, and a cloud is formed. Cumulus clouds resemble small cotton balls, with small rounded tops and flat bases at around 2,000 feet. These clouds are often referred to as “fair-weather



Cumulus (mediocris). Still a fair-weather cloud; this phase of cumulus is often a transition stage between the lesser humilis and the more developed congestus stage.

cumulus” and normally indicate no immediate change in weather. The winds associated with them are usually light to moderate, with daytime readings of 4 to 10 knots and 1 to 6 knots at night. Temperatures will be highest in early afternoon and coolest at dawn. The barometric pressure will normally be steady or may rise slowly.

While this form of cumulus is associated with fair weather, should it continue to build rapidly, you may want to be prepared to reduce sail area.

This advanced form of cumulus (at right) is taller than it is wide. Its development is associated with atmospheric instability, in which the temperature of the surrounding air drops more rapidly. This form of cumulus is capable of generating heavy and prolonged showers. If the winds are blowing between southwest and northwest, precipitation and gusty winds or wind squalls



Cumulus (congestus). *“A round-topped cloud, with flattened base, carries rainfall in its face.”**

without precipitation are likely in 4 to 8 hours. Should the cloud become darker, it may grow into cumulonimbus. Time of day is a deciding factor. If cumulus is the tallest cloud in the sky by late afternoon, it is unlikely that it will progress to cumulonimbus. However, if the color darkens and vertical development increases in the early afternoon, expect squalls within 1 to 3 hours.

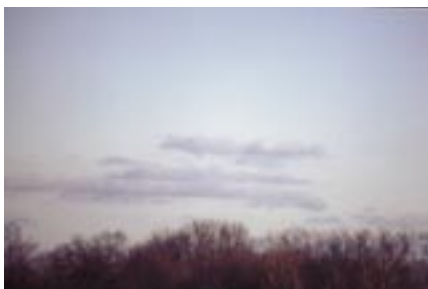
Cumulonimbus is a tall, heavy, and dense cloud. While its base is near 2,000 feet, its top routinely reaches 30,000 feet and, upon occasion, as high as 60,000 feet. It is often referred to as the “king of clouds.” The formation of cumulonimbus can begin early in the morning as simple cumulus. In order for this to occur, powerful convection must combine with atmospheric instability. This combination produces vigorous updrafts that force the cloud up into the highest levels of the troposphere. Distant cumulonimbus clouds often show an anvil-shaped cirroform top.

If cumulonimbus clouds are present, especially if the winds are



Cumulonimbus. “When mountains and cliffs in clouds appear, sudden and violent showers are near.”*

coming from the southwest through north, batten down the hatches, stow loose items, reduce sail, and don foul-weather gear. If close to sheltered waters, head for them. Winds of 18 to 28 knots, with gusts up to 40 to 60 knots, can be anticipated, along with thunder and lightning, heavy showers, and possibly hail. Unlike the long-lasting, widespread rain associated with stratiform-type clouds, these showers will be localized and may last only minutes. A large temperature drop can accompany the storm cell, and visibility may fall to a half a mile or less. A slowly falling pressure, more rapid with worse storms, will also occur.



Stratocumulus formed from the spreading out of cumulus.

Stratocumulus typically forms when stable layers in the atmosphere retard the vertical development of cumuli-form cloud and channel its development horizontally. Thus, stratocumulus and cumulus are frequently seen together in the same sky. Stratocumulus is usually white or somewhat gray and forms in patches, sheets, or layers. It has a ragged appearance along its upper surface, but has well-defined, flattish bases, developing between



Stratocumulus (undulatus) not formed by the spreading out of cumulus.

2,000 feet and 6,500 feet.

These clouds are commonly observed in conjunction with stable high-pressure areas and normally is an indicator of no change in weather type. Winds associated with this low cloud are normally light to moderate, with daytime readings of 4 to 10 knots and 1 to 6 knots at night. Relatively warm temperatures and little change in pressure are usually experienced.

Stratus clouds are generally very low (below 6,500 feet) in the sky. They are usually a gray layer with a fairly uniform base and result in overcast conditions. Stratus clouds often form when a mass of warm, moist air rises over the surface of a warm front. Since these clouds normally cover a wide area, any precipitation tends to be widespread and relatively long-lasting. Stratus that



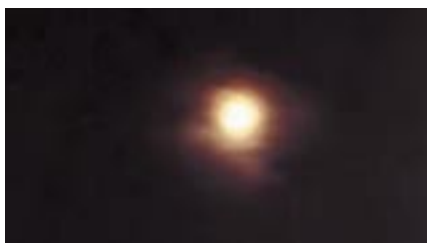
Stratus. “When mist comes from hill, then the weather it doth spill; when mist comes from the sea, then good weather will it be.”*

gives rise to significant precipitation is known as nimbostratus. Winds from the northeast to south may bring heavy rains, while winds from other directions may only bring light drizzle or just an overcast sky. The visibility with low-lying stratus may be ½ to 2 miles, the temperature is normally steady with high humidity, and the pressure is also steady or possibly falling.

Altostratus is a middle-level, featureless cloud, ranging from a thin veil to a dense gray mantle. A middle cloud, its base is at around 6,500 feet. It can be an extensive cloud deck and may extend over hundreds of square miles. Altostratus is formed by the lifting and condensation of a large air mass over the top of a warm front.



At a minimum, it produces an overcast sky. However, if it's sufficiently thick, it becomes the forerunner of nimbostratus, which produces widespread, steady rain, especially if the winds are steady from the northeast through south. This cloud is an indicator of moderate deterioration of weather conditions. At its worst, it can bring winds of 15 to 20 knots, cooler temperatures, and a falling barometer.



Altostratus. When thin, the sun can be seen vaguely; if thick, the sun may be blocked out completely.



Altostratus (floccus) resembles a flock of sheep standing close together in a sky pasture.



Altostratus formations are often more distinct and dramatic at sunrise and sunset.

Altostratus is a middle cloud most commonly occurring in the form of a layer of fairly regularly arranged "cloudlets." It is formed by the lifting of an air mass, followed by condensation combined with instability. Altostratus is normally a sign of fair weather and possibly just an overcast sky. However, if altostratus thickens to more of a washboard appearance, light rain, heralding an approaching front, is likely in 16 to 24 hours. This can be anticipated if the winds are steady from the northeast through south.



Altostratus (undulatus) often results from wind shear and resembles ripples on a pond.

Cirrus. This high-level cloud appears as delicate, wispy strands that often stretch across the sky. Its base is at 16,500 feet and its presence indicates moisture at high levels. Cirrus is the highest of all clouds and is composed of ice crystals.

There's a fine day in store if the winds are from the west through north and the cloud is isolated or very



wispy in appearance. Visibility will be more than 10 miles with light to moderate winds of 5 to 15 knots and a barometer showing little change.

Cirrus clouds typically form on the leading edge of a frontal

system. Precipitation within 24 to 48 hours is likely, especially if the cloud changes to cirrostratus or cirrocumulus or if the winds are from the northeast through south.

Cirrus. "Mare's tails, leave short sails."*
(Forecast: good weather, perhaps the approach of a warm front.)

Cirrostratus is a high, even-layered cloud that can cover a wide area of the sky. It is formed by the saturation of a large air mass at high levels.

A darkening and thickening of the cloud layer may indicate the approach of a frontal system. Expect precipitation in 24 to 48 hours, if the

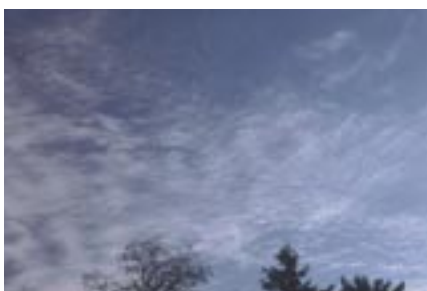


winds are steady from the northeast through south, or sooner, if they're blowing from southeast through east. Watch the rate of barometric pressure fall, as another indicator of how soon to expect the rain. The faster the pressure falls, the sooner you can expect the rain.

Cirrostratus. "If clouds look as if scratched by a hen, get ready to reef your topsails then."*

Cirrocumulus, like cirrostratus, forms because of the saturation of a large air mass at high levels. However, unlike cirrostratus, instability at cloud level gives cirrocumulus its cumuliform appearance. It

can stretch for hundreds of miles across the sky, often appearing as a fine rippled pattern, said to resemble the



Cirrocumulus. "Mackerel sky, mackerel sky, not long wet, not long dry."*

scales of a fish.

As the old mariner's saying goes — "Mackerel sky, mackerel sky, not long wet, not long dry" — cirrocumulus is an indication of an approaching frontal system.

Precipitation is likely in 12 to 18 hours, especially if the winds are from the northeast through south.



"Old" contrails mixed in with cirrus.

Contrails. Aircraft operating at high levels (above 16,500 feet) emit water droplets from their exhausts. Since the air temperature at these levels is normally well below freezing, these water droplets form ice crystals and create an artificial cloud. The term "contrails" is short for condensation trails.

If the surrounding air contains little moisture, the contrails will be short-lived and invisible from earth. How-

ever, if the surrounding air is close to saturation, the contrails will be much more noticeable and can last for 45 minutes or more. These long-lasting contrails indicate an approaching frontal system.



Contrail being formed.

Facelift *for a* Teak Lady



*It was
one of those
endeavors
that go beyond
financial
reckoning*

by Lon Zimmerman

TEAK LADIES ARE HEAVY-DISPLACEMENT cruisers, 17 feet long with a 6-foot beam. This petite cruiser tips the scales at 2 tons. *Esmarelda* is Teak Lady hull #26, commissioned in 1958. She somehow made her way to Seward, Alaska, where Drake Diteman bought her from Cornelia Daley in 1989. Drake restored her until time pressures caused him to sell her. *Esmarelda* was eventually forgotten.

I first noticed this charming little boat in 1998, neglected at her slip. The bronze portholes, brass ventilators, spruce spars, and teak decking all showed that she had been formed by excellent craftsmen. On each occasion that I visited the little boat, I fully expected to see her spar sticking out of the water. Fortunately, that did not happen.

Doug Olson bought *Esmarelda* in the autumn of 2000. He came to Seward from Aspen, Colorado, where

he had spent time designing and building snowboards between bouts of being a ski bum. In Alaska, he began doing finish carpentry with a particular interest in boat joinery work.

*“As he became
immersed in this
project, Doug would
find himself hard at
work until 2 a.m.
some mornings,
unaware of where the
time had gone.”*

His first challenge was to evict a family of river otters that had taken up residence in *Esmarelda*'s cabin. The first encounter ended in a stalemate. The angry otters hissed and advanced on Doug, forcing him to the end of the dock.

Next, Doug arranged for some shop space with Drake Diteman. Drake was astonished to see the little boat show up at his doorstep once again. He would be an invaluable help and source

of advice throughout this project.

The mast was lifted out from the dock gangway while *Esmarelda* floated below. Doug then devised a plywood cradle mounted on 6 x 6 beams that sat on a 20-foot flatbed trailer to move *Esmarelda* to the shop.

Scraping and priming

The task of restoring a very dilapidated Teak Lady to her former state began. Doug spent two days scraping the hull and then primed it for eventual painting with sign paint. Then he stripped all the hardware, coamings, and trim. He removed the canvas covering from the cabinroof. The bronze slotted screws holding the coamings in place resisted impact hammers and all other attempts at removal. He resorted to a Sawzall with a metal blade to slice the screws where the coaming meets the deck.

As he became immersed in this



The Teak Lady, at left, shows the end result of hours of toil.



project, Doug would find himself hard at work until 2 a.m. some mornings, unaware of where the time had gone. He has more than 1,000 hours invested in *Esmarelda*. Drake was beginning to suspect that his friend was obsessed.

Doug removed more than 600 screws from the teak decking and made a Plexiglas template to allow the use of an offset router to rout the gap between the teak planks on deck. This was followed by inserting cotton caulking that was first spun between the fingers and then pulled tight. The cotton was then forced into the gaps with a Plexiglas wheel Doug made for the purpose. The edges of the planks were then cleaned with alcohol-soaked rags to remove the oils in the teak. He used blue tape to protect the teak planks so that TDS (Teak Decking System) could be caulked in.

Around this time, Doug admits, he began to consider selling *Esmarelda*. The project seemed to be taking much longer than expected. Fortunately, no takers could be found.

He used Irish felt on the cabinroof. This was, in turn, covered with 10-pound duck canvas. The canvas was stretched and fastened along the edges with bronze wedge tacks into predrilled holes. The canvas was then primed and painted.

Doug Olson's million-dollar grin includes delight with *Esmarelda* and with his dog, Promise, a black lab mix, at top right.

***Esmarelda*, on facing page, a 17-foot Teak Lady, had a checkered past, until she came into Doug's hands. A lucky lady, she has the snow-capped grandeur of Alaskan mountains, at bottom right, for a view from Resurrection Bay where she sails.**

"...the grin on Doug's face when he brings Esmarelda about on a series of short tacks up the harbor is a million-dollar grin if ever I saw one."

Split in two

The Sitka spruce mast had partially delaminated. Doug wrapped wet rags around the remaining part of the mast until it, too, had delaminated. The mast was hollow and in symmetrical halves. He sanded, cleaned, and dried it. The interior of the mast was sound, with no signs of rot. However, delamination had caused the two half cylinders to be slightly sprung. Doug used


more than 40 clamps on the seam to draw the mast halves back into true. Slow-cure epoxy and lots of blue tape kept them together.

I sold Doug an old Yanmar 8-hp engine. He made a plywood mockup of the engine to help fit it into the tiny hold. He bolted aluminum stock to the Yanmar engine mounts and lowered the engine, with aluminum stock attached, into position. He lag-bolted the aluminum stock to the existing engine bed.

Was it worth it?

A nominal rate of \$20 per hour, Doug's investment of 1,000 hours in this project makes this a \$20,000 boat. Factor in the cost of teak, epoxy, canvas, fasteners, paint, and miscellaneous other parts. It will be hard to recover this in hard cash. But the grin on Doug's face when he brings *Esmarelda* about on a series of short tacks up the harbor is a million-dollar grin if ever I saw one.

Bean counters will no doubt weep with despair, but I believe some endeavors go beyond financial reckoning. The restoration of *Esmarelda* to a state of grace was a defining moment in Doug's life. What price could be placed on that?

The rest of us surely benefit from the opportunity to admire a creature such as *Esmarelda* and to be amazed at the skill and perseverance of a man like Doug Olson. 





Victoria 18

*As pretty a little sloop as ever
graced a Minnesota lake*

by Karen Larson



*Halcyon, a freshly
restored 1982 Victoria 18,
is perfectly at home near
a lakeside retreat.*

WHE FIGURE HAL NEWELL CAN PROBABLY do just about anything, and lately sailboat refits figure prominently in what Hal wants to do. The most recent boat touched by his magic wand is a Victoria 18, and the trend is toward bigger boats. He's looking for something in the 30-foot range.

The Victoria was designed by William and George McVay and manufactured by McVay Yachts in Nova Scotia and Victoria Yachts in Debary, Florida. Approximately 1,000 were built, starting in 1977 and ending

in the early 1980s. Most were sloop-rigged.

The boat at the end of the dock in front of the Newells' Minnesota lakeside log home is a sloop. Her sweeping

lines are Albergesque with a long counter stern, cockpit coaming, and pedestal winches. She has bronze ports and hardware, immaculate brightwork, brand-new sails, and navy blue topsides that can be used as a mirror.

*"Approximately
1,000 were built,
starting in 1977 and
ending in the early
1980s. Most were
sloop-rigged."*

Among other things, Hal and his wife, Jen, collect antiques that contribute to the feel of the log home.

A gleaming Victoria 18 sitting at the dock is just one part of the whole. Even before the visitor takes in this scene, there is one hint of the creativity of this energetic couple.

A brick driveway leads down a hill to their home. Hal and Jen laid the 33,000 (plus a few) bricks one summer a couple of years ago. "Our goal was to make the herringbone brick pattern look like it just 'flowed' into and in between the rocks," Hal says. Indeed, it is perfectly executed.

Early in their marriage, Jen began to understand Hal's interest in renovation when the two bought a Victorian home in need of work. Hal gutted it and started over.

"He likes to tackle a project, and when he does, he does a good job," Jen says. "He's fearless. Nothing fazes him. He can fix anything."

Right beside him

Hal may be the mastermind behind these projects, but from the sounds of things, Jen's been right there beside him whether the job is bricklaying or sanding brightwork. They run a family business together also. In between,

they've also raised two children, Charlie and Lindsay, now 16 and 14.

Both Hal and Jen grew up with powerboats and waterskiing in the foreground and sailboats in the background (a Sailfish or Sunfish here, a Snark there). The sailing bug bit Hal at summer camp when he discovered E-Scows. "They had several big ol' aircraft carriers moored offshore," he recalls. "I soon discovered firsthand that these were a heck of a lot faster than the other camp watercraft offerings (canoes). Speed and danger: just what a young teenager wants. I will always remember hiking out and watching those sideboards slicing through the water!" There was

something else about those E-Scows in comparison with the towboats of Hal's waterskiing days: "They were fast," he says, "and there was no noise to propel them."

Next came marriage, children, and starting a couple of businesses, the first in carpet cleaning and the second an outgrowth of their hobby — racing radio-controlled cars — and eventually supplying products for that specialty niche. Even in the racecar

"As for sailboats, well, I simply like the quiet lapping of water on the hull and the natural beauty of moving via the winds."



Hal and Jen Newell can take pleasure in a job well done, above. Hal turns restoration into an art form, and Jen is assistant No. 1. Brand-new portlights sparkle and brand-new sails dress up *Halcyon* in style, below.

field, Hal came to prominence as the guy who took honors in the *concours d'élégance* arena, which involves making the most beautiful car in the competition. This seems to be the thread that runs through Hal's life.

Sailboats crept in

Eventually sailboats crept into his dreams. He's not sure when or why. "Not to pigeonhole the powerboaters or sailors, but by all rights I should probably be a power guy," he says. "I like red meat with lots of salt (hold the granola), I'd vote for Genghis Khan if he were running, and I'm sure the internal combustion engine will not be humanity's ultimate demise.

"As for sailboats, well," he adds, "I simply like the quiet lapping of water on the hull and the natural beauty of moving via the winds. It's the ultimate for true relaxation. In contrast, my Mercury-powered jet boat has been in the shop more than on the water. That is the quintessential antithesis of relaxation.

"Being a tinkerer and frugal (OK, cheap), I wanted to find a boat that needed some work and would hold its value," Hal says. He consulted with Gordy Bowers, a well-known local sailor and sailmaker. Gordy shot down one "opportunity" after another until a fixer-upper Catalina Capri 14.2 entered the picture. This one seemed right for a couple with young children. Hal naturally turned this boat into a gem and set his sights on the next boat. "As time passed," he says, "I wanted to move up in size. I wanted something with winches! It's been Hal's 'Easy Down Boat Club' ever since."

He prowled the Internet looking for a Cape Dory Typhoon and wound





up buying both a Typhoon and a Victoria 18. That was one boat too many, so the Typhoon was resold soon afterward. The Victoria became the object of his attention. He replaced the taffrail, tiller, boom, and a bent chainplate; did some fiberglass work; redid the sliding hatch; added a wooden toerail and a bowsprit; and added bronze cleats and a flagpole. And there was a new sound system, new standing and running rigging, new sails, and a complete paint job for the topsides and bottom. The topsides were rolled and tipped with two-part urethane. Jen was there throughout the process. They named their “brand-new” 1982 boat *Halcyon*.

Caught his fancy

Since he'd had made so many inquiries on the web, it's no surprise that in the middle of all this work, another boat caught Hal's fancy. This one was a Sparkman & Stephens Pacific Dolphin/Yankee Dolphin, a 24-foot beauty with classic lines that he bought and disassembled, ready to doll it up in teak and bronze. But a cruising class on Lake Superior turned Hal and Jen's attention to somewhat larger boats, and this one will be sold to make way for the ultimate cruiser. Someone else will buy this classic boat, which has been scrubbed and polished and is ready to finish.


“Why sailboats with classic lines?” Hal asks thoughtfully. “Some guys like the more contemporary Ferrari ‘lead wedge’ designs, and others like the more curvaceous classics of old. I can appreciate *other* boats, I just prefer boats that look ‘right’ on the water over the ones that look better suited for the cargo hold of the space shuttle. I also think the classic-lined boats tend to be better-built boats. They're often more seaworthy — boats that would do their best to keep you alive if Mother Nature decided she wanted you. To me, classic-lined boats are

“She has bronze ports and hardware, immaculate brightwork, brand-new sails, and navy blue topsides that can be used as a mirror.”

more romantic and rich with lots of brightwork and bronze. I'll take a green patinated bronze winch over a shiny chrome winch any day. Even though all that wood equates to a higher maintenance factor, modern finishes/

chemistry are decreasing the downtime.

“Classics are oftentimes in need of TLC (which I enjoy obliging),” he says. “That conveniently translates into ‘deals’ to be had, and I love a good deal. Finally, many of the old ‘classic plastics’ are pretty well depreciated. Unlike buying a newer boat that is usually sold for less each time it changes hands, these boats will hold their residual value — some are even appreciating.”

As Hal and Jen discover their once and future cruising boat, it's likely that a veritable procession of lovely restored classics will pass through Hal's large, heated indoor boatshop. The rest of us need only follow a step behind, picking up the finished projects. There will be more stunning beauties of all sizes restored as well as *Halcyon*, the Victoria 18. And as they're completed, the sailing community will be the better for it. 

Photos at left: From the refinished bowsprit to the flag on her stern, *Halcyon* is new or renewed. Little more than the decal in the center photo, proclaiming her to be a Victoria 18, and the deck paint beneath that, is original. Below: When Hal looks back over his shoulder, he has no regrets.



Resources

Victoria 18 websites

<<http://www.victoriayachts.com>>
<<http://home.texoma.net/~jbwrenn/page 2.html>>
<<http://www.geocities.com/Yosemite/Meadows/4900/>>

Four small pots

Comparing the Victoria 18 with three trailersailer cousins

by Ted Brewer

THIS COMPARISON POSED A FEW PROBLEMS for several reasons. First, data on these boats was on the slim side, and no waterline lengths were given in the scanty information accompanying the small drawings of the boats. That was solved, simply by measuring the waterlines on the tiny sketches and proportioning them from the given LOA. First problem solved, close enough for practical purposes.

Then the Victoria's data showed no ballast weight either, and I was unable to find it in any of my other references. Second problem unsolvable, so I'll avoid references to the ballast/displacement ratio. It really is not serious in any case. The heavier Cape Dory Typhoon is the only one of the four with a significant amount of ballast; the prime stability factor in the three lightweights will be the crew weight and position.

The third problem was the question of displacement. On boats of this size, the crew weight is a very large part of the overall displacement. I'm certain the manufacturers kept the reported weights as light as possible to encourage trailersailer buyers so, to even things out, I added 300 pounds — a 170-pound husband and 130-pound wife crew — to the displacement shown for the boats when calculating

the displacement/length ratio and sail area/displacement ratio.

I did not add that crew weight to the capsizing screening factor since, in all probability, the crew would be thrown out of the cockpit in a serious capsize and would have little effect on the unlikely event of the boat's righting itself. In any case, these little yachts should not be in big waters where a capsize from wave action is a possibility.

Some readers will write to say that their favorite small boat has successfully sailed from California to Hawaii or crossed the Atlantic in mid-winter. Indeed, I know of an 18-footer that circumnavigated the globe. But my reply will always be, "Not with me aboard!" I'm far too aware of people who have died, or nearly died, in large, seaworthy yachts to risk my life in a vessel that should not sail out of sight of land.


So, here are the facts, only the facts, ma'am!

It's obvious that the performance champion of the group is the Montgomery 17 with her long waterline, generous sail area, and modest ballast adding to the form stability of her beamy keel/centerboard hull. The Victoria and Com-Pac should be fairly evenly matched on a reach, but the

latter's centerboard would probably give her an edge to windward, and her lower wetted surface would win out in light air.

I do like the Victoria's rig. It is rather old-fashioned with a large main and small jib; she should sail well under main alone. That can ease handling in tight quarters or let her slip through a squall with the main luffing slightly and no need to panic.

The figures leave the Typhoon as the slowest of the bunch due to her heavier displacement, modest sail area, and greater wetted surface. Still, her husky displacement and good ballast ratio will come into play when the wind pipes up, and she might well walk away from the others when the lightweights are making heavy weather of it. In any case, her lovely balanced ends and perky sheer make the Typhoon the beauty queen of the group, at least in my eyes.

Any of these boats would make a decent weekend for a couple, and the lighter three, with their shoal draft and modest weight, are quite suitable for trailering behind a medium-sized car, thus extending their cruising grounds substantially. 

	Victoria 18	Typhoon	Montgomery 17	Com-Pac 16CB
LOA	18 ft. 5 in.	18 ft. 6 in.	17 ft. 0 in.	16 ft. 11 in.
LWL	13 ft. 0 in.	13 ft. 9 in.	15 ft. 10 in.	14 ft. 0 in.
Beam	5 ft. 6 in.	6 ft. 3½ in.	7 ft. 4 in.	6 ft. 0 in.
Draft	2 ft. 0 in.	2 ft. 7½ in.	1 ft. 9 in./ 3 ft. 6 in.	1 ft. 6 in./ 3 ft. 3 in.
Displacement	1,200 lb.	2,000 lb.	1,500 lb.	1,100 lb.
Ballast	n/a	900 lb.	500 lb.	450 lb.
Sail area	134 sq. ft.	160 sq. ft.	200 sq. ft.	130 sq. ft.
Beam/LWL ratio	0.423	0.458	0.463	0.429
Disp./LWL ratio	304.8	395	203	227.8
Bal./Displ. ratio	n/a	0.39	0.28	0.32
SA/Displ. ratio	16.36	14.69	21.63	16.62
Capsizing screening factor	2.07	2.0	2.56	2.33



Victoria 18



Typhoon



Montgomery 17



Com-Pac 16CB

CLASSIC BEAUTY



BY
CARYN
DAVIS



South Coast 22

A good first boat, made for gunkholing

by Gregg Nestor

IN 1965, THE SOUTH COAST SEACRAFT Company, then located in Shreveport, Louisiana, introduced two fin-keeled sailboats, the South Coast 21 and the South Coast 23. Both of these classic design offerings had come from the drawing board of the noted naval architect Carl Alberg. While both boats were well received and moderately successful financially, Hollis Metcalf, the founder of South Coast Seacraft, searched for a way to capitalize on the emerging trailerable “pocket cruiser” market.

With the assistance of James Monroe, who was to later design the South Coast 26, Hollis modified Carl Alberg’s South Coast 21. They lengthened the cabin area, installed a larger doghouse, and replaced the fin keel with a swing keel. The result was the South Coast 22, by far the most successful of the South Coast line of sailboats.



One of the best buys of the time, the South Coast 22 shows an unmistakable Alberg influence. Kits or factory-finished versions were available. Wayne and Diane Martling’s 1977 South Coast 22, *Family Fun*, above.

At one time, there was an active one-design racing fleet, with annual regattas held in Shreveport, Louisiana.

For several years running, Lake Michigan was home to the South Coast 22 nationals, which were sponsored by the then very active Chicago South Coast Club. In addition to being offered as a completed boat, the South Coast 22 was also marketed in kit form, at a substantial saving, to the do-it-yourselfer.

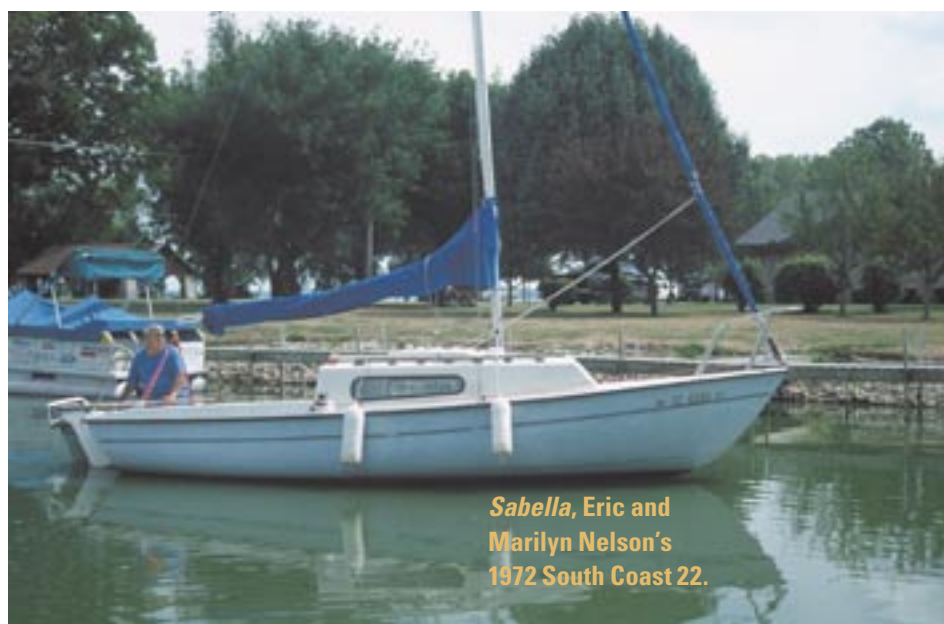
While Hollis was working on the design of the South Coast 25, his son, Warren, died as a result of a diving accident. Unable to maintain the company within the family, Hollis sold South Coast Seacraft in 1975.

Under the new ownership, South Coast Seacraft continued producing sailboats ranging in size from 21 to 26 feet. Even with the addition of the Eclipse (an upgrade of the popular South Coast 22) and the Rozinante (a 28-foot double-ended, ketch-rigged daysailer designed by L. Francis Herreshoff), failing finances forced South Coast Seacraft to close its doors in June of 1981. South Coast Seacraft’s legacy includes more than 4,000 sailboats, of which more than 3,000 are South Coast 22s.

At a price below that of many daysailers of smaller size and displaying the classic lines inspired by Carl Alberg, the South Coast 22 was one of the best boating buys of its time. It has an overall length of 22 feet, a waterline length of 17 feet 6 inches, a beam of 7 feet 1 inch and a displacement of 1,800 pounds with 505 pounds of ballast.

Construction

The hull of the South Coast 22 is solid fiberglass laid up by hand, largely of woven roving, and is close to ½-inch thick in some places. The deck is a sandwich comprised of two layers of fiberglass with an end-grain balsa core. While balsa coring significantly increases strength, not to mention affording good temperature and sound insulation, it has the potential downside of soaking up moisture and turning into mush if you don’t take the time to carefully seal the through-holes of deck fittings. The hull-to-deck joint is



Sabella, Eric and Marilyn Nelson’s 1972 South Coast 22.

bonded with adhesive, mechanically fastened with what appears to be pop rivets, and covered with a one-piece vinyl rubrail. All deck hardware is easily accessible, but there doesn't appear to be any reinforcement in the form of backing plates.

The South Coast 22 features a 505-pound swing keel made of cast iron. With the swing keel raised, the boat draws a mere 10 inches of water, compared to 4 feet 9 inches when it's lowered. The raising and lowering of the keel is accomplished by means of a brake winch inside the cabin, just beneath the bridge deck. The winch automatically brakes when the handle is released.

Once the keel has been lowered and the cable slackened, a ½-inch-by-5-inch pin is inserted through the keel trunk, locking the keel in place. With the keel locked down, the boat is said to be self-righting. Unlike many of the boat's contemporaries, whose swing keels form stubby "shoal draft" keels when raised, the South Coast 22's keel is almost fully retracted into the hull of the boat. This enables the craft to venture into thin waters and to be easily beached. However, with the center of gravity raised to such a height, the boat becomes extremely tender.

Marketing strategy

While the South Coast 22 might be considered a typical product of the early days of fiberglass construction, it was marketed atypically. One could buy a factory-assembled boat or a kit version.

For the do-it-yourselfer, there was a substantial (approximately 30 percent) saving in purchasing a South Coast 22 kit. The most difficult parts of building the boat (hull-to-deck joint, rudder and keel mounting, bulkhead and hull

"For the do-it-yourselfer, there was a substantial (approximately 30 percent) saving in purchasing a South Coast 22 kit."

supports) were already completed by the factory. All that was required to finish the job were a few ordinary hand tools, approximately 20 hours of time, and various critical items from the list of optional equipment.

Hundreds of these kit versions were sold. And it is this *à la carte* marketing strategy that can also be seen in what is called the "completed boat," especially in the list of optional equipment, which more correctly should be referred to as an "*à la carte* menu." While such items as bow pulpits, lifelines and stanchions, sail covers, and spinnaker gear are customarily considered optional equipment, South Coast Seacraft also listed as options such critical items as mooring cleats, a hinged mast step, a bow eye, the basic sails, and even the hatches.

To quote a loyal South Coast 22 owner, "The boat was marketed to a price point, and that price point was low."

Overall appearance

When viewing the South Coast 22, one immediately spots the Alberg design influence. This is characterized by the

spoon bow, pleasing sheer, and long, slender hull with slight overhangs. The foredeck is completely free from clutter and is a generous 6 feet long. It provides a more-than-adequate work platform for making sail changes, deploying and retrieving ground tackle, and like tasks. Combine this generous free space with the 14-inch-high sloping front of the somewhat boxy doghouse and you have a great sunbathing deck with a built-in backrest.

The deck and cabintop have molded-in non-skid surfaces. The shrouds are outboard of the 7½-inch sidedecks, and there are teak handrails (optional) along the cabintop. These handrails, along with the companionway hatch slides, are the only teak accents on the boat. The base boat did not come with pulpits or lifelines; however, they were available from the long list of optional equipment.

On top of the cabin, just in front of the mast, is the forward hatch (optional) made of opaque fiberglass. The main companionway also uses a one-piece opaque fiberglass hatchboard. While the companionway bulkhead opening can be considered of average width, the top opening is a generous 38 inches wide. To take advantage of this large opening, a "jumbo hatch" pop-top option was available.

The cockpit is 7 feet long and, with the addition of a canopy or boom tent, can be used to expand the living/sleeping area. There are two cockpit-seat hatches (optional), one to port and another to starboard. Both allow access to the cockpit lockers as well as to the cabin's interior, since they are not partitioned off inside.

The cockpit is self-bailing by means of a drain located at the forward end of the cockpit, just aft of

The cockpits of two South Coast 22s belonging to the Martlings, at left, and the Nelsons, at right. The 7-foot cockpit offers additional living space.



the 8-inch-deep bridge deck. This barrier between the cabin below and a wave-filled cockpit is sound design insurance and a feature often lacking on boats of this size. The cockpit coamings extend smoothly aft, blending nicely into the transom. They are reasonably high and provide good back support.

Mounted on the transom is a fixed spade rudder with an oak tiller. A



The deck-stepped mast is supported by a wooden compression post belowdecks.

kick-up rudder was available as an option. Standard equipment included a fixed, fiberglass outboard-motor mount to port.

Belowdecks

Unlike many production boats of this size, the South Coast 22 did not use a one-piece fiberglass pan for structural integrity or to determine the location of interior joinery. Instead, all bulkheads and hull supports (which form the bases for settees/berths) were individually glassed in place. There is no fabric or vinyl liner to give the interior a "finished" look. Instead, the majority of the interior (headliner, sides, and sole) is painted textured fiberglass.

Forward, underneath the foredeck, is a potentially claustrophobic V-berth measuring 6 feet long. Beneath this V-berth is foam buoyancy. Aft on the port side, just forward of the main bulkhead, is space for a Porta Potti.

"When viewing the South Coast 22, one immediately spots the Alberg design influence."

A curtain covering the remaining bulkhead opening gives the V-berth and Porta Potti some privacy. The corresponding starboard area is either a continuation of the starboard settee/berth space or a combination of optional galley (forward) and settee/quarter berth (aft). The optional galley is a self-contained, polyethylene, molded unit that consists of a sink, hand pump, countertop, and a 12-gallon potable water tank.

Aft on the port side is a dinette (table optional, of course) that converts to a double berth. Below all settees/berths are bin stowage areas. Cabin cushions were optional equipment. With the standard companionway hatch, headroom is 4 feet 7 inches, or 6 feet with the "jumbo



South Coast 22

LOA: 22 feet 0 inches
LWL: 17 feet 6 inches
Beam: 7 feet 1 inches
Draft, CB up: 10 inches
Draft, CB down: 4 feet 9 inches
Displacement: 1,800 pounds
Ballast: 505 pounds
Sail area: 189 square feet

hatch" raised. Further aft, under the cockpit seats and sole, is stowage and the cockpit locker.

Since the South Coast 22's swing keel is housed inside, there is a 15-inch-high keel trunk that runs the entire length of the cabin. This is a source of restricted movement and bruised shins.

The rig

The South Coast 22 is a masthead sloop with the mast stepped on deck and supported below by a wooden compression post. Both the mast and boom are anodized aluminum. The standing rigging is stainless steel and comprises a headstay, single spreaders, upper and lower shrouds, and a single backstay. The standard sail area is 189 square feet, comprised of a 112-square-foot mainsail and a 77-square-foot jib. All halyards are Dacron, external, and cleated at the mast. The running rigging hardware supplied by the manufacturer is substandard and a candidate for upgrading.

There are no winches or headsail sheet tracks. Jib sheets are led aft through fairleads on the cabintop and cleated off with cam cleats further aft. The boom-end sheeting is an awkward triangular affair that runs back and forth from the boom to a block on the starboard coaming and back and forth from the boom to a fiddle block on the port coaming, where it is cleated off. This arrangement is fine on a starboard tack, but a bit clumsy

A brake winch raises the cast-iron swing keel to achieve the boat's exceptional 10-inch draft.



on a port tack or even on a run. There are no reef points in the mainsail, but roller reefing was an option.

Underway

The South Coast 22 makes a good first boat. It is comfortably sailed in protected waters and, due to its 10-inch draft, really shines when gunkholing in thin water. Its narrow beam and light displacement make for a tender craft that heels quickly and then stiffens up at 15 to 20 degrees. The boat's best point of sail is a reach, and it is quick. There are no bragging rights when on a run, however, and its performance in light air is just OK.

The helm is a bit quick, but with a little time and effort can be mastered easily. The standard hardware and relatively small headsail hold the boat back. Upgrading these two areas will yield a significant improvement in overall performance. Like many boats with swing keels, the keel cable tends to hum. This can be eliminated by easing the cable.

Things to check

Before you reach for your wallet, remember that a South Coast 22 could have already celebrated 30 or more birthdays, and a boat that old has experienced its share of both good and bad. Survey carefully. Also, more than 3,000 of these boats were produced, many in kit form. It goes without saying that the quality of the finished kit product needs to be checked out closely.

Check the deck for delamination caused by a balsa core that has deteriorated due to water saturation. Pay keen attention to the areas around all deck fittings. Delami-

"The overall construction is sound and what one would expect to experience in the infant years of fiberglass boat construction."

nated areas sound dull and hollow when tapped with the handle of a screwdriver.

There have been reports of leaking keel pivot pins, as well as the keel stop bolts and keel locking bolts. All of these are stress areas. The keel cable and its attachment point at the keel are other keel-related items to scrutinize.

The cockpit of the South Coast 22 drains into the keel trunk. As such, these boats routinely experience problems with water burping up through the cockpit drain. Many owners have resorted to putting a plug in the drain while under sail, while others have embarked on various replumbing projects.

It is doubtful that a South Coast 22 exists sporting only stock deck hardware. You can be almost certain that the quality, variation, and installation of these owner upgrades will cover the entire spectrum of seamanship and craftsmanship.


The bottom line

The lines of the South Coast 22 are unmistakably classic Alberg, owing to the fact that it's a copycat big cousin of the South Coast 21. The overall construction is sound and what one would expect to experience in the infant years of fiberglass boat construction. It's the Spartan touch — even lacking deck hardware and creature comforts — that detracts from the boat.

This is a low-end trailersailer. As such, it makes for an acceptable first sailboat. Company advertisements boasted berths for four; that's two adults and two small children ... assuming the boat is equipped with the optional cabin cushions, that is.

There are no major flaws or problem areas common to this model, but like any boat of this vintage it's a good idea to conduct a thorough survey before closing any deal.

When considering the purchase of a South Coast 22, remember that this model was sold both as a completed boat and in kit form. This not only was reflected in the original selling price, but also affects the resale value. For example, in 1968 a completed boat with sails sold for \$2,845, while its kit version was \$1,900. In 1975, the same versions were \$3,490 and \$2,545, respectively. Today, you can expect to spend between \$900 and \$2,500 for a South Coast 22. What a bargain, especially as this often includes an outboard motor and trailer.

For additional information and to contact South Coast 22 owners, log on to the South Coast Owners Association website at <<http://www.southcoastus.8m.net/>>. 

The interior has a 6-foot V-berth and a Porta Potti, both curtained off. Cabin headroom is 4 feet 7 inches. The interior of *Family Fun* shows off the personal touch of Diane Martling. Wayne designed the cockpit cover, which doubles as a sunshade.



The short course — the first in a series of overview articles for those who want just the big picture

by Don Launer

TWO THOUSAND YEARS AGO, during the age of the Roman Empire, weights were molded from lead to replace the stone tied to a string that had been used previously to measure depths off the side of a ship. This lead line was one of the first navigational instruments and remained relatively unchanged for two millennia. It was the only method of measuring depth until the late 1930s.

In the 1920s, someone got the brilliant idea of measuring depth by using an echo from the sea bottom. The first attempt was by firing a cartridge into the water on one side of the ship and listening for that sound and the return echo on the other side of the ship. But, since sound travels about four times as fast in water as it does in air, the echo, which returned in milliseconds, was too short a time to measure with the relatively crude technology of that decade. At 24 feet, the sound would be returned in a hundredth of a second.

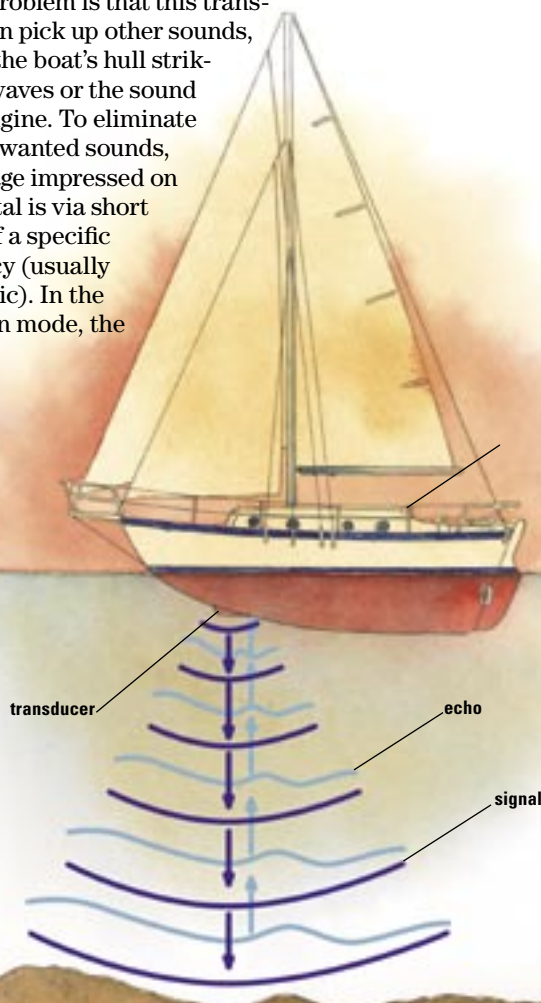
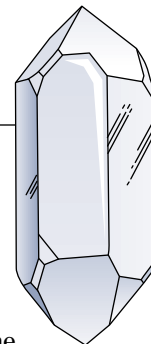
It wasn't until the late 1930s, when electronics was progressing by leaps and bounds, that echo depth sounding became practical, using an electrical phenomenon known as the piezoelectric effect.

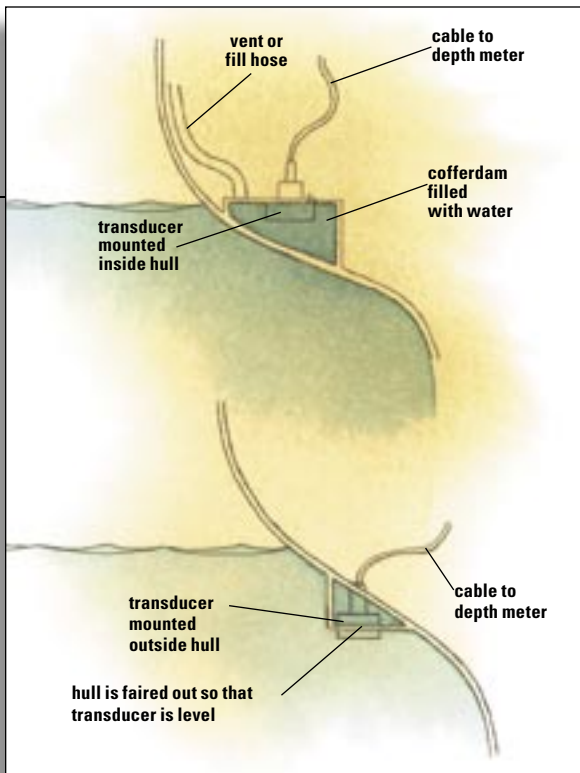
The piezoelectric effect was first discovered in 1880 by scientists Pierre and Jacques Curie. They discovered that if you take certain crystalline substances, such as quartz, put a metal plate on each side of it, and apply a voltage to these metal plates, the crystal physically changes shape. Now, if you put this mechanism under water and hit those electric plates with a sudden, short, high voltage, the crystal changes shape so suddenly that it creates an underwater sound. This sound could then be used to replicate the crude method of firing a cartridge into the water that was used in the 1920s experiment.

This same quartz crystal also works similarly in the reverse direction. If you put pressure on this crystal, a

voltage is developed between the two plates, and if tension is applied to the crystal, an opposite voltage is developed. Using this reverse technology, the quartz crystal can be used to receive the return sound (a pressure-wave), which strikes it and creates a voltage. By measuring the time difference between the sound initiated by applying the sudden voltage between the crystal's two plates and the voltage generated when the return sound strikes the crystal — and knowing how fast sound travels in water — the depth of the water can be determined. A device that can change energy from one system to another — in this case from electrical energy to sound and vice versa — is known as a transducer. Although the same crystal can be used to generate and receive the sound waves, in some applications two separate crystals are used.

The problem is that this transducer can pick up other sounds, such as the boat's hull striking the waves or the sound of the engine. To eliminate these unwanted sounds, the voltage impressed on the crystal is via short bursts of a specific frequency (usually ultrasonic). In the reception mode, the



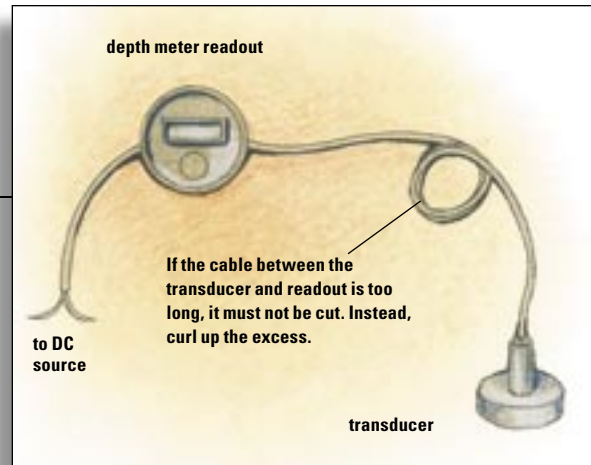


receiver is tuned to receive only this same reflected specific frequency, excluding all other un-wanted sounds.

The sound radiated into the water is in the shape of a cone. This shape is determined by the frequency of the pulsed signal and the physical characteristics of the transducer. The area of the bottom covered by the cone is a function of depth. A reflection occurs whenever the sound strikes a boundary whose propagation characteristics are different from those of the water into which the sound was transmitted.


Although much of the early experimentation was done with quartz crystals, other crystalline substances are now generally used for the transducer.

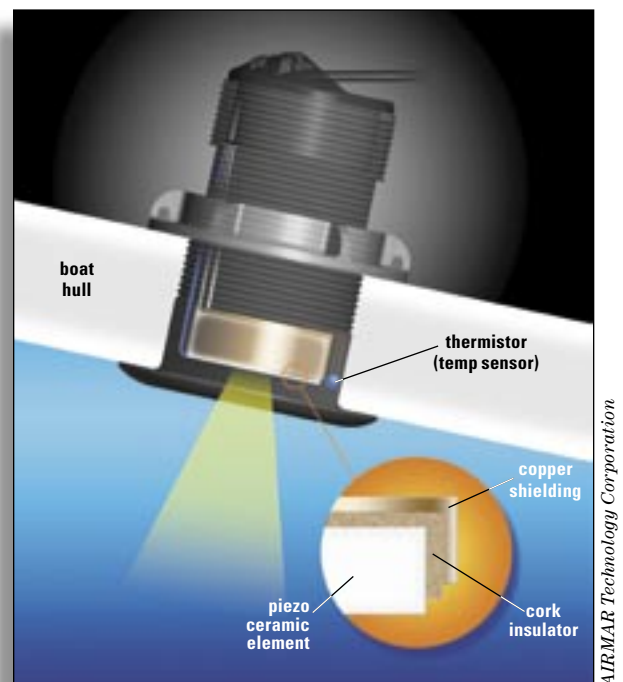
So now we have a system for measuring depth that is just as accurate as the lead line — or do we? Sound travels faster as the transmission medium becomes denser. So sound travels about four times faster in water than in air — about 4,800 feet per second. But there are varying densities of water. If you measure a depth using an echo sounder in the Great Lakes and then measure that same depth off the New England coast, you'll get two different readings. Since the salt water of the Atlantic is denser than the fresh water of the Great Lakes, the sound will travel faster, the return time will be shorter, and the depth finder will indicate a shallower depth. Similarly, if you measure the same depth in the Gulf of Mexico, there will be yet a third reading because the Gulf of Mexico has lower salinity than the waters off New England. So there is always some difference between the actual depth and the depth indicated. Although these differences are relatively minor, often bathymetric depth measurements



are still being done by the most accurate method — the 2,000-year-old lead line.

Other factors can also affect the accuracy of the echo depth sounder, such as seaweed or grass, a soft mud bottom, a school of fish or plankton, or a thermocline (a horizontal interface between cold and warm water). Also, since the sound pulses are propagated down in the shape of a cone, the first reflected sound will be interpreted as the depth beneath the boat, when these reflections may actually be coming from objects at the edge of the cone. Another source of error is the heel of a sailboat or rolling of the boat, which causes the transmission cone to become canted. Compensation must also be made for how deep the transducer is below the surface of the water.

However, the modern depth sounder is much more user-friendly than the old lead line and is now the instrument of choice on modern sailboats. 



AIRMAR Technology Corporation



Fire protection

*Fire on board is terrifying;
here's how to deal with it*

by Simon Hill

FOR A BRIEF MOMENT, THERE IS A TENSE quiet — just the heady, dangerous stench of spilled gasoline wafting on the wind. Then the mixture ignites with a powerful whoosh that I feel as much as hear. I hoist my boat's original, 17-year-old fire extinguisher. There's no need to pull the pin, as it's been missing for some time. I squeeze the handle and, almost surprisingly, the ancient, patient device spews out a powerful stream of yellowish powder.

Its effect on the seemingly invincible wall of flame is immediate and impressive. As I sweep back the flames, somewhere in the back of my mind it occurs to me that the extinguisher is tremendously reassuring in my hands, almost familiar feeling. But I worry that the powder will run out before the flames do.

Happily, my experience battling a gasoline fire took place under controlled circumstances, on the premises of DBC Marine Safety Systems, under the watchful eye (and backup fire extinguishers) of manager Keith Burke. I was at DBC for two reasons: first, to have my boat's fire extinguish-

ers inspected, and second, to find out everything I could about fire extinguishers and the law. What I learned (other than that my boat's original extinguisher was due for retirement) was that there's a whole lot more to fire extinguishers than first meets the eye.

Evaluation and selection

Chances are, if yours is like most good old boats, it already has at least one fire extinguisher aboard. But unless it has had proper, regular inspections it may be just plain *old*, and that's no *good*.

For existing fire extinguishers, two factors are of primary importance: first, ensuring the extinguishers meet the Coast Guard's minimum requirements for the vessel (see sidebar on Page 58) and second, ensuring the extinguishers are in good, working condition and up-to-date with any required inspections or service. Beyond these two factors, there are matters of personal preference and intended use. There are several types of extinguishers to choose from.

Dry chemical. These are probably the single most popular type of extinguisher used aboard recreational boats. The reasons are simple: they're cheap, reliable, effective, and low-maintenance. Their limitations include a limited range (you have to get close to the fire to use them effectively), relatively narrow effective stream (you have to aim

them well), and comparatively short discharge time (this is why it pays to take advantage of their economy and have several aboard). Also, they leave a messy residue after use. As Keith Burke points out, the mess isn't anything like the damage caused by a fire, but it can be troublesome to clean up.

CO₂ (carbon dioxide). Carbon dioxide units were at one time the standard for engine-compartment protection. They require less precise aim than dry chemical units and are very effective, simultaneously cooling a fire and depriving it of oxygen. They leave no residue and are nontoxic.

However, they aren't safe in enclosed spaces because they'll deprive occupants of oxygen as effectively as they deprive the fire. Principal disadvantages of carbon dioxide units include the greater size and weight of the bottle needed to store the compressed gas and the need for more frequent, expensive maintenance than dry chemical units. Furthermore, they aren't suited to use in open, breezy locations because wind can quickly dissipate the CO₂ gas.

A fire aboard can have serious consequences, above. Adequate, nearby fire extinguishers can help you stop the flames before they destroy your boat. At right, Keith Burke of DBC Marine Safety Systems demonstrates the use of a CO₂ extinguisher, and author Simon Hill gives it a go with reassuring results.

“When evaluating your existing fire protection, keep in mind that most original extinguishers on older sailboats are chosen by the boatbuilder primarily based on price.”

FM-200 and FE-241. Developed as a replacement for Halon (which was a clean, nontoxic extinguishing agent but which is now banned because of its destructive effect on the earth's ozone layer), FM-200 and FE-241 are inert-gas, flooding-type extinguishers, principally in use as fixed, automatic installations. Their advantages are that they are effective and safe to use in enclosed occupied spaces, plus they leave no residue. Their big disadvantage is cost, ranging from \$271 upward. And for portable use they aren't as effective as dry chemicals because any breeze will quickly dissipate the inert gas.

Aqueous foam. A relatively new technology, aqueous foam units can be highly effective for cooling and for smothering a fire. The foam sticks well to the surfaces involved in a fire (including vertical surfaces) making these extinguishers easy to use. The foam cleans up easily with water and doesn't dissipate rapidly during use, which helps prevent re-ignition. But because the technology is new, it's not yet easy to find U.S. Coast Guard-approved models.

When evaluating your existing fire protection, keep in mind that most original extinguishers on older sailboats are chosen by the boatbuilder primarily based on price. While economical and functional, these units aren't necessarily what you want to rely on 20 years later ... after you've spent countless hours refitting your classic. An inexpensive extinguisher tends to have a plastic nozzle head,

with the gauge held in by a circlip. These units aren't as robust as extinguishers with aluminum nozzle heads and screw-in gauges. According to Keith, it's not unknown for the circlip holding the gauge on an inexpensive extinguisher to fail while stored aboard, shooting the gauge across the boat like a projectile and spraying extinguishing agent all over. If you're buying a new extinguisher, check its date of manufacture — don't buy one that's already nearing its first mandated inspection.

Inspection and maintenance

Apart from providing you with peace of mind, fire extinguishers need regular inspections to satisfy the requirements of two agencies: your insurance company and the Coast Guard. Your insurance policy may have the strictest inspection requirements — commercial vessels must have all extinguishers professionally inspected on an annual basis, and many recreational boat policies require the same frequency. The Coast Guard doesn't require yearly inspections of fire extinguishers aboard recreational boats, but it does expect that the

required fire extinguishers be in good, serviceable condition.

According to Don Kneesebeck, the U.S. Coast Guard's Boating Safety Coordinator in Seattle, for extinguishers with a gauge this means that the gauge must be in the “fully-charged” zone, the tamper seals must not be broken, and the required 6- or 12-year inspections must have been performed. Extinguishers without gauges require annual inspection tags from a certified testing agency (Canadian requirements are similar). If you're boarded, and your extinguishers aren't in compliance, the Coast Guard will likely issue a citation and require you to prove subsequent compliance. At their discretion, they can terminate the voyage, forcing you to return immediately to the dock.

But according to Keith, there are several reasons beyond simple compliance to have regular certified inspections carried out:

- Over time, the gauge on an extinguisher can seize, so it's possible for a unit to lose pressure and still show a charge. A reputable shop weighs the extinguisher to ensure that it contains the factory-specified charge.
- If a dry chemical extinguisher is bumped in such a way as to depress the pin and release even a tiny quantity of chemical, it can react with moisture in the air and block the nozzle, preventing the unit from discharging when you need it. The shop will check for signs of discharge.
- If you have your extinguishers inspected aboard your boat, the



Selecting extinguishers

CHOOSING APPROPRIATE FIRE EXTINGUISHERS for your boat can seem like a daunting task. Extinguishers carry a baffling array of letters and numbers, but in the United States the Coast Guard makes things simple by having its own rating system, with only two approved types suitable for pleasure craft. Here's what you need to know:

The principal rating system for fire extinguishers is applied by Underwriters Laboratories (UL) or Factory Mutual, a lesser-known lab that can perform tests to ANSI or OSHA standards. (Underwriters Laboratories of Canada operates north of the border.) This rating system uses a series of letters and numbers to identify the types and sizes of fires that the extinguisher will put out. There are three types of fire:

Class A fires are fed by fuel that burns to Ash — paper, wood, cloth, fiberglass, rubber, and such. These fires can be extinguished with water.

Class B fires are fed by fuel that

comes in Barrels — flammable liquids such as gasoline, diesel, oil, and kerosene.

Class C fires are started by Conductive, or Charged, Circuits — electrical fires. Electrical fires typically turn into Class A or B fires as the electrical system that started the conflagration is

destroyed and the surrounding materials catch fire. The danger in fighting a live electrical fire is that you might be electrocuted if the firefighting agent is conductive (as water is, especially seawater). If you disconnect the power, an

electrical fire (if it continues to burn) becomes a Class A or B fire.

The number preceding each letter is simply a comparative rating identifying what size of each type of fire the extinguisher will put out. To assess the ratings, the laboratories use standardized wooden cribs for Class A fires and standardized burn pans of heptane for Class B fires. So a 1-A: 5-B:C fire extinguisher will put out one burning wooden crib or five pans of burning heptane. A 5-A:10-B:C extinguisher

will put out five burning wooden cribs or 10 pans of burning heptane. Both use nonconductive agents and are safe on electrical fires.

Keep in mind that the lab performs only the tests that the manufacturer asks for, so one manufacturer's 5-A extinguisher may put out exactly five burning wooden cribs and then expire, while a


"To be sure you have an approved unit, look for the label that says 'Marine Type USCG.' "



When purchasing fire extinguishers, look for an aluminum (above at right), not plastic (above at left), valve head. Safety Inspection Day at Vancouver's Burrard Yacht Club, below. If your yacht club offers a safety inspection day, it's a perfect opportunity to get your fire extinguishers professionally inspected.

second manufacturer's 5-A unit may put out five burning wooden cribs, as rated, and still have enough agent left to extinguish one or two more cribs.

The U.S. Coast Guard, which is primarily concerned about flammable liquids, cuts to the chase and approves only three ratings for pleasure boats: B-I, B-II, or B-III. These are type B extinguishers with approved marine brackets and a specified weight or quantity of firefighting agent — it varies by agent, but is at least two pounds for a B-I dry chemical unit and at least 10 pounds for a B-II. (The B-III devices are too large for use on most recreational boats.) To be sure you have an approved unit, look for the label that says "Marine Type USCG."

The Coast Guard requires cruising boats that have enclosed living spaces to carry one B-I extinguisher if under 26 feet, one B-II or two B-I extinguishers if 26 to less than 40 feet, and three B-I or one B-I plus one B-II if 40 to 65 feet. But keep in mind that the Coast Guard requirements are the minimum, not the optimum, for safety. You should ideally have at least one fire extinguisher for every 10 feet of boat. 



Peter Vassilopoulos

company will issue a full compliance report (detailing such site-specific things as correct placement and labeling and use of a correct Coast Guard-mandated bracket for the extinguisher). This shifts the onus of responsibility from you to the inspection company — handy if you ever do need to make a fire-based insurance claim.

If your extinguisher has a gauge and you elect to carry out your own annual inspections, check the following (to be truly safety conscious, perform these checks monthly):

- No obvious physical damage or corrosion.
- No leakage; neither hose nor nozzle is blocked.
- Pressure gauge within operable range.
- Seals, pins, or other tamper devices in place and unbroken.
- Operating instructions legible.
- Dry chemical not “caked.” (Shaking the extinguisher monthly will both test for and prevent caking. If the powder doesn’t slosh around freely inside the extinguisher, rap the extinguisher sharply into your hand to break up the cake.)
- Extinguisher not due for its 6- or 12-year inspection.

Never test fire an extinguisher; this will likely cause a slow leak and can cause the nozzle to become blocked with extinguishing agent residue.

One inescapable fact is that the small portable extinguishers used aboard our modestly sized cruising boats have a limited economical life. Dry chemical extinguishers require an internal visual inspection every six years and a hydrostatic (pressure) test every 12 years. While the visual inspection, with its attendant discharge and refill of the unit, is still significantly cheaper than a new extinguisher, the 12-year hydrostatic test simply doesn’t make economic sense for a small extinguisher — it’s almost the same cost as a new unit, and you run the risk that the unit will fail (and, yes, you typically have to pay for a hydro even if the unit fails).

You can rotate “stale” extinguishers into your house or car (on the grounds that it’s better than no extinguisher at

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all), but keep in mind that the hydro test is really a safety measure. The last thing you want is an aluminum canister, charged to 100 psi, rupturing under your car seat. Obsolete extinguishers should be disposed of at a reputable fire safety equipment shop, which will recover the extinguishing agent.

Approved technique

As I learned when I visited DBC Marine Safety Systems, using a fire extinguisher isn’t difficult, but there’s an approved technique. It’s the PASS method:

Pull the pin. (Mine didn’t even have a pin, something I hadn’t noticed until I took it in for service.)

Aim the nozzle (or hose or horn) at the fire’s base, keeping the extinguisher upright.

Squeeze or press the trigger to release the extinguishing agent.

Sweep from side to side at the base of the fire, or use a series of short blasts. As the flame front moves back from your extinguisher, adjust your aim to follow the fire’s base.

If your extinguisher runs out of juice before the fire is out, you have two choices: continue fighting the fire with water or abandon ship. If the fire is not too fierce and not fueled by flammable liquids, fighting it with water is a very real option. Your boat is floating in the stuff and, as with bailing, a frightened sailor with a bucket can move a surprising quantity of water.

Turn off the main battery switch if you can, and as long as you’re not pouring seawater on live 110-volt connections, low-voltage electricity from the batteries won’t usually hurt you. As John Poole at Vancouver’s Fire Prevention Office points out, it may be conceivably possible to kill yourself with low voltages, but it’s unlikely. On the other hand, unless rescue is close

by, jumping into frigid northern waters is almost guaranteed to kill you within a few minutes due to hypothermia.

Effective prevention

As a final note, the most effective way to fight a fire is to ensure that it never starts. The major sources of fire on boats include engine fires, galley fires, fires started by heating appliances, fires started by carelessness with cigarettes, and electrical fires. A few safety guidelines can prevent many of these.

In the engine compartment, ensure that wiring is adequate for the load being carried and that all circuit breakers and fuses are properly sized and functional. Visually inspect insulation on a regular basis.


Diesel fuel is far safer than gasoline, but don’t let it lull you into a false sense of security. Regularly inspect high-pressure fuel lines and injector bodies for deterioration, leaks, or cracks.

Wet exhaust systems can become incredibly hot if the flow of seawater is interrupted, so install a seawater strainer, routinely check the hoses, and develop a habit of constantly listening for the telltale splash of water being discharged.

In the galley, exercise common sense. Don’t hang towels or curtains over the stove. All bottles of alcohol or kerosene should be closed and stowed before lighting the stove, and any spent matches should be doused in water before disposal. Periodically inspect the stove’s connecting hoses and fittings, especially for heavier-than-air propane or natural gas stoves.

Diesel heaters or stoves shouldn’t be left unattended, and electrical heaters should be placed where they can’t get knocked over or ignite flammable materials. In addition, they should only be plugged into circuits or extension cords capable of handling the load.

If you allow smoking aboard your vessel, be sure you stress to all smokers the safety rules regarding handling and disposal of matches, lighters, and cigarette butts. Don’t allow any smoking in sleeping quarters.

Finally, make sure everyone who boards your vessel is cautioned on the use of open flame, made aware of safe fueling procedures, and knows the locations of fire extinguishers. You have lots of them aboard, right? 

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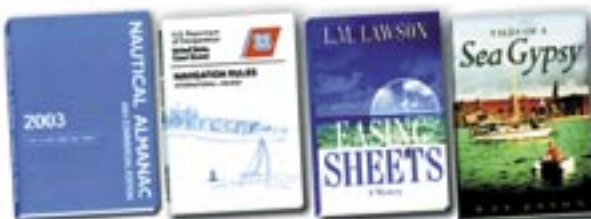
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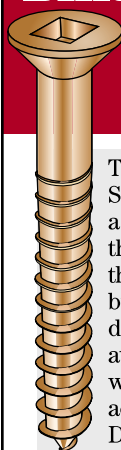
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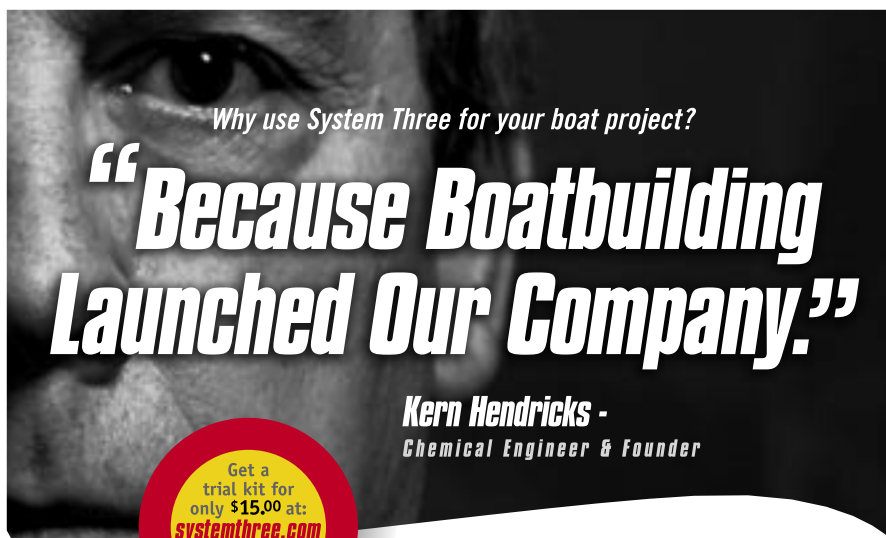


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Good old racing events

by Karen Larson



Mary Jane Hayes

THE FOUNDERS/EDITORS OF *GOOD OLD BOAT* MAGAZINE HAVE absolutely nothing against racing. In fact, Jerry Powlas figures he's been in more than 900 races. Nonetheless *Good Old Boat* is an unlikely sponsor of racing events. This magazine is about cruising. About modifications to cruising boats. About maintaining cruising boats. It's about enjoying good old cruising boats. *Everybody* knows that.

The problem is that some of the good old cruising boats were designed as cruiser/racers. Others were more like racer/cruisers. They served beautifully in these dual capacities. To this day, some people still choose to race them. From the beginning of this magazine, we chose not to say much about racing. It was an "editorial decision" based, we thought, on logic.

It started in Annapolis

We ignored racing until, that is, a serious race series for good old boats was organized in Annapolis, and they called it the Good Old Boat Regatta. It was for "boats of some maturity," they said ... those with hulls designed before 1975. It was hard to ignore the fact that the owners of Tritons, Cals, Catalinas, Bristols, Pearsons, Tartans, Columbias, and other good old boats were out there racing for the pure joy of finding others with whom to compare their sailing skills. Besides, they were using our name. The concept and a whole lot of hard work organizing the series came first. Our sponsorship came later ... after we'd discovered what they were up to.

They've been up to a whole lot in the Chesapeake Bay with the Good Old Boat Regatta. It's going into its fourth

season this fall with races on October 4 and 11. Participation has grown mightily, primarily because the older designs were being excluded from other racing events on Chesapeake Bay. The owners of these boats created their own race, dang it, and have been having a great time ever since. For more information about how to get involved, contact Don Frye, DonaldFrye@aol.com, 301-585-0526.


Classic series was next

Once we were onboard with the Good Old Boat Regatta in Annapolis, we began hearing from folks on Lake Michigan, on the West Coast, and in the New England states wanting to start similar race series. It seems there is an untapped need for good old racing opportunities for good old boats. For our own sakes, we had to make it clear that we may sponsor the events — which involves a small outlay of cash and publicity help in the magazine and on our website — but we don't do the organizational work. We can't. It's all we can do to get six issues of this magazine out.

But another group of sailors was undeterred by this news, and a classic fiberglass series will begin this fall in conjunction with a classic wooden boat racing series. This regatta is called the Heritage Classic Regatta Series for Good Old Boats. We admit that's a mouthful. (Perhaps we can shorten that to the HCRSGOB. Or perhaps not.) This series of fun races will include fiberglass sailboats designed before 1978. Four weekends are set for the 2003 inaugural series of races.

It begins with a race on September 6 in eastern Long Island Sound as part of the Governor's Cup. Next is a race on September 13 in New York Harbor as part of the ongoing Mayor's Cup. The following weekend features a race on Gardiner's Bay as a part of the Greenport Classic Yacht Regatta there September 20. And it winds up on September 27 and 28 on Fisher's Island Sound with races in conjunction with the Race Rock Regatta.

All in fun

As the Annapolis regatta organizers have already learned, this one will grow over the next several years as the word gets out and skippers emerge from the series unscathed and wearing broad grins. As with the Annapolis series, the Heritage Classic welcomes skippers who are new to racing. They have chosen to level the playing field for all participants by eliminating spinnakers. And while the race will be conducted in a professional manner, they are promising a no-fuss fun time for all involved. For more information, contact Michael Brassert, mbrassert@registeredfilms.com, 646-456-8288. 



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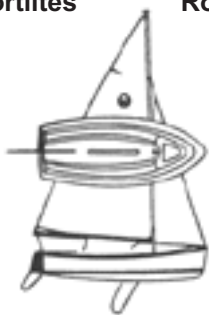
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among others. And not to forget our patron saint, Francis Herreshoff."

Talk to Bill Crealock for more than a few minutes, and it's easy to tell how important the cruising life has been to him. Read his books about his adventures as a young man, and you can still sense that certain faraway look in his eye all these years later.

"Usually when you think about something as being very desirable,"

says Bill, "when you have it, it's not quite as good as you thought it would be. But for me, the cruising life was even better. It's very seductive, the ultimate freedom, the ultimate story with a surprise on every page. It's a wonderful way of life. It can get you into such wonderful situations. Many people think that ocean sailing is dangerous, but it's coastal cruising that's dangerous — more things to hit.

Keeping it simple

"The main thing for us back then was to enjoy our cruising by keeping it simple," he says. "We nearly always were the only boat in the places we went. Even in Gibraltar, the crossroads of the world, we only saw a handful of other boats in those days. That was the golden age of cruising. Even today I still love looking at maps and charts."

Bill's design work now is about evenly split between sail and powerboats. He strives to keep his workload manageable, keeping the office to three people total, including Bill Luther, who has been with him for many years. He prefers to work on his own designs rather than running a larger office and "running around the country bringing work in to keep others busy. That doesn't appeal to me. There are 7,000 of my boats out there, mostly

smaller ones, and that means 7,000 owners could call me up at any given time — a terrifying thought."

One of his recent projects was the design of two wooden, 90-foot brigantines for the Los Angeles Maritime Institute. "The institute runs programs to help disadvantaged youngsters," says Bill, "and performs near miracles with some of the youths. I've seen their letters. Naturally the institute is always in need of donations."


According to Bill, the ships are of "traditional design above the waterline with more modern and quite slippery underbodies. They also were

built using traditional construction methods." Both ships have completed their sea trials and are now in service. They also will serve as the official tall ships of the City of Los Angeles.

Bill and Lynne, his wife for more than 30 years, lead very active lives.

Lynne is a well-known painter and travels whenever she can with Bill. She also is an experienced sailor, having sailed in the Mediterranean and Caribbean for six years when she was younger and before marrying Bill. "But he and I have never cruised together," she says. "Cruising is a great life. You don't have to change hotels; you take your own things with you. It's a wonderful way to learn about other cultures."

What about retirement plans? States Bill, "My ambition would be to work only five days a week. That would be semi-retirement for me."

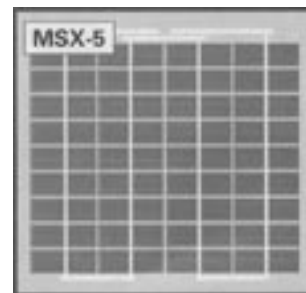
Don't count on that too soon. Bill Crealock is having too much fun. After all, he has already retired once. 

*"I aim at a boat
that will take care
of its crew in the
very worst conditions."*

Bill Crealock and his wife, Lynne, a well-known painter and experienced sailor.



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Shelves that breathe

Fishing-net locker shelves provide vital ventilation

by Guy Stevens



MOST BOATS FROM THE 1970S AND EARLY 1980S CAME WITH cavernous hanging lockers, big enough to get at least one or two crew completely inside. Perhaps the idea was that you could stow your foulies in the hanging locker along with a couple of replacement crew just in case someone was washed overboard. *Pneuma*, our 1973 Ericson 39, is one of those boats.

While we were getting ready to head across the Pacific on the “Coconut Run,” we ran out of places to store food and toilet paper. In the past we had discussed the notion of converting the giant hanging lockers to shelved storage, but due to its magnitude the task never even made the project list. The idea of purchasing an entire sheet of mahogany-veneered marine ply, cleat stock, glue, varnish, and brushes, then spending at least two days getting all the joinery perfect seemed like too much. Suddenly, though, we needed the storage, and something had to be done immediately.

That night, while I was removing 48 rolls of toilet paper from my side of the V-berth, I remembered having looked in the lockers of an old square-rigger and seeing shelves made of canvas. This seemed like a good idea, especially with one of the tubes from the toilet paper roll sticking in my ear. Melissa was worried that even canvas would-

prevent good ventilation and result in mold and mildew on the precious soft cargo. In addition, we would have to sew up the shelves out of whatever canvas we could find in Mexico. A quick look at the price of a yard of Sunbrella south of the border brought that idea up short.

The solution

The next day, while I was transporting paper towels from the supermarket, I happened by one of the fishing boats moored at the marina. I noticed them drying a fine fishing net. Here was the solution I had been looking for. At the local hardware store I got a nice straight 1 x 4, a couple of good 6-foot pieces of 3/4-inch dowel, and a handful of stainless-steel screws. Then I went to the local fishing supply for some netting, and the project was more than half completed.

The shelves were simple to construct and install. They met all of our requirements: they are very strong, allow for good ventilation, and are easily removable should we want to hide



Netting, threaded onto dowels and suspended in the hanging locker, above, creates useful shelves in a cavernous locker that had been convenient primarily for storing extra crewmembers, such as author Guy Stevens, at right. The shelves are removable using Guy's bracket system, above right.

extra crew from the race committee. Best of all, the total cost was less than \$30 and installation took less than a couple hours for both lockers.

We cut the 1 x 4 into square pieces, 4 inches on a side, four per shelf. In the center of each of the squares we used a paddle drill to make a 3/4-inch hole to fit the dowel into. On half of the squares, we cut out a 3/4-inch slot from the edge through to the center hole, making them into U-shaped brackets (see illustration on Page 64). The blocks are installed in pairs, with one of the blocks with the center hole and one of the U-shaped blocks opposite each other on the opposite walls of the hanging locker. This allows each dowel to be removed by sliding it up and out of the U-shaped slot. If you slant the U-shaped block slightly away from the front of the locker, the dowel will stay in place even in the case of a knockdown.

Lined them up

Next we cut the dowel pieces to fit the width of the hanging locker. We used the dowels and a small carpenter's square to line up the brackets opposite each other on the sides of the locker. Using the holes drilled in corners of the square brackets, we drilled starter holes for the screws in the bulkhead, being careful not to drill through the bulkhead. After drilling each starter hole, we started that screw before moving to the next one. This guaranteed that all of the holes would be in the correct place. The aft blocks were mounted about 3 inches higher than the forward blocks; this prevents items from dropping off the back of the shelves when removing items of clothing stacked on the shelves and makes for better ventilation.

We then cut the netting 3 inches longer than the locker dimensions. This extra allows the netting to hang slightly and keeps things from sliding off even in the worst weather. The netting was then threaded onto the dowels.

"Best of all, the total cost was less than \$30 and installation took less than a couple hours for both lockers."

The dowels were placed one end in the block with the hole in the middle and the other end dropped into the U-shaped block. By threading a piece of light string along the sides and tying simple constrictor knots around each of the dowels, we were able to tighten up the netting on the sides just enough to keep everything in place.


Both of the lockers on *Pneuma* now have three shelves. The top

shelf is about 10 inches from the overhead; by placing its forward edge in from the front of the locker by 8 1/2 inches we were able to use the space above the hanging locker door. We found that about 16 inches of vertical separation between the shelves was perfect. Each of the shelves is as deep as the locker.

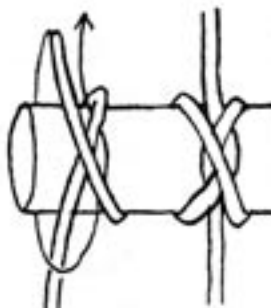
Place to sleep

All of the rolls of toilet paper fit nicely on the top shelf in the forward locker along with the majority of the paper towels, thereby freeing my side of the V-berth for sleeping. Under the bottom shelves we store large but little-used items that can be reached by removing the bottom shelves' contents and slipping the forward dowel out of its brackets.

It's very easy to get to anything on the three shelves. We have fewer problems with mold and mildew since converting the hanging lockers to shelves than we did when they were hanging lockers. The entire contents of the former hanging lockers fit on the middle shelves when neatly folded. The usability of the hanging lockers for storage was increased by at least four times.

After completing the shelving project, there was nothing left to do but put them to the test. After 11,000 miles and two knockdowns in the Southern Ocean, nothing has ever fallen out of the net shelves. While cold water was running in waves over the sole, it was comforting, in some small way, to open the locker, reach in, and grab a dry roll of toilet paper. 

Constrictor knot



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Keep menus for favorite recipes nearby.

Instead of looking up those favorite recipes every time you need one, write down recipes you use frequently on recipe cards. But don't stop there; laminate them or cover them with clear contact paper (available in the storage/shelving section of discount stores) and mount them on the inside of your galley cabinet doors or another out-of-sight, but handy, location. Picture-mounting putty works well for this. A recipe card can be grabbed (with the putty still on the back) and placed anywhere on a bulkhead or counter visible to the cook.

Galleys can be crowded with crewmembers passing through. Reduce the amount of maneuvering required for cooking by storing items used together in the same space.

Storing your galley equipment intuitively saves time, energy, and frustration for the cooks, especially those who are not familiar with it. Here are some examples:

- Sharp knives near the cutting boards
- Measuring utensils near or even inside mixing bowls
- Mixing spoons and whisks near those mixing bowls
- Cups near the water pump
- Can opener near the pots and pans

Clear sink

While cooking, keep your sink clear of dirty dishes as much as possible so it can be used for storing ingredients. This reduces the number of items that will have to be grabbed or watched when the boat sways due to an unexpected swell or wake.

Create an easily reached snack zone away from the galley so anyone can grab a quick snack without getting in the way of the cook. Stock it with small amounts of a wide variety of snacks to keep interest high.

Have a small bin or hammock somewhere in the galley just for fruit and vegetables that need to be eaten quickly. I have gotten into the habit of going through all of our produce daily and sorting out the fruit and vegetables that are nearing the end of their lifespan. These go in a small hammock that hangs above our galley counter. Now everyone knows what produce needs to be used first for meals. We also line our produce hammocks with opened paper bags to reduce bruising from the hammock strings. It also helps to keep the hammock spread out, and the paper absorbs moisture.

Collect all the non-perishable items necessary for a

Gastronavigation

Secrets to help you navigate the galley

by Theresa Fort




Having simple meals bagged together is a great help.

favorite meal or entrée and store them together in a plastic bag. Have several of these “meals-in-a-bag” stored within easy reach near your stove. Some of our quickie meal favorites include:

- Cajun dirty rice mix with canned chicken and green beans
- Hash-brown mix with a small can of chopped ham and canned mushrooms
- Macaroni-and-cheese mix with canned tuna
- Canned navy beans with canned chicken, salsa verde, and canned green chilis

Having all the basics for a meal together in one bag within easy reach is a great help when a meal needs to be prepared quickly.

An efficient galley is a joy to work in. Now all those who wander into your galley will not be lost. They may even share in the cooking. 

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Quickie meals that can be kept ready in a bag

Hash browns with ham and mushrooms

1 package dried hash-brown mix
1 small can of ham, drained
1 small can of mushroom pieces, drained
1 cup grated cheese (optional)

Cook hash browns according to directions on package, adding the ham and mushrooms. When done, top with grated cheese and allow to melt before serving. For a little more flavor, add a can of green chilies also.

Macaroni and cheese with tuna

1 package macaroni and cheese
¼ cup milk (or 2 teaspoons powdered milk and ¼ cup water)
¼ cup margarine
1 6-ounce can tuna in water
1 teaspoon lemon pepper
½ teaspoon dill

Cook and prepare macaroni and cheese according to package using milk and margarine as directed. Drain water from tuna and add to macaroni and cheese along with seasonings. Serve with quartered fresh tomatoes.

Dirty rice with chicken

1 package dirty rice mix
1 6- to 8-ounce can chicken
1 small can green beans, drained, or 1 cup fresh green beans cut into bite-sized pieces

Cook dirty rice mix according to package directions. If substituting fresh green beans, add them to the rice midway through cooking. Otherwise, add the drained canned green beans when rice is done. Add chicken with liquid when rice is done. Heat on a low burner until all ingredients are hot. Serve in bowls.

White chili

2 cans white navy beans
1 6- to 8-ounce can chicken
1 small can green chilies
1 7-ounce can salsa verde

¼ teaspoon ground cumin
½ teaspoon dried cilantro
salt to taste

Salsa verde is a green hot sauce found in the Mexican section of the grocery store. We like the Herdez brand. But Old El Paso has one, too, in a large jar (use one-half cup). Combine all ingredients in a large saucepan and simmer for 20 to 30 minutes until hot. Serve in bowls with grated cheese on top, corn tortillas or tortilla chips, and sliced fresh vegetables.

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A composting head

This technology means no holes in the hull or deck

by Chuck Kanter

MY SOLUTION TO THE PROBLEMS, CONCERNS, AND MANDATES about marine toilets had been to use a Porta Potti and a few jury-rigged devices that satisfied federal “no discharge” requirements. It was not an ideal solution. The thought of drilling two holes in my hull and one in my deck to install a standard marine head — and then carrying around a tankful of waste for an indeterminate time until I was either offshore or found a working pump-out station — just did not fit my concept of prudent seamanship. Better technology, in the form of a composting toilet, showed up at the 2001 Miami Boat Show.

Composting toilets are not new. The technology is tried and true, proven over many decades of use in areas where either public sewage is not available or sanitary septic systems are not feasible. My 32-foot catamaran fits into the greater spectrum of smaller yachts with installed marine toilets, thus it appeared to be a better-than-average solution if it worked as stated by the developer.

The Air Head Dry Toilet is the brainchild of Geoffrey Trott. It has been around for a couple of years and is getting well tested. I installed one in my boat based upon my own intuition, the assurances of the designer, and the reports from other users.

Competing composting toilet units are essentially too large for a small- to medium-sized boat, but my Air Head

unit has the same footprint as my diminutive Porta Potti, though it is almost twice as tall. It is simplicity itself, having few moving parts and only a 45-milliamp muffin fan as current draw. It uses no water, thus has no seacocks or hoses. And it is of modest cost.

The Air Head runs \$300 less than a complex marine toilet installation with seacocks, Y-valves, siphon breaks, holding tanks, yards of costly pipe, macerator pumps, and deck pump-out connections. The only thing the two systems have in common is the vent pipe.



All parts necessary for assembly, above, and the new installation, below.

Coast Guard-approved

There are the usual concerns about odors. I figured that the odors could not possibly be greater than many of the liquid-based systems I have surveyed, which explains my reluctance to have such a system in my boat in the first place. The Air Head is USCG-approved under CFR 159.53.

The unit bolts to the cabin sole with spring-loaded catches. I decided to use an unobtrusive side mount under the rubrail for the vent exit in lieu of a deck-mounted solar vent. The unit needs only the supplied initial feeding of ordinary peat moss, replaceable at any garden shop, and a modest amount of electric power for the fan that maintains airflow. After using the unit, a couple of turns of the crank handle mixes the “material” with the peat moss and natural decomposition takes place, thus returning it to its original state, which is plain soil! Simply put, it is similar to the way a cat buries it. The reason the unit is so small and simple is the method of separating liquids from solids.

Urine is separated into a quick-detach bottle. A teaspoonful of ordinary sugar in the bottle suppresses odor. The bottle is convenient to empty.

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The Air Head, to the right of the Porta Potti, is no wider than the conventional Porta Potti, but it is taller.



Disposing of urine is seldom a problem. The operating capacity of the unit is based upon approximately 80 uses.

To empty the toilet, the bottom unit is detached, and the material either appropriately dumped or stored until completely degraded. Then it can be placed in flower beds. Any bacterial or viral contamination is destroyed by the natural processes. In our own case, it will most likely be several years before we need to empty it, based upon our lifestyle, which includes offshore and marina supplements.

Stay tuned, we will keep you posted. 



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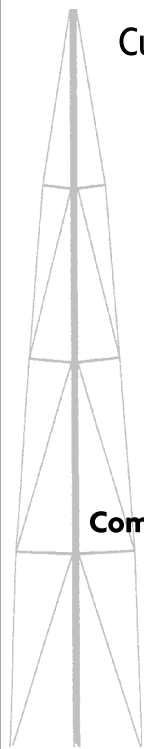
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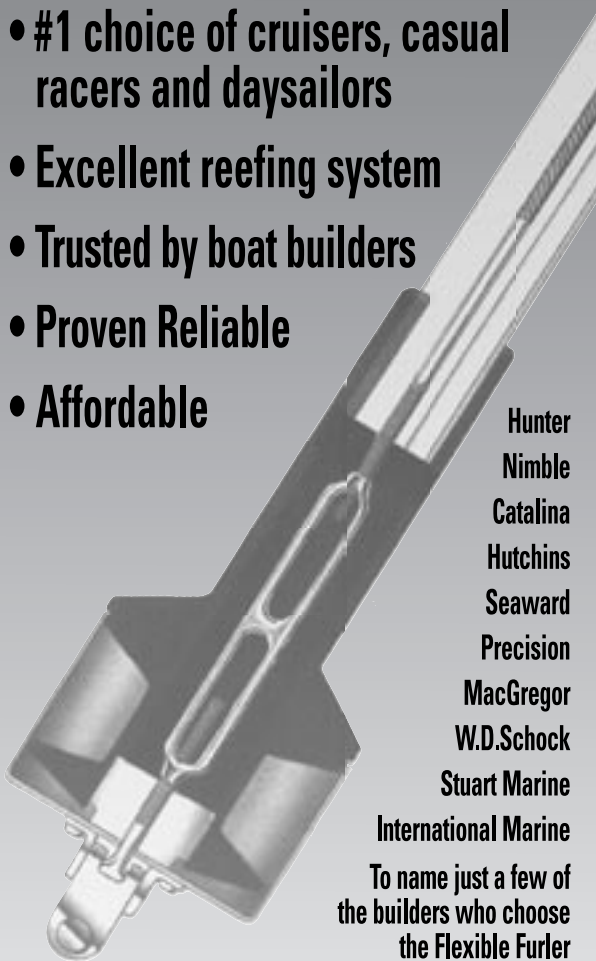
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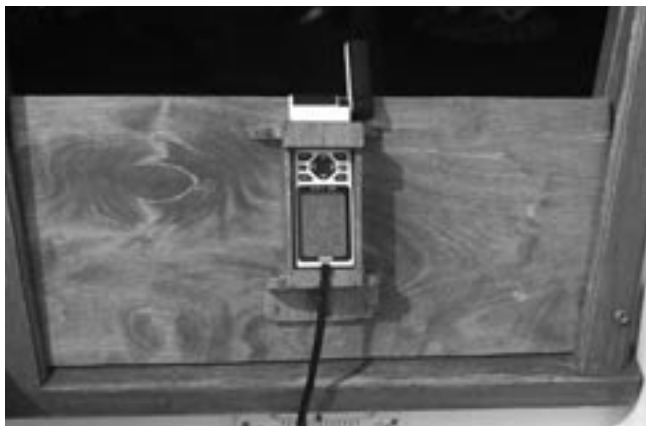
by Gregg Nestor

WHILE CHECKING OUT THE "GOODIES" OFFERED FOR SALE AT a neighborhood flea market, I came across a used, handheld GPS receiver. The unit came complete with batteries, external power cord, and owner's manual. After a cursory check of its operation, a little negotiation with the seller, and the exchange of a crisp new Alexander Hamilton, the palm-sized 21st-century technology was all mine.

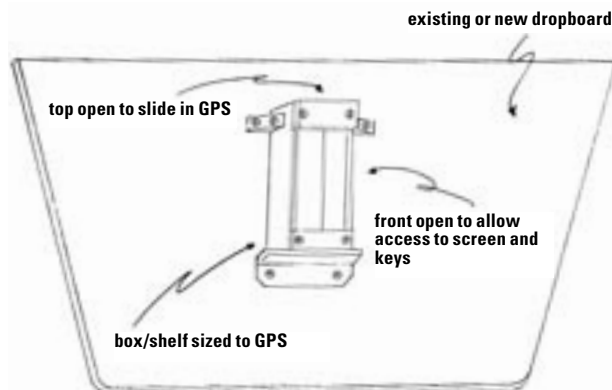
Now that I owned this little hand-held marvel, I needed to learn how to operate it and to find a convenient and secure place for it on my boat. The learning part was relatively easy. Locating a proper mounting place on the boat was a bit more challenging.

I decided to purchase a readily available GPS mounting bracket. There are several to choose from.

A quick check of the marine catalogs ended that line of thought. The bracket would cost more than twice the price of the GPS. True, not a fortune, but it's the principle of the thing. Back to the drawing board. I figured I could build a custom bracket for next to nothing. And that's what I did.




Dropboard GPS holder



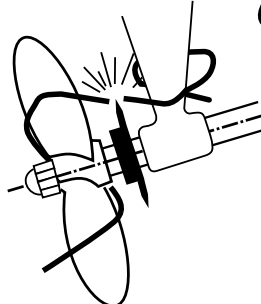
With bulkhead space being a premium, taken up with coiled lines, compass, depth and knot meters, and cupholders, not to mention a backrest for the First Mate's sunbathing activities, the only available area was the companionway. True, it was visible from all reaches of the cockpit, but there was nothing there ... at least not yet.

With necessity being the mother of invention, I rooted around my workshop and found a piece of 1/4-inch plywood roughly the size of my lower dropboard. A few simple cuts and it slid perfectly down the companionway slides. Out of 1/4-inch scraps, I fashioned a simple open-sided boxed shelf, into which I could slide the GPS. The box was glued and assembled with stainless-steel screws and mounted in the center of the dropboard. Four coats of marine spar varnish completed the project.

To use my GPS bracket board, I simply slide it into place, add the GPS and press the "On" button. The centralized location and open side allows access to all the function buttons as well as an unrestricted view of the screen. 

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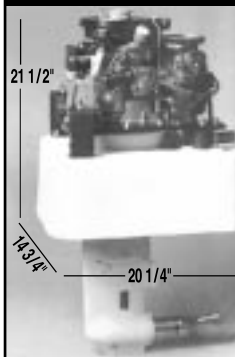
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Double-duty divider

Taming the lazarette and unplugging the drains


by George Zimmerman

DURING NINE YEARS SPENT SAILING A 25-FOOT YAMAHA SAILBOAT in the waters of the Puget Sound, I have found space to be at a premium. Most items on my boat must have at least two functions.

The lazarette on my boat runs the width of the transom. This storage space is great, but the contents shift from side to side as the boat heels. Since I store a spare container of diesel fuel, a gallon of alcohol for the stove, fuel additives, and other flammables along with deck-cleaning equipment in this space, this shifting is a problem.

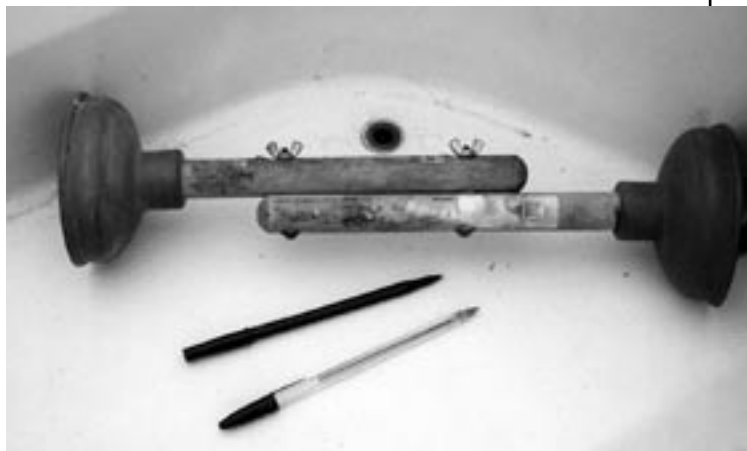
I purchased two small plungers from the hardware store. I placed the plungers in the lazarette, handles together and rubber cups out. I then marked the handles where the plungers gripped the sidewall. Then I drilled two holes in the plunger handles at the marked spots and fastened the handles together with stainless-steel bolts and screws.

Now I pack the fuel in the lazarette; push my plunger/divider against the walls, and the fuel and flammables are held firmly in place. It helps if the walls of the lazarette are slightly sloped, as the plungers can grip the walls well.

Now for the second use. The cockpit seats slope inward and collect rainwater, which is dispersed by ½-inch drains. The anchor well has the same arrangement. These drains often clog with debris. I simply use my plunger/divider to unplug the drains. 

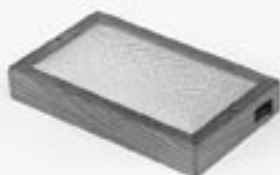


Everything in its place and a place for everything (all having at least two uses, of course). Plungers clear the cockpit drains and keep the fuel tank and gear where they belong.



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The runaway plug

How to stop a diesel that's running amok


by Don Launer

A RUNAWAY DIESEL ENGINE CAN BE A DESTRUCTIVE, DANGEROUS, and terrifying experience for people nearby. Although it happens infrequently, a runaway is possible if you overfill the crankcase with oil, are motorsailing at too much of an angle of heel, or have certain mechanical problems. Closing the throttle or turning off the fuel supply from the tank will have no effect because the engine is burning lubricating oil, not diesel fuel. I've only had a runaway engine once, about 20 years ago, but that was enough to make me take precautions in case it happens again.

A diesel engine that is running can only be stopped by eliminating the fuel source, the air source, or the compression. The fuel source — such as too much crankcase oil — cannot be easily shut off. If the engine is equipped with compression-release levers, the compression can be eliminated by raising these levers, which will stop the engine. Some engine manufacturers, however, warn that if the compression levers are lifted when the engine is operating at high speed, the pistons can hit the valves, causing severe internal engine damage. This leaves shutting off the air as the safest alternative.

Just inside the engine-compartment door, within easy reach from inside the cabin, I have a small wooden rack that holds a rubber plug that fits snugly into the engine's air intake. In case of a runaway, it can be rapidly and safely inserted in the air intake — before any engine damage can occur, I hope.

This rubber plug, which was purchased at a local hardware store, also serves a dual purpose. Most engine manufacturers recommend that rubber plugs be inserted in the engine's air-intake and exhaust ports during the winter lay-up to prevent condensation from forming inside the engine due to cold, winter air — so my runaway plug also serves that purpose.

And just in case I forget to remove the rubber air-intake and exhaust plugs during spring commissioning, I have a sign in front of the engine control panel to remind me. 



A runaway plug, above left, is cheap insurance. It is kept in a small rack just inside the door of the engine compartment, above. A sign in front of the control panel, below left, reminds author Don Launer that the winter plugs are in the air intake and exhaust.



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Cruising trashcans

ONE OF THE PROBLEMS ALL CRUISERS FACE IS WHAT TO DO WITH onboard trash between visits to town. Not only is it bulky, but let's face it, it does tend to smell after a few days, so just stuffing the trash bags in the lazarette can quickly give a boat the ambience of a landfill. I've seen some boaters store their trash in the dinghy, which does keep it downwind but is hardly satisfactory.

We came up with a solution that has worked remarkably well — we use “dry bags” as onboard trashcans. These bags are made of tough, 18-ounce, vinyl-coated nylon with a watertight closing system. They're commonly used by kayakers and rafters to keep their gear dry. Not only does the vinyl keep the odors in, but the tough construction allows you to squeeze the bag to reduce the volume as a sort of trash compactor. We use several of the extra-large size (12½ inches by 28 inches). They cost \$17.50 at <<http://www.sierratradingpost.com>>. As an added bonus, the bags float and could even be used as PFDs in an emergency — though I doubt they would be Coast Guard-approved! 



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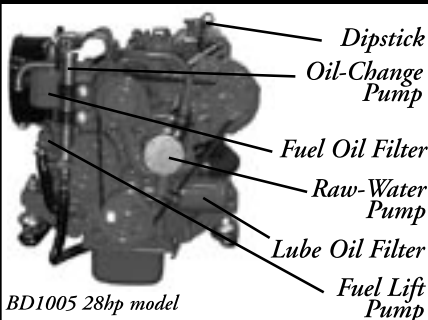
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It's the blame game

Down below, the weight wars are raging

by Niki Perryman

ABOARD OUR CRUISING HOME, *Siandra*, battlelines are drawn. It starts innocently enough. Jamie announces his intention to buy one of those natty angle-drive battery drills. Handy for tight corners and will serve as a backup if our regular drill dies, he says.

"Sounds useful," I say. "Which tool are you getting rid of to compensate for the extra weight?"

"Tool?" His eyes slide toward the groaning bookshelf. "I thought we could unload some of those books."

"Huh? Forget it, chum. New tool on, old tool off — you know the routine."

If it sounds too trivial for warfare, bear in mind that we're talking about the entire belongings of two packrats, and a stowage area smaller than your average cupboard-under-the-stairs. No garage or spare room, remember. Furthermore, that bit of space under the stairs has to be shared with charts, sails, spare parts, and sufficient cruising gear to survive both in the tropics and above the Arctic Circle. And did I mention that this cupboard's sinkable and doesn't sail well if overladen?

Weight was the least of our worries as we prepared to leave Sydney, Australia, 10 years ago. After all, we didn't own much compared to friends living in five-bedroom houses. And we'd need all those cans of food: we were about to

"Our first passage was a shock. We were used to racing Siandra with barely enough equipment on board to make coffee."

cross an ocean. Those oddments of secondhand cruising gear from other family boats would surely come in handy. You never know when you'll need a chart of Tonga — even if we were heading in the opposite direction.

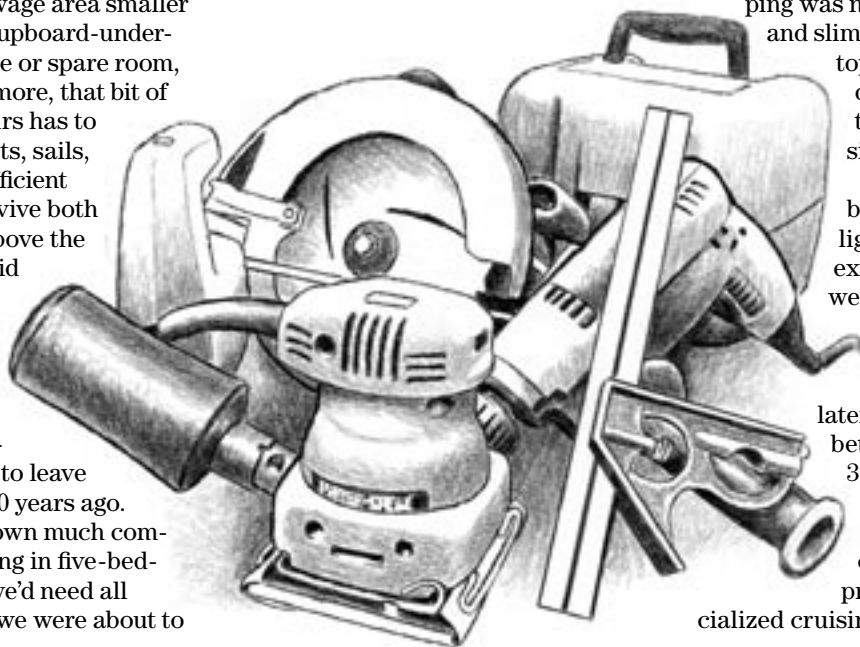
Just afloat

Forty carloads later, the boat was still floating (just), but the crewmembers were tearing their hair out. Where on earth would we stow it all?

Our first passage was a shock. We were used to racing *Siandra* with barely enough equipment on board to make coffee. The thoroughbred had turned slug. Not only was she slow, but she sailed through waves instead of over them. Her boottopping was nowhere to be seen,

and slime was growing up the topsides. At the first opportunity, we raised the antifouling paint six inches.

Since then, we've been on a mission to lighten the load. Some excesses are obvious: we bought so many dried beans before we left, we were eating them six years later. And 35 polo shirts between two people on a 35-foot boat is ridiculous. Then again, we've found a few canny ways to solve problems without specialized cruising gear, like using our





bosun's chair as a swim ladder (*Good Old Boat*, July 2001).

Inevitably, we've made mistakes. Everything has some value or it wouldn't be on board. The question is: is it valuable *enough*? We voted no when it came to the garden hose. The damned thing had been coiled up in the quarter berth for as long as we could remember. A month after we threw it out, we needed a hose so badly we had to buy a new one. That hurt.

On balance, we're getting lighter and smarter. If it weren't for the tools and books, we could have the old girl leaping the waves like she used to.

It's his fault

Jamie's to blame, of course. He comes from a family of hoarders. His dad collects vintage sailboats, wacky chess sets, and thrift-store shirts. His brothers are into bronze boat hardware and tired BMWs. Jamie's passion is tools. Not a bad one to have when cruising a wooden boat, especially when you earn your living as a shipwright. But surely there are limits?

Perhaps not. Veteran cruiser Lin Pardey once confided that she'd given Larry an ultimatum. Either he rid

Talei-
sin of
some redun-


dant tools, or she would sort through the drawers and throw out anything he hadn't used during the previous year. "Suddenly I found him tackling all kinds of obscure jobs," she laughed. "And guess what? *Every* job required a tool from the very back of the drawer."

Now books are a different matter altogether. You need lots of books.

How could we navigate without those cruising pilots and the almanac? The dictionaries and whale-watching guides are vital. We'd survive without the recipe books, although the grub would be grim.

But how could we bear to give away Jonathan Raban's *Coasting* or Miles Clark's *High Endeavours* or Farley Mowat's *The Boat Who Wouldn't Float* ... even if we have read each of them three times?

The final arbiter has to be the boat. All tools are stowed on the port side, all books and paperwork to starboard. The simplest way to resolve the battle is to hop in the dinghy and check out which way the old girl is listing.

Hmmm ... well, OK. Could anyone use a well-thumbed, much-loved copy of *High Endeavours*? 

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we could have the old
girl leaping the waves
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Purchased larger boat. In Bayfield, Wis. \$25,995.

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Seidelmann 25

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cruising. Motivated to sell, purchased larger boat. In Texas. \$7,800. Trailer included.

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1972. Hull #168. Cruised extensively in Narragansett Bay, Martha's Vineyard Sound, Nantucket Sound. In excel. overall cond. Upgrades include rebuilt Universal Atomic 4 (Moyer Marine) w/Indigo A4 prop, teak-and-holly sole, mahogany bulkheads, new interior cushions (blue), Harken RF, w/130 genoa, new mast, new traveler, others. Upgrades by email. In Centerville, Mass. \$20,500.

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paulchychyk@attbi.com

Capri Cyclone 13

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rebinva@cablenet-va.com

Bristol 24

1969. Hull #347. Same type seen in *Good Old Boat* January 2003. A husky little ship. Main, working jib, 150 genny w/RF. Johnson 9.9 in lazarette mount. Dinette, full-cushioned interior and cockpit, marine head. S/S sink w/hand pump, VHF, anchor and rode. Peaks Island, Maine. \$7,200.

Gus Karlson
207-772-6603
karlson@prodigy.net

Cape Dory Typhoon Senior

1986. Hull #30. Many new upgrades in '02: Doyle full-batten main, 140 RF genoa w/foam luff, Schaefer furler, Harken blocks, double lifelines, Raymarine ST-60 Tri-data depth, SaniPottie. 2000, Nissan 5-hp OB. Double bow pulpit/stern rail, lightning ground system. Saturn compass, VHF, Stereo-CD, bilge pump, Danforth, 250-ft rode, fenders and docklines. In Holland, Mich. Asking \$13,000. Email for list and photos.

Doug Hill
616-285-7165
djhill@earthlink.net



Contessa 26

1985 sloop. LOA 26', draft 4'6", 10-hp Bukh diesel. Porta Potti, windvane, Profurl jib, Avon life raft, EPIRB, ICOM radio, radar, solar panel, spare main and head sail. In N.J. \$23,000.

Calley
48-0477

Nimble 20

1990. Canoe-stern yawl. Dark green hull, cream topsides, tanbark sails. Gorgeous! Well-maintained, 4 opening ports, fwd hatch. Standard Horizon radio, lighted compass, shorepower, 2 GFI outlets, installed battery charger, 12-V fan, teak cockpit table. 11" draft w/CB up makes launch/recovery easy. Schaefer RF jib and self-feeding mizzen makes single-handed sailing simple. More gear in storage on trailer. \$8,500.

Steven
@aol.com



Ericson 25+

1983. Galley w/2-burner stove, 18-gal water tank, head, stereo and fin keel. 1998 OMC 9.9-hp OB. All engine and line controls feed to cockpit. VHF, Loran, pull-out bed for 2, icebox. Teak interior trim w/velour cushion covers. 6-ft headroom. Main, spinnaker, 110, 130, and 150 jibs. More at <http://www.yachtworld.com/listing/yw_listing_detail.jsp?checked_boats=998260¤cy=usd&units=feet>. \$14,900.

Joe Bonola
860-871-8221
jmbono@yahoo.com

Voyager 26

An efficient, graceful double-ender small enough to fit a limited budget, yet large enough to make long, offshore passages in safety and comfort. Shallow draft, moderately high displ. for a long cruise without sacrificing performance. In eastern Virginia. \$28,000 <<http://www.traditionallyyachtsales.com>>.

John Schnoering
877-776-0433
ipyacht@crosslink.net

Nor'Sea 27

1977. Aft-cockpit model, triple-axle trailer less than 3,500 miles, new Yanmar 20-hp diesel, new Walker Bay 8 dinghy, electronics, ground tackle, etc. In Savannah, Ga. \$29,500.

John Beard
970-263-8000
johnbeard43@yahoo.com

Catalina 22 swing keel

1976. Great cond. All lines lead aft. New work done in '01 includes: standing rigging, bottom paint, keel and winch cable, keel hanger, bushings and bolts, auto bilge, Windex. Also includes '01 Evinrude 5-hp 4-stroke, Porta Potti, lazy-jacks. Trailer in good shape. New trailer work in '01: surge brakes, springs, cylinders, wiring and lights, keel guide. On Flat-head Lake, Mont. \$4,800.

Kent Bray
406-728-2899
ksccbbg@aol.com



Irwin 28

1975. Great freshwater boat in good cond. New CDI furler and Boomkicker vang are among the continuous upgrades. Volvo Penta MB10A runs strong when the wind isn't. Tiller steering, steel cradle. In West Mich. A lot of boat for the price. \$8,900.

Dennis Lavis
231-843-1561

Catalina 22

1984. 8-hp Johnson LS, freshwater sailed, winter stored inside, VHF, depth, pop-top w/enclosure, pull-out galley, swing keel, new RF, trailer w/tongue extension, whisker pole, safety equip. Exc. cond. In Lansing, Mich. \$5,699.

John Cansfield
517-626-7906

Pacific Seacraft 25

1977 Mk II cutter. On flatbed trailer. Out of water since June 2000 survey (available w/pics). Sound and solid w/few nickel-sized blisters. Sails fair, RF jib. Sound Yanmar YSM8. Brightwork needs attention. Survey indicated fair market value of \$18,500 when minor repairs completed. \$13,500 on the trailer. Delivery from Corpus Christi, Texas.

John Schanafelt
361-808-9429
jschanafelt@interconnect.net

Kittiwake 23

1978. Beautiful, traditional full-keel lines. Ready to sail w/your customization. Jiffy reefing, lines lead to cockpit. Main, storm jib, jib, 135 genoa, oversized rigging, mainsail cover. Great trailerable daysailer/weekender. Shallow draft, can go anywhere and also provides good comfort in rough weather through open water. Sailed to Bermuda and back in '78. Great starter boat. More info at <<http://www.captamsyacht.com>>. \$5,000.

Edward Lieberman
elieberman@cox.net

Cape Dory 25

1978. CD 25, hull #630. Lightly used, well-cared-for Finger Lakes boat. Nov. 2001 survey. Boat is mostly original. Main, jib, and newer genoa, '98 8-hp Evinrude, Porta Potti, life-lines, sailcover, anchor and rode, ladder and bumpers. New vinyl dinghy included. Located in New York. \$6,000.

Sold
Call 315-389-9133
killian@rochester.rr.com



Westsail 32

1979. Factory built. New/recent upgrades: hull paint, satellite phone, standing rigging, chainplate bolts, boomkin staytangs, Harken RF headsail, stays'l, trys'l, electric windlass, Cutlass bearing, refrigeration, water-maker, inverter, electric head. Volvo MD17C 36-hp. Radar, GPS, depth, ICOM VHF, TV/VCR, solar panels, 2 CQR anchors. In dry storage in San Carlos, Mexico. Details, photos, survey available on request. \$47,000.

Bob Forrest
grayhare61@hotmail.com

Schock 25

1964. All fiberglass (no core). A fast, fun-sailing, cuddy cabin sloop. The first boat built by Bill Schock (see article, Page 4 this issue). Trailer included. Browse <<http://www.io.com/~mayfield>> for info and photos. In Austin, Texas. I've bought a J/24 and have too many boats. Email link on webpage. Make me an offer.

Mike Mayfield

Lancer 25

1983. Mark V sloop. White w/dark blue sheer stripe, low profile, exc. cond., sails well, very roomy open interior plus large cockpit. 5'8" headroom in cabin. New bottom paint, Yamaha 9.9. Recent survey. Fully-equipped, ready to sail. Should only need basic maintenance. In Victoria, British Columbia. Photos, info via email. \$13,500 Canadian.

Peter Jacobs
250-478-5046
pjacobs@islandnet.com



S2 6.9 (22-footer)

1984. 7 sails, racing and full-batten main. 4 jibs: two 150 genoas (1 Mylar and 1 Dacron), 110 Dacron genoa, 95 storm jib. Also Dacron spinnaker w/pole. Some Harken hardware, Nissan 9.8-hp LS elec. start, swim ladder, Porta Potti, sleeps 4, icebox, no through-hulls, centerboard drop 5'1", fractional rig. In Brooklyn, N.Y. \$6,500.

Craig Poole
718-333-9838
CrPoole@mindspring.com

Pearson 323

1979. Hull #179, Volvo MD11C. Ready to cruise. Bimini, ST4000 Autopilot, 3-burner propane w/oven, H/C pressure water, S/S sink, Y-valve w/macerator, shower w/sump, Harken RF, battery charger/Truecharge 20+. 2001 Grunert refrigeration w/freezer, Zodiac 8' dinghy, Mercury 3-hp OB, 13" AC/DC color TV, SeaWatch antenna. 2002 dodger, Standard Horizon CP160, JVC 1500, Intrepid VHF w/RAM remote MIC, microwave, and reconditioned mainsail. Much more. \$36,500.

Jim Grimmett
910-326-4689
jgrimmett@ec.rr.com

S2 9.2A

1977. 2-owner, freshwater boat in beautiful cond. UK sails. Electronics new in past 4 yrs. Barrier coat, VC-17. WS. Atomic 4 30-hp runs perfectly. Interior and exterior teak refinished. Always dry, no deck leaks. Ready to sail. Includes shorepower, fenders, life jackets, new cockpit cushions. Wood cradle. In Holland, Mich. Motivated to sell, moving to S2 11.0m. Definitely the best 9.2A and value on

the Great Lakes. Complete listing upon request. \$21,000.

John Toben
989-725-7871
jetsails@yahoo.com



Catalina 27

1984. Second owner since 1989. Fresh bottom paint, waxed topsides. Standard rig, cabin. New bottom 1994. 14-hp Universal diesel inboard, low hours. Guest dual charger/shorepower. Teak enclosed head, holding tank, macerator. RF jib plus 2 hank-on sails, cruising spinnaker w/Chutescoop and pole. Self-tailing Lewmars, all lines led aft. Autohelm, full instruments. Lots more! A solid, fast, easy, singlehanded boat. In Annapolis, Md. \$14,800 OBO.

Dan Walker
443-465-0749
dealer@comcast.net

O'Day 25

1976. Completely remodeled, looks sharp! Trailer, 5 sails, 6-hp Johnson, swing keel, all new wiring, equip. Very clean, custom storage. Located in mid-Mich. Photos available on request. \$8,500.

Roger Parsons
616-984-5196
parsons@pathwaynet.com

Pacific Seacraft Flicka 20

1984. Generally in good shape. Out of water since '99. Professional captain has no time to finish refit. Boat is solid, most of work needed is cosmetic. No engine. In Tampa Bay, Fla. \$19,000.

Capt. Vangelis Lazaridis
813-651-0737 or
813-967-3899
VLaz@msn.com

O'Day Javelin 14

1985. Rarely sailed. Trailer like new. New reefs in main, cover, cockpit cushions. \$2,500 OBO.

Steven Hier
507-847-4146
sjhier@rconnect.com

Westerly Centaur 26

Twin keel, British-built sailboat. Draft 3'4", headroom 6', sleeps 6. Enclosed head, new main, new Profurl RF. VHF, GPS, depth, stove. New 18-hp Perkins 3-cyl. diesel. Sails effortlessly. Lots of extras. In Va. \$12,000.

Eric Von Mueller
804-438-5770

O'Day 27

1975. Comfortable cruiser. Side galley model, fully equipped w/OB. Many race trophies. Boat of the Year! Located in Michigan City, Ind. \$9,500 (negotiable).

Bob Lamb
219-362-4311
lambc@csinet.net



Islander 29

1967. By Wayfarer Yacht Corp. Documented. Looking for new home and someone searching for a structurally sound fiberglass sailboat w/unlimited possibilities. Tiller steering, LOA 29'1", beam 8'10", draft 3'8", 2,700-lb fixed keel, 30-hp Atomic 4 gas in-board, 30-gal fuel (needs new tank), 25-gal water, enclosed head/sink, galley w/full 6'2" headroom. Sleeps 2 in V-berth, dinette converts to double, and a fifth sleeps in full-length quarter berth. In Morehead City, N.C. \$7,500. Details by request.

Owen Latham
603-474-3732

OwenLatham@juno.com

Ericson 27

Sloop-rigged, freshwater sailed. Main, working jib, 150 genoa, storm jib. Chrysler 10-hp OB, 110-V dock-side power, 2 batteries w/charger. 5 berths, enclosed head w/marine toilet, holding tank, aft galley, 20-gal water, Force-10 bulkhead-mounted kerosene heater. LOA 26' 9", beam 9', draft 3' 11", displ 7,000 lb, ballast 2,900 lb lead. Tiller. In Kansas. \$9,000 <http://dulcinea.unl.edu>.

Newell Decker
402-423-2130
tdecker1@unl.edu



Elizabethan 29

Diesel-powered Bermuda-model w/trailer. British-built example of C.R. Holman's successful design for a full-keeled cruiser w/good windward performance. New freshwater-cooled Volvo MD7A w/new 3-blade prop. New professionally applied epoxy barrier coat and bottom paint. 3-axle trailer adjustable to any sail or power craft to app. 34 feet. St. Simons Island, Ga. \$10,500.

Brad Barwise
912-638-9880
barwise3@juno.com

O'Day 27

1974. 3 jibs, 2 mains, 1 spinnaker sail and pole, autopilot (tiller). Two new VHF radios, stereo, RF, 9.9-hp 4-stroke Yamaha OB. Steel cradle, much more. Exc. shape, no blisters. Located at Great Lakes Yacht Club, St. Clair Shores, Mich. Owner retiring to Florida. \$7,500.

Seymour Kirsch
248-661-6888
Seymourkir@aol.com

Corsair F-31

2001. Trimaran, hull #193. White hulls w/gray nets, aft-cabin design, aluminum rotating rig, Calvert racing sails (main, jib, screecher, and asymmetrical spinnaker). Garmin Plotting GPS/sounder, USCG documented. Trailax aluminum 2-axle trailer. Light freshwater use only. In St. Louis, Mo. Will deliver. \$110,000.

Kip Williams
636-937-3326 ext. 112 (day)
wilkip@aol.com

Tanzer 22

1977. Freshwater only. New main and storm jib '99. Original 110 and 150 genoas in good cond. Well-maintained Johnson 9.9-hp OB. 8' Zodiac inflatable. VHF, S/D, compass, ground tackle, more. Recent upgrades include transom-mounted boarding ladder, stern pulpit, and cabintop stanchions. Includes steel cradle for winter storage. Family forces sale! In Thunder Bay, Canada. \$4,700 OBO.

Roberto Campanaro
807-597-4654
campanaro@nwon.com



Haida 26

1977. Teak cabin sleeps 4. Teak and bronze windows and fittings. Inboard diesel w/less than 150 hrs. Full sail inventory, self-steering, many extras. Ocean-worthy cruiser. A beautiful, sound boat. \$9,900. Trailer included. Ready to sail.

Chuck Leonard
406-829-1412 or
406-544-2856
Leonard@selway.umn.edu

Yankee Dolphin 24

Designed by Sparkman & Stephens for Yankee Yachts in the Midget Ocean Racing class. Teak rails and all exposed teak varnished. Prettiest boat in marina. Electric start 9.6-hp Evinrude inside rear hatch has an inboard look. Beam 7'8", 1,750-lb lead, shoal keel, draft 2'10" w/swing to 5'2". Custom trailer, toilet. Wired for shorepower. 5 sails and lots of equip. \$9,000.

Bill Watson
763-404-0242
peeweebw@lycos.com

Com-Pac 27

1986. Lake Norman, N.C., cruiser, Universal diesel, 3 sails, Flexible Furler, Standard Horizon S/D, VHF, 2 marine batteries new in past year. Main cabin fabric replaced last year. Panasonic AM/FM/CD, cabin/cockpit speakers. Edson teak table in cockpit. Binnacle compass refurbished. Bimini, dodger, mainsail cover replaced in last 18 months. Details, photos available by email. \$26,750.

Buddy Layman
704-957-8377
cmljr@ix.netcom.com

Morgan 34

1967. 6 sails incl. full spinnaker. New Universal diesel and Autoprop. New deck paint 2002. Full instruments. Perfect Chesapeake Bay boat. 3'3" draft, 6'3" headroom. Must sell. Two-boat owner. In Northern Chesapeake. \$19,500 OBO.

Jim Taneyhill
410-592-5754
taneydds@aol.com

Irwin 25

1973. RF, 10-hp Honda OB. Refit 2000, sleeps 5. Originally from Port Huron, Mich. Sailed last 5 years on Lake of the Woods. \$9,500 Canadian.

Don Neumann
204-888-4770
ndneumann@shaw.ca

Alberg 37

1967. Well maintained. New anti-blister bottom, 30-hp Atomic 4. In Manitowoc, Wis. \$37,000.

David A. Lahmann
319-882-3023

Cal 2-30

1971. Bill Lapworth-designed racer/cruiser. Sails fast, comfortably. LOA 30', beam 9', draft 5', displ. 10,300 lb. Includes 5 jibs from 105 to 170, 3 spinnakers, blooper. Spinnaker pole, reaching strut, boom for club-footed jib. Oversized Barient winches, Contest compass, S/D, wind direction. '85 Yanmar 3GMD, 18-gal fuel and water tanks, tiller. VHF, Loran, AM/FM cassette. In Calif. Photos: <www.geocities.com/slyfoxrwc>.

Drea Harris
650-949-4640
slyfoxrwc@earthlink.net



Unique wooden ketch 46

1998. Motorsailer, hull 46 x 13, (overall 75'). Traditionally built and rigged. Planking copper riveted. Very strong boat, ideal for family or friend cruising, associations, day charter, liveaboard. Worldwide electronics (radar, autopilot, generator). Many sails. She is too beautiful! 150-hp Ford diesel engine. Recent interior finishing. Exc. cond. More info and photos <http://www.le-tigara.com>. Unique sailboat at a production boat price! \$350,000 plus tax.

Philippe Wohlhuter
philippe@le-tigara.com

Rasmus 35

1976. Halberg-Rassy ketch. Center cockpit, 63-hp Volvo diesel. Fully-equipped. GPS, radar, VHF electric head, inflatable OB. Original owner. Exc. cond. In Mass. \$63,000.

Tom Moscarillo
978-807-7364



Macwester twin keel 28

1969. 7-ton fiberglass auxiliary sloop, Volvo Penta 15.5-hp, tiller. Sleeps 4, 6' headroom, Furlex RF, 4 sails, jiffy furling boom, red dodger and sailcover in exc. cond, mahogany interior, African teak toe and grab rails. Stern boarding ladder. Dinghy also available. Original head, no MSD. Nice British sturdy cruiser, 2'9" draft. Time to let someone else enjoy the family boat. In Cape Cod, Mass. \$9,999.

Robert Nielsen
508-420-7333
Caneel35@aol.com

Tayana 37

1983. Hull #342, cutter rigged, sailed Great Lakes until '95 then cruised East Coast, Keys, Bahamas. Well maintained. Fiberglass decks, rebuilt Yanmar 3QM30, 5 sails, 4 anchors, windlass, new standing/running rigging, Harken RF, newly painted/rewired deck-stepped aluminum mast, Autohelm 5000, Garmin 75 GPS, 3 Siemens solar panels, new dodger, Bimini, 3-burner Shipmate stove/oven, Norcold fridge. Spacious custom interior w/exceptional storage. In Green Cove Springs, Fla. \$79,000. Details, photos: <http://www.yachtfreyja.com>.

Robert and Gerlinde Lindy
513-325-7009
RMLindy@aol.com

Aquarius 23

1974. New mainsail, 2 headsails. 1985 9.9-hp Honda 4-stroke OB. Drop CB, draft 13" board up. Pop-up cabintop w/bug screen tent. All cushions, seat backs recovered. New Porta Potti. Rebuilt rudder, new tiller. Trailer recently sand blasted and painted. New tires and bunks. Ready to sail. Bought a bigger boat, need to sell. In Minn.

Steve
507-876-2733
smack@schadtracy.com



Westerly Cirrus 22

1970. Babied, improved, single-owner since new. Unanimous winner in *Yachting World* trial against 9 competitors. Similar *Yachting Monthly* trial called her "outstanding," "worthy winner." Fast, stiff, dry, ruggedly-built, roomy, comfortable in a seaway. 8' beam. 3,500-lb single keel, 46 percent ballast. New fully-battened

Hood main. Full headroom, 4 berths, enclosed head, galley, dinette, large cockpit. Wood interior w/varnished overhead. Lloyd's certificate. Sound as a dollar. In Cape Cod. \$5,900.

Gary
781-383-1305
gsharp1@attbi.com

Pearson 39
1976. 4-cyl. Westerbeke diesel. In Northport, N.Y. \$40,000.

Ed Hall
631-821-0539

Cape Dory 25
1977. Exc. cond. Ready to sail. 9.9-hp OB, new compass, new Waverly upholstery. \$10,000.

Laura
864-225-5282 or
864-225-9070



Crotch Island Pinky
1980. Salty replica by Peter Van Dine. Well cared for, dry sailed 22-foot Chesapeake character boat features fiberglass hull w/varnished oak coamings, toerail and rubrails, varnished hollow Sitka spruce masts, painted wood seats, oiled fir sole, swing keel, electric motor, 2 batteries. On custom trailer. On Lake Minnetonka, Minn. \$7,500 OBO. Boatlift included.

Steve Boller
952-474-5022

Catalina 25
1986. Sloop-rig. Last bottom job in Feb. '02. Pop-top, 7.5-hp 4-stroke Honda. Stove, Porta Potti. Very clean rig, 3 sails, new depth finder. Bought a larger boat. In Southeast Texas. \$8,900.

Terry Swan
409-782-3133
swan@ih2000.net

Pearson 30
1973. Modernized Atomic 4. Clean, well-maintained. Raced and cruised. RF, 5 sails, spinnaker, pole. Folding prop, autotiller, pressurized H/C water. S/D, tach, compass, VHF, AM/FM, weather. Danforth, dodger w/awning and more. In Chesapeake Bay, Md. \$12,000 OBO.

Richard and Barbara Hampel
215-822-8637
bhmpl@att.net

Westsail 28
1976. Factory-built cutter. 27-hp diesel w/500 hrs. Exc. cond. In Berkeley, Calif. \$28,000.

Tom Turner
510-517-8167
tturner@ebnmng.org

Bristol 22
1972. Caravel. Heavy-built, great sailing boat. Very stiff. 3'5" fin keel. Truly exc. inside and out. Huge cockpit.

Well maintained wood coaming and interior. Main and 110 sails. Sails like a much larger boat. For more info, see Bristol sailboats <http://members.aol.com/bristolylt/>. 9.8-hp Mercury OB included. Wood cradle. Purchased larger boat. Must sell. \$2,500 OBO. Email for photos. In Toledo, Ohio.

Jeff
419-474-5305
FlyingScott@Buckeye-express.com



Fisher 30
Motorsailer. Complete refit in 2002. For details and price, see <http://www.fisherlionheart.net>.

Frank
408-398-4057

Pearson 30
1977. Very good cond. Atomic 4 engine. Mainsail, working jib and spinnaker w/pole, compass, VHF, Loran. Sleeps 4 to 5. Beam 8', draft 5'5", LOA 30'. In Raritan Bay, N.J. \$18,000 OBO.

Kurt Dorste
908-647-7659
basket99@bellatlantic.net



Herreshoff 32
1932. Hull #3 from MIT plans. Built in '96 as reproduction. LOA 32', LWL 20', beam 5'6". Cedar planking, oak ribs, bronze fastened. Blocks and hardware from original patterns. Forerunner of the Fishers Island 23. These long, narrow, easily-driven hulls were a European concept introduced here by Herreshoff. Custom trailer, storage/docking covers. 3-hp OB on bronze motor mount allows motor to be stored in cabin. Classic Sunday racer. Kansas City, Mo. Photos via email. Asking \$38,000.

Larry Gillen
816-454-1386
larry_gillen@yahoo.com

Westerly Centaur 26
1972. Sturdy English twin-keel cruiser. New paint and interior. Full standing headroom. Volvo Diesel. Heavy-duty trailer. Exc. cond. We love this boat but bought her big sister and can't keep two boats! In Minn. \$9,500.

Johnny Carver
218-631-4099
carverjm@uslink.net

S2 9.2
1980. Center cockpit. More room than most 30-footers, including aft cabin. Quality construction, Always freshwater, newer sails, new Andersen winches, new forest green canvas

and cockpit cushions, AP, spinnaker, 15-hp Yanmar diesel, exc. cond. Near Detroit, Mich. \$33,000.

Rick Janisse
248-816-4851
rick.janisse@abnamro.com

Blue Jay and Sunfish
#5256, McNair-built fiberglass, Farrar & Kappa sails, '98 West Marine trailer. Good race record. \$2,500. Also Alcott Sunfish, \$450.

Bill and Sharon Bell
860-535-2971
sharonsbell@aol.com

Morris Frances sloop 26
1977. Hull #5. Original raised deck, C. Paine design. New main, Sailor VHF, ICOM SSB, Datamarine DS/SL, Fleming vane steering, Autohelm Tillerpilot, wind gen, 1986 Volvo 9-hp diesel. \$26,000.

John O'Hara
781-545-7749
jackohara92@hotmail.com

Princecraft 16
Classic daysailer. Clean, pretty, fully equipped. Small open cuddy, sleeps 2 under boom tent. Swing keel, aluminum mast, wooden boom. Classic lines, fiberglass hull/deck, wooden trim, 2 sails, Johnson 4-hp. Exc. cond. New trailer. Firm \$2,500 Canadian. Photos by email.

Zoran
zorang@videotron.ca

Montgomery 23
1979. Actual boat in *Good Old Boat* magazine May 2003 issue #30. Beautiful cond., teak exterior, oiled teak and ash interior. 4 sails, 9.9-hp OB, tandem trailer, Bimini, Awlgrip hull, no blisters. Garmin GPS, Humminbird 3-D S/D/temp, spreader lights, 2 batteries, S/S boarding ladder, 2 anchors, custom winter cover, double lifelines, WC head, holding tank, 2 Y-valves and pumps. Full of TLC throughout. \$26,000.

Bob Mann
952-885-0909

Gear

Winches
2 Gibb 2-speed sheet winches. Never been used; stored only. Suitable for 35- to 40-foot boat. Located in Fla. \$250 each.

Cal Buck
352-686-9248

Spinnaker and Gori prop
New spinnaker, never used 3/4-oz tri-radial green/white. Leach 37'6", foot 20'.

Gori prop, 2-blade 16 1/2 x 13.
Sarge Goodchild
617-912-7011

PowerTalk Radio
Approx. 2-yr-old/brand-new SG2000 PowerTalk Radio with SG-230 tuner. In original boxes. Never installed. \$1,450. For more info, visit <http://www.sgworld.com>.

Hugh Owens
208-232-7236
cal48@cableone.net

Foul weather gear

Henry Lloyd offshore foul weather gear. One woman's and one man's; exc. cond., internal flotation and harness gear. Both suits \$1,000.

Dave or John Gorzka
847-258-3833

TF-20 TideFinder

Portable tide and current calculator by Conex Electro-Systems. Includes tide and current predictions for Mexico, California, Oregon, Washington, British Columbia, and Alaska through the end of 2008 (and beyond with update). Device retails new for \$398. In like-new cond. and has recently been back to the manufacturer for an inspection and new keypad. \$175 OBO (plus shipping).

Tim Whelan
425-898-0812
timwh@pobox.com

Wanted

Gear for Ensenada 20

Looking for a rudder, tiller, boom, and sails for Ensenada 20 by Lyle Hess.

Cal Buck
352-686-9248

Dinghy and Yanmar

Looking for a 6'8" or 7' Fatty Knees-style dinghy or a nesting dinghy. Also looking for a used Yanmar 1GM10 (single cyl.) engine in good cond.

Trent Sanders
818-790-2403
trent@gonzowrite.com

Tropical cruising sailboat

Husband, wife, and cat looking for 30- to 35-ft LOA vessel to cruise Caribbean. Hull integrity, strong rigging, and good sails important. Fiberglass, full keel, reliable marine purpose engine, 4'5" draft, opening portlight and hatches, self-tailing winches, RF headsail, toilet, sink, shower, cockpit benches long enough for sleeping, facing settees also same length. Under \$25,000.

Dave, Deb, and Maui (the cat) Walkup
573-221-3332
maui@socket.net

Magellan NAV 5000

Looking for a handheld Magellan NAV 5000 in good working cond. \$50.

Brooke Westover
772-283-2072

Sailing rig

Looking for a sailing rig for my Boatex 10 dinghy. Something around 55-60 sq ft w/1.5" mast diameter.

Jesse Garman
252-633-3941
sailman@pamlico.net

Alcohol pressure fuel tank

Looking for a 2-gal alcohol pressure fuel tank for a Taso 550A stove.

John Canfield
707-937-1344

1/3 interest in Cal 40

1966 Cal 40 sloop, hull #64, in great cond. Featured boat in *GOB* Jan. 2002

issue #22. Yanmar diesel, RF, full-battened main, propane stove/oven, forced-air heat, Autohelm 2000, VHF, GPS, S/D/W, several jibs and spinners. New Schumacher rudder in Feb. '01. Set up for cruising. \$200/month for moorage, electricity, and maintenance plus equity. In Shilshole Bay Marina, Seattle, Wash.

Bob
425-649-9167 (evenings)
robert.a.peters@boeing.com

Info on Celebrity boats

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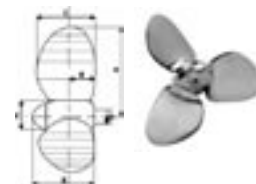
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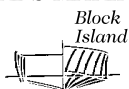
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Sept. 2003.....	July 1, 2003
Nov. 2003.....	Sept. 1, 2003
Jan. 2004.....	Nov. 1, 2003
Mar. 2004.....	Jan. 1, 2004
May 2004.....	Mar. 1, 2004
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Ada Leisure Products/ RodeRider.....84	Cruising Direct Sails67	JDA Inc.83	Sailor's Solutions Inc86
AirForce Sails75	D&R Marine/O'Day Parts.....62	JR Overseas Co.85	Sailrite Enterprises90
Air Head Dry Toilet85	Design Works/ MessingAbout.com.....83, 87	Kevane Sails.....87	Scully/Grin Design84
Alado Nautica USA74	Eagle Cliff Press.....83	LightsNMore86	Sea-Cure/World Wide Safe Brokers.....86
Alpenglow Marine Lights.....72	Eastern Sails and Canvas.....87	LineCatcher84, 85	Seven Seas Yachts83
American Rope & Tar84, 86	Edey & Duff87	Link Tools.....96	Snug Harbor Productions87
Annapolis Plating & Polishing.....83	Edson International.....89	Lou Diamond Art87	Solar Propulsion63
Anzam Yacht Refurbishing.....60	FaMet ReefFurl Sail Handling Systems85	Mahina Expeditions.....83	Somerset Sails87
Arne Jonsson Boatworks/ Saildrive 28071	Fatsco Stove/Tiny Tot86	Marine Mail Order/MMO.....65	South Shore Yachts86
Atlantic Sail Traders87	Fawcett Boat Supplies.....88	Marine Skylights85	Spartite60
ATN84	Featherman Enterprises.....66	MAS Epoxies/Phoenix Resins.....83	Sport-A-Seat70
Ballenger Spar Systems.....69	Five-year Clear/Smith & Co.82	Mast Mate65	St. Angelo Hardwoods.....82
Balmar96	Forespar Products.....70	Mauch's Sailboat Guide90	Standout Yacht Fittings.....77
Bauteck Marine Corporation.....96	Foss Foam Products.....85	McFeely's Square Drive Screws.....60	Sun-Mar Corp.74
Beta Marine North Carolina.....74	Freedomeals.....70	Midwest Marine Plywood83	Sure Marine Service89
Bingham Boat Works.....75	Global Navigation Software84	Minney's Yacht Surplus87	Surface Dive85
Boat Owner's World.....82	Good Old Bookshelf.....70	Moyer Marine98	Survival Safety Engineering.....93
Bo'sun Supplies.....67	Grab Bag Sailboats.....87	Myerchin Gear85	System Three Resins60
Borel Manufacturing84	Great Lakes Marine Specialties.....83, 84	Nautic Art87	T&L Tools/Unscrow-Ums86
Bottomsiders.....90	Hansen's Harbor62	Navigator Stove Works.....84	Tank Tender/Hart Systems.....93
Boye Knives.....85	Hayn Enterprises.....70	New England Chrome Plating83	Teakflex Products.....82
Bristol Bronze.....83, 84, 86	Head-O-Matic/ Alex Milne Assoc.....84	New England Ropes98	Thai Teak Marine82
Bugbusters/Sogeman.....84	Henry Inc.87	New Found Metals.....88	The Sailing Program83
Bulwagga Anchors.....85	Heritage Marine Insurance62	Overland Parts Corp.62	The Vinyl Image.....86
By-the-Sea82	High Marine Transport83	Paradise Cay Publications60	Tops In Quality72
Cape Horn Marine Products86	Hooper's Yachts75	Pen & Ink Press/Dabbler Sails.....83	Torresen Marine70
Capt'n Pauley Video Productions.....83	Hotwire Enterprises85	Philadelphia Resins/ITW89	Trionic Corp.84
CDI/Cruising Design Inc.....69, 75	Hydrovane Self Steering.....86	Poli Glow Products86	Tufted Topper/ Sails East-Midwest.....84
Celestaire95	IDASailor Marine86	ProProtector/ Yachting Services.....71	Variprop USA.....84
Celesticomp.....85	Independence Boatworks.....87	Raka Marine.....82	Voyager Windvanes.....73
Clark Craft Fasteners.....82	Indigo Electronics.....77	Rigging Only.....86	Westerbeke Corporation.....63
Classic Rope Fenders.....85		Sail Abaco, Bahamas.....83	Yager Sails and Canvas.....87
		SailboatOwners.com.....90	
		Sailboats Inc.69	



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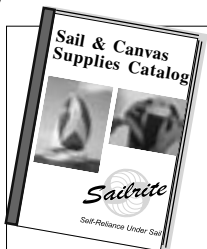
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Mark Ellis says

Many thanks for your kindness in sending along the copy of your fine magazine with Dan Spurr's article (May 2003). I appreciate the attention (typical designer ego), and my vanity is served by your use of the 25-year-old photo that shows me with hair and only one chin.

Mark Ellis
Oakville, Ontario

Jerry Montgomery writes

Your May 2003 issue stated that Lyle Hess designed the Montgomery 15 as well as the 17 and 23. In a way he did, because I learned most of what I know about design from Lyle, but I designed the 17 myself. The fact that I did was not a reflection on Lyle; it was simply a matter of wanting to try my wings. Lyle was happy with the 15, as was I, and he told me that the 15 was "the best looking boat I made." I remember disagreeing with him because I believed (and still do) that the Hess-designed Montgomery 12 was the best-looking of the bunch.

The other unimportant mistake was the fact that I started my business (Montgomery Marine Products) in 1969 and stopped production in 1995. I didn't retire; the small sailboat market had dropped to the point where it just wasn't fun anymore. I remained profitable only by downsizing, went through a long and bitter divorce, and decided that I had best get out while I gracefully could.

Looks like Bob Mann did a great job on restoring the boat. I wonder if it is the same 23 that won first overall in the Leech Lake Regatta in about 1979. Can't be too many yellow 23s in that area! I flew out and sailed with the family that owned the boat, and we did well and had a wonderful time. A great three-day race with well over 100 boats. Hope it's still a going thing.

Jerry Montgomery
Orangevale, Calif.

RodeRider

Thanks for bringing to my attention the recent letter from Tim Hanrahan (January 2003). The reasons he stated for his satisfaction using our sentinel can still be appreciated by your readers who may be interested in purchasing a RodeRider. Since 1984, we have provided a professional sentinel to our boating customers. It is still the No. 1 reason for Ada Leisure Products' existence. We sell direct to users and, by the way, only good old-fashioned checks are accepted as payment.

Gary Weeden
Alexandria, Va.

When he sent his note about the RodeRider, Tim was not sure whether Ada Leisure Products was still in business. Although the company has moved from Ada, Michigan, to Alexandria, Virginia, Gary notes that they are very much in business. The new address is: P.O. Box 25104, Alexandria, VA 22313-5104; <<http://www.roderider.com>>. Refer to their ad on Page 84.

Spaghetti for breakfast ?

I have rarely enjoyed an article more than "Black Lab in the Doghouse" by Sally Cole in your March 2003 issue. It hilariously illustrates how "things that *can* go wrong do" and how seemingly unrelated events can suddenly form totally

Happy birthday to us!

Good old boaters from left, front row: Karen Larson and Jerry Powlas, founding editors; second row: Michael Facius, advertising manager; Karla Houdek, financial manager;

third row: Mary Endres, art director; Fred Street, director of special projects; and Mark Busta, director of circulation and retail. Several others, who live at some distance from the *Good Old Boat* headquarters, were not photographed, but they are just as valuable to the overall operation of this magazine.



unpredictable links in a chain to disaster. An altogether wonderful story delightfully told. I do wish to note, however, that people who eat spaghetti for breakfast deserve to have it scarfed down by a wet 15-year-old black lab.

John Karklins
Chicago, Ill.

Good advice

My wife and I are relatively new to sailing. We, along with a small terrier, have been sailing the Long Island Sound in our 1989 Sabre 30 for four years. Each year, as we gain confidence in our boat and ourselves, we are taking longer jaunts. As a result, more than once we have discussed whether we need more room, size, and/or amenities. We have often thought something in the 35- to 40-foot range would do very nicely.

Now along comes Guy Stevens' article (Second Thoughts, May 2003), which has indeed given us second thoughts. Guy makes some very good points, particularly about the bigger costs and bigger complications associated with a bigger boat. And I have to admit his observation — that it's the smaller boats that are out there sailing — certainly holds true where we sail. Armed with this new insight, I must admit that our 30-footer seems pretty ideal for us. And I guess it always has. Thanks for a great article.

Bob and Bobbi Thomas
Ridgefield, Conn.

In a word

I noticed in Phillip Reid's article on repairing leaky portlights that in his epoxy directions he says to clean tools with acetone. One word: *vinegar*.

Vinegar is much better to use than acetone. It's so nontoxic you can drink it. It emulsifies uncured epoxy. It is cheaper and does not drive epoxy into your skin as acetone will.

Dana Munkelt
San Diego, Calif.

Jim Grimmatt spars with scammers

After receiving the following (very typical) email scam, Jim Grimmatt was inspired to reply:

"My name is Dorgan Nichason. I am interested in buying your boat which you placed for sale on the posted ads. Do let me know as soon as possible if it is still available for sale. Concerning the shipping, I have a reliable shipper who will take care of the shipping, as I am based in West Africa. Also

do let me know if you do accept payment drawn on an American cheque as I am much willing to buy. I look forward to hearing from you very soon."

Jim's response

Hello, My name is Jim. If you will have your agent put \$36,500 green American currency in my hand, you can buy the boat. Otherwise take your scam elsewhere.

Email scam is proliferating

We must warn those posting classified ads with an email address on the Good Old Boat website or posting their email address anywhere on the web these days that they will hear (often within hours of the posting) from scammers. This must work for the scammers, or they wouldn't continue this practice. Don't fall for anything that seems too good to be true. It probably is.



The latest from Nigeria

As a result of my ad and email address appearing on the *Good Old Boat* website, I have been flooded with scam letters from Africa. Many are variants of the usual story of millions tied up awaiting some party with a U.S. bank account who will handle the loot for a share of the proceeds. But the best one I received was from an alleged African importer who is buying boats for the Nigerian navy. He feels that my Pearson Triton is *just* what the navy needs! I'm not sure how his scam works, but the letter was a riot, almost as good as the one from the obvious drug dealer looking for a "clean" boat suitable for offshore pickups.

The enclosed photo of my boat in front of my house (above) is sent at the insistence of certain people who feel it might make a dandy cover for the magazine. The start of Chapter 7 in *A Cruising Guide to the New England Coast* has, for many years, been: "To be headed east by Schoodic whistle before a summer sou'wester, with Mt. Desert fading astern and the lonely spike of Petit Manan Light just visible on the port bow, is about as close to perfection as a man can expect to come on this imperfect earth." If you do get to the Schoodic whistle and hang a left, you will come to the house and the boat in the picture. And it *is* pretty close to heaven, if anyone asks!

Congratulations on a fine magazine — the only sailing magazine to which I subscribe after 40+ years of sailing.

W. H. Bell
Birch Harbor, Maine

Apologies to Lloyd's; we goofed

I've just eagerly made my first read through the new issue of *Good Old Boat* (May 2003), and I'm having a lot of trouble with the wood-characteristics table (allegedly from Lloyd's) in the article about working with woods used on boats. Have I just had one too many swigs from the Alzheimer's bottle? Or are a bunch of the column entries misplaced or erroneous or incorrectly copied or something else attributable to a cause other than the Alzheimer's bottle? Or maybe I just no longer know how to read a table. Would appreciate some enlightenment.

Thomas Ryan Nelson
Port Charlotte, Fla.

*The problem was not in **your** bottle. We had that danged table set up correctly and then stopped paying attention to it through several more proofs. That's when the gremlins moved the tab stops slightly. It is reprinted correctly on Page 93.*

Missed a photo credit also

While we're apologizing, we also omitted the credit for the photo of the Hinckley Bermuda 40 on Page 29 in the May 2003 issue. Buell Hollister, *Blue Chantey's* owner, had asked: "Please credit Norm Fortier of South Dartmouth, Mass., for the great picture of *Blue Chantey* under a double reef and a heavy-air jib leaving Padanaram Harbor in 25+ knots of wind from the SW, heading out into one of our typical Buzzards Bay summer afternoons."

Vendor praise

Just had to write with a bit of praise for a good old vendor. I recently purchased a 1985 Sanibel 18 with a busted boom fitting. One of the tabs for the clew fitting had broken off, and I was thinking through a jury-rigged repair when a salty neighbor stopped by. He noted a very faded supplier label on the extruded aluminum mast. We could barely make out the name, Dwyer, and my neighbor commented that he thought they were still in business. That night I did an Internet search and confirmed his observation at <<http://www.dwyermast.com>>. I measured the boom extrusion and found the fitting was still in production and available for less than \$50. Around noon the next day I called Dwyer and placed the order with a credit card. It arrived the next day by FedEx (\$7 standard shipping). It's a beautifully cast part, and it fits the boom and mast perfectly. My hat's off to Dwyer for their excellent customer service!

John Oetting
Fair Haven, N.J.

And more attaboys

I recently complained bitterly to the folks at Whale that the little rubber footpad on my Galley Gusher pump had split after only 25 years of service. I could not find one in the local marine supply stores, so I emailed the manufacturer (still in business after all of these years, something which cannot be said of too many marine suppliers). They responded quickly and courteously with a replacement directly from Ireland. Good service, good product. Their website is <<http://www.whalepumps.com>>. My contact was Joy (a well-deserved name) Gray.

Brian Coffay
Georgetown, Md.

Lloyds' guidance on the selection of timbers for constructional members

Timber Species	Average Weight Air-dried		Keel & False Keel	Deadwood	Stem	Sternpost	Bilge & Chine Stringer	Beam Shelf, Stringer & Clamp	Floors	Frames		Hull Planking		Deck Planking	Beams & Carlings	Knees		Covering Boards, Kingplanks & Margins	Natural Durability	Resistance to Impregnation	Ease of Gluing
	Lb per Cubic Foot	Kg per Cubic Meter								Grown	Bentwood	Below Waterline	Above Waterline			Hanging	Lodging				
Afrormosia	43	690	B	B	B	B			B	B					B	B	B	B	V	E	S
Afzelia	51	815	B	B		B						B	B						V	E	S
Agba	32	515								B**		B	B	B					D	R	S
Cedar, Western red	24	385										C		C					D	R	S
Douglas fir	33	530					C	C				C	C	B	B				M	R	S
Elm, English	34	545	B	B	B	B													N	M	S
Elm, Rock	44	705					B	B				A*				C	C		N	R	S
Elm, Wych	42	670	B	B	B	B													N	R	S
Guarea	36	580										B							D	E	S
Gurjun	46	735	C	C	C	C			C	C		B	C						M	R	S
Ipil	45	720								B	A								M	R	S
Iroko	40	640						B	A	A		A	A	A				A	V	E	S
Kapur	46	735	B	B	B	B	B	B	B	B		B	B	B	B	B	B	B	V	E	S
Keruing	46	735	C	C	C	C			C	C		B	C						M	R	S
Keyaki	39	625	B	B	B	B			B	B						B	B		D	R	S
Larch	35	560					B	B		B**		B	C		B	B	B		M	R	S
Mahogany, African	33	530	C	C	C	C	C	C	C	B**		C	B	B	B**			C	M	E	S
Mahogany, Honduras	34	545	B	B	B	B			B			B	B		B**			B	D	E	S
Makore	39	625	B	B	B	B			B	B					B**				V	E	S
Oak, American white	48	770	B	B	B	B	B	B	B	B*	A*	B	B		B*	B	A	B	D	E	S
Oak, English	45	720	B	B	B	B		B	B	B*	A*	B			B*	B	A	B	D	E	S
Opepe	46	735	B	B	B	B			C			C	C	B				C	V	M	S
Pine, Pitch	44	705						B				A	B	B	B				M	M	V
Redwood, European	32	515					C	C				C	C	C					N	M	S
Robinia	45	720	B	B	B	B			B	B	B								D	E	S
Sapele	39	625	C	C	C	C	C	C		C		C	C						M	R	S
Spruce, Sitka	28	450					C	C				C	C	C	C*				N	R	G
Teak	41	655	A	A	A	A	A	A	A	A		A	A	A	A	A	A	A	V	E	S
Utile	41	655										A	A	A					D	E	S
Yacal	62	990	B	B	B	B	B	B	B	B						B	B		V	E	S
Yang	46	735	C	C	C	C			C	C		B	C						M	R	S

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And another cool thing

Ken Clift of Teakflex writes about a new patent he's developed "for the rest of us:" During my years in the sailboat teak product aftermarket business, I realized the need for a simple way of replacing worn and broken teak handrails. I believe my system surpasses anything on the market at present. The product consists of various lengths of 1-inch teak dowels according to the length of handrail required. This is

supported with pylons, primarily of teak in two styles, an inner support and a rounded end support. Considering the present replacement handrails that are available, there is a standard support distance that may not conform to the bolting locations that are on the craft. The only other alternative was to have custom handrails made costing approximately \$40/foot. Our system costs as little as \$10.50/foot and has several advantages. The footprint of



the rail is longer than present handrails, giving extra stability and less chance of leaks, one cause of support distance flexibility. Dowel replacement — should it be necessary — is very easy. The general appearance of our item is rugged, yet very stylish.

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Magnificent obsession

I have long felt awkwardly different from Earth People, but was reassured, a little anyway, by Water Rat in Kenneth Grahame's *Wind in The Willows*: "There is nothing — absolutely nothing — half so much worth doing as simply messing about in boats." Now comes Dan McDougal ("The Shipwright Principle," March 2003) with a unified theory of (good old) boating existence. Thank you, Dan. At long last I am at peace with my magnificent obsession!

John Atkisson
Washington, D.C.

A new product

At the Atlantic City Sail Expo, I ran into a new product that you should look into ... the Suspenders line has added a fanny pack inflatable which is far more comfortable even than the collar-style ones. Same cartridge and same 35 pounds of buoyancy. You do have to pull it up over your head after it is inflated. I bought one and wear it whenever I'm alone on the boat. I wear it in front, so it doesn't annoy when I sit. Check it out.

Dan McDougal
Williamsport, Md.

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Docking... the great intimidator



Trucking isn't easy, but docking is worse

by Karen Larson

JERRY NAMED IT YETI, ANOTHER NAME FOR Big Foot. It is the largest truck we can imagine driving. We'd been driving small sedans and sports cars before we decided it was time to travel the country with a trailerable boat ... a big trailerable requiring a three-quarter-ton diesel pickup. It's a big truck. Some days, when this used truck was new in our lives, we'd open the garage door and be shocked to see that huge vehicle there. Sometimes the surprise led to hysterical fits of laughter. We had trouble adjusting.

It can just fit in the garage. Side mirrors barely clear the openings on each side, and there's not an inch to spare front to back. We have to remove the trailer hitch to close the garage door.

After driving small and smaller cars all my life, I was intimidated by the idea of actually driving the truck, getting it into and out of the garage, and even more intimidated once we added a 6,000-pound boat and trailer behind it. Our total rig is nearly as long as a semi.


But I have volunteered to drive Yeti. I can manage the garage maneuver, and I expect I'll eventually drive the full rig on the road from time to time, although I'll never be the primary driver.

What's more intimidating, even though I've been exposed to it much longer? Docking our nontrailerable boat.

Flash of insight

I realized in a flash of insight that it's easier to park Yeti in the garage than to get *Mystic* (a 30-foot C&C) into her slip. I've done it a few times but only when conditions were perfect. With a four-wheeled vehicle, you can maneuver slowly, stop when you're confused or beset with an unanticipated problem, and move in the other direction at will.

With a boat, you've got to take into consideration the vagaries of wind direction, sudden loss of wind, large gusts of wind, currents, tides, prop-walk, random maneuverings of other boats in the vicinity, and so on. All of these contingencies can lead to an unanticipated problem from which you may or may not be able to recover gracefully. When you're underway, you'd better do it smartly (not at dead slow); there's no stopping, reversing direction is not fast, and backing may be a random act. The bow may swing in the wind, or it may not. Life gets stressful in a hurry when things go wrong. When they do, you're committed. Think fast!

I didn't grow up with a tiller in my hand. When things go wrong, instincts don't kick in, but my adrenaline does. Sure, I have to drive that huge truck around at highway speeds and get it into and out of tight spaces, even pull a large heavy load with it. I'll take that over docking the boat any day. 

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Essentials of happiness

Contemplating the way of a ship in the midst of the sea

by Madison Blackwell

THE DICTIONARY DEFINES SAILING AS: “TO MOVE ACROSS THE surface of water by the action of wind.” This is like saying that your first warm, passionate, and totally intoxicating kiss was “nice.”

My first real encounter with sailing was aboard an old coastal schooner plying the bay of Bahia on a warm afternoon in northeast Brazil. I reclined with closed eyes and let the sound of the wind and waves drift my mind into calm. The warm sun chased away any remaining cares. It slowly became apparent that I had reached into and somehow became part of a meditative state that was wonderfully relaxing, vaguely exciting, totally natural, and extremely pleasurable. This was a state of mind more rewarding than anticipated, one induced not by ingestion or inhalation but by the close proximity of natural forces blending together in a way that achieved a melodious harmony within the soul of my being. The subjective influence, mostly indescribable, was awe-inspiring. I was hooked!

Living on a farm four hours from a coast, I took heed of the old adage, “Never buy a boat that you will not live on or trailer.” After some rather serious looking, my wife and I became convinced that a MacGregor 26x fulfilled our needs. We went right out and ordered up a brand-new one with a Mercury 50-hp Big Foot, towed her home, and proceeded to look over our new how-to manual.

Enter the learning curve.

After six months of intermittent usage and some changing out of components, I could rig this vessel and have her in the water, ready to sail, in less than 20 minutes. That first day it took three of us more than four hours to get her rigged and ready. There in our drive-

way we learned how to work with the little round clip things holding importantly placed pins. We found out that sails are specifically made so only one edge faces forward on a roller-furling system and that — with the setting up and breaking down we were to be engaged in regularly — putting hanks on the sail is more practical. We found out firsthand about skying your halyard, and about sheets and mains, and so on. We also began, somewhat subconsciously, to relearn simple pleasurable things like childish anticipation. Truly there is nothing much more worthwhile than simply messing about in boats.

“One of the fascinating things about sailing is that there is always something more to learn.”

Found shelter

From behind Bear Island on the Georgia coast, we found shelter from the high winds of a small-craft advisory. In the enclosed spherical world of fog, we found faith and self-reliance standing alongside us in a primitive, almost supernatural, way. On Lake West Point, we learned the value of letting loose the sheet when a gust of wind knocks the sails into the water.


There is power within the essential elements from which we normally shield ourselves in our modern lives. Perhaps it's because while we're sailing we can see firsthand that greater powers than we exist here.

Upon the back side of Jekyll Island we found ourselves sitting in the mud one morning. We were most solidly stuck. We had a late breakfast, watching the water slowly rise, and I could not help but ponder about how we are each the captain of our own vessel in this life and about how the responsibilities for our actions rest with us alone.

How different this seemed from the modern concrete-and-asphalt world where no one accepts the responsibility for his own actions, and there is always someone else to sue. How fortunate I felt to have found a mate who could smile at me and softly say, “I wouldn't want to be anyplace else but here as your mate.”

It has been said that time spent sailing is not subtracted from your total time on earth. I have to agree. As we spend time before the mast, each of us is privileged to be part of a special type of harmony... away from the turmoil brought by the haggard existence most mortals endure.

One of the fascinating things about sailing is that there is always something more to learn. As Alexander Chalmers once said, “The three grand essentials of happiness are something to do, someone to love, and something to hope for.”

Our next move — living aboard — gives us something to look forward to. If the good Lord is willing and the creeks don't rise, by then we will have acquired the necessary skills and wherewithal to comfortably devote our full attention to what is now one of our most beloved pastimes. 

KNOW • THE • ROPES

Do you know which rope is best for each application on your boat? Mainsheets are more likely to suffer from wear and dirt absorption than other sheets. A spinnaker halyard needs a little "give" to take the shock of loading and losing the sail. A roller furling Genoa halyard can be made up of two different sized and types of

rope to save weight and clutter at the winch or cleat.

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