



Bora Bora on *Intermezzo*, in the olden days. Elyse was seven and Sarah four when we started our serious cruising.

Several boats, years, and many thousands of miles later we were all together for a summer in Alaska. This shot was taken during the summer of 1991. Sarah was 18 and Elyse, back from her third year at college, was 21.



INTRODUCTION, SECOND EDITION

This second edition to our *Offshore Cruising Encyclopedia* started out as a quick update of a few areas that were out of date in the original edition.

“Three months,” we thought, “and we’ll be ready to go to press.”

We should have known better! We started looking at the advances in computer hardware and software and before long we were playing what-if games, just like with a new yacht design.

Scanners and cataloging software, not to mention printers capable of creating camera-ready art soon had us enthralled. If it was this efficient, why not take the time to squeeze it all in?

That was a little more than two years ago. The high-tech goodies do make more things possible, but then you want to use them, and so the work load goes up.

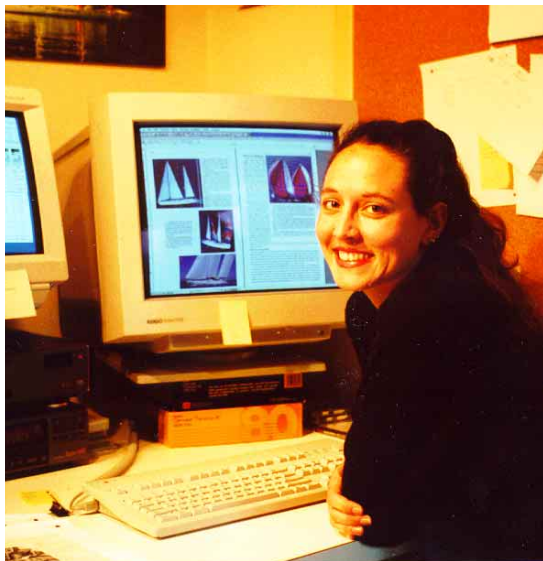
Hence this somewhat thickly crammed compendium on cruising yacht design, construction, equipping, and usage.

Our apologies if the type is a bit small and layout tight, but we figured that you’d want as much data as we could cram in — and cram we did, right to the limits of what our printers told us they could print and bind!

Although the page count is only up by 50%, there are over three times as many illustrations and almost twice as many words. If you’re like us, you’ll need to reach for the reading glasses.

In the last two decades, Linda and I have made our living by building offshore cruising yachts, typically custom designs, for couples who wanted to do what we’ve done before — extensive cruising. Since our work encompassed preliminary design considerations, creation of hull shapes, supervision of the formal engineering process, buying all the equipment, and then arranging for and overseeing construction, we quickly learned that everything on a yacht is related to something else. You simply cannot make any decision exclusively on its own merits. All hydrostatic design and system aspects must be considered every time you pick up the phone to order a piece of gear, or decide where to place it in the hull.

In time, both by virtue of our own seagoing experiences, and those of other cruisers we had met along the way, and with the results of almost fifty design and/or building projects behind us, we



How fast the time flies. Elyse is now 27, married, with her own business (EDX Communications) in Charlotte, North Carolina.

Sarah is 24, a professional musician, and off cruising on her own boat.



developed an *integrated* approach to this whole business. One of our goals in this book is to pass along as much of this information as is possible.

Of necessity, then, we must discuss topics that may not apply to your own situation. But understanding the logic of, say, an air-conditioning system, when it's the farthest thing from your mind, may help you to think about it as a future option or a resale consideration.

We want to be absolutely clear at the outset that while we've owned some fairly complex yachts, and most of those we have built for others are in this category, *we personally favor keeping things as simple and inexpensive as possible*. Of course, simple and inexpensive are relative terms.

Many cruisers are attracted to the glitter of high tech, the excitement of new gear and performance goodies, the lure of the "conveniences" of home. That's fine as long as the accouterments of modern cruising don't get in the way of the objective — which is, after all, to go sailing.

A decade ago we were bringing our then-newest design, *Sundeer*, back from Mexico. As you tend to expect in Southern California, the wind had been light and on the nose going down; now returning, it was blowing hard, and still on the nose. Well, we learned the solution to that years ago — fine entry angles on the bow and an efficient engine and prop system.

As we were contentedly sitting in the shelter of the pilothouse, motoring dead upwind at 9.5 knots, the prop quit turning. There was oil in the transmission, the coupling was intact, the shift mechanism worked, so it was either the hydraulic pump or pressure plate inside of the transmission. (It turned out to be the latter.) Heavens! Two hundred miles from our dock and we'd have to *sail* all the way.

So up went the sails, and we set out offshore, looking for a better angle on the breeze as the night came upon us. We carried on to San Clemente Island, debated whether or not to go inside or out; chose inside looking for a countercurrent and lift in the wind (which we found), worked our way through the lee off Catalina (it took eight hours to cover seven miles), beat up the Catalina Channel, and then ghosted across Santa Monica Bay all night at two knots. By the time we'd gotten to the Channel Islands area, the wind was becoming fitful. The onshore flow looked like it might evaporate for a few days, and we were working very hard with sail changes to make progress — up spinnaker, then reacher, working jib, back to spinnaker. Ten miles from the breakwater, with the sea glassed over, a puff came in from the stern quarter, filled the reaching chute, and carried us at nine knots to the harbor entrance.

Bareheaded, we sailed into the harbor, rounded up by our downwind berth, dropped main, pulled the mizzen to windward to shove the bow in the right direction, dropped mizzen, hoisted the jib halfway, and a few moments later lay snug on our dock.

We relearned a basic lesson: Sometimes it's very rewarding to do things the simple way, to have to *work* a boat through the lee, or across a channel and into a downwind berth. It sharpens your instincts when you have to sniff the night air for the next puff, or sense land under your lee rather than relying on long-range navigation aids. Taking 50 hours under sail to make what would have been a 24-hour motorboat ride brought home, once again, that sometimes the simplest approach is the best.

There's a corollary on the systems and electronics side of this. When you're weekend sailing or out for the summer, it can be a more rewarding experience if you have to pump water by hand, bake bread in the pressure cooker, and read by kerosene lamps. After all, getting away from the hustle and hassle of "modern" life is part of what cruising is all about.

But as the time horizon aboard lengthens, and cruising ceases to be a getaway and becomes the *lifestyle*, priorities will change. Then, some of the conveniences of home start to look more attractive.

We hope to be able to help you decide on your own what's the best approach for *your* needs. And, once you've decided upon the appropriate path, to know the correct questions to ask the yachting "professionals" you'll be dealing with. If we're successful in this book, you'll be able to

make up your own mind, with your own preferences, about what's best for your cruising puzzle. We hope you'll be able to see through the fog of ideas that exist any time you sit down to ask the best way of doing something on a boat.

If you start to get a feel for the *overall* view of what's happening with your plans, whether you're building a new boat, buying an old hooker, or just trying to decide on what sort of refrigeration system to install (or if you need one at all), we will have succeeded.

Which brings us to the use of this book. We've organized the topics into a series of eight areas, each dealing with a facet of the overall cruising picture. Here's a brief overview of the book's organization: *Preparation* deals with topics applicable to all styles of cruising and existing boats. So if you already have a new boat and are wondering what you need for the next step, this is where to start. On the other hand, if you're building or thinking about buying new, preparation tells a lot about what you need to look for.

Cruising Life deals with all those aspects of medium- to long-term sailing about which the two of us have been asked so many times. This area of the book covers the gamut of basic equipment and preparation as well as the details of the cruising lifestyle. If you're a weekender, and don't want to be frustrated by having to stay close to home, skip this section. If you want to dream a little — read on.

Design and Engineering cover the basics of cruising-yacht design, then go on to interpret the basics as we see things, as well as the way a number of other successful designers look at the trade-offs. The engineering section covers the basics of structure so as to give you a basic knowledge of how loads are developed and what needs to be done to cope with them. This section ends up with a series of chapters detailing various construction materials, starting with fiberglass and working through aluminum, steel, and timber.

Rigs and Deck Hardware start off with the basics of rig engineering (in lay terms) to help you understand those forces, safety factors, and details that make your rig stand up, and those that could make it fall down; then it goes on through how to select an extrusion. Following is a considerable amount of detail about spar hardware, rigging (both standing and running) and deck hardware.

Systems focuses on the power-supply center — the engine room. It starts with the foundation of an easily maintained yacht, and goes on to discuss performance under power, engines, props, AC and DC electrical systems, refrigeration, and a host of other related topics.

On Deck begins with steering systems and discusses the elements of deck layout, cockpits, lifelines, and sheltering the crew.

Interior Design is a study in the basics of interior styling — from furniture detailing to decor, with a heavy emphasis on increasing visual space.

The next-to-last section deals with *Business Issues*. Here you will find data on how to buy a boat efficiently, whether a new production, a custom project, or on the brokerage market. You will find a substantial amount of data on choosing a builder, evaluating designers, contracts, specifications, and building a boat efficiently (i.e., minimum cost for maximum results).

Finally, there is a compendium of different yachts we've owned, known, or built for others. The four cruising yachts that shaped so much of our own experience, 50-foot (15.4m) *Intermezzo*, 62-foot (19.1m) *Intermezzo II*, 67-foot (20.6m) *Sundeer*, and the 78-foot (24.1m) *Beowulf* are detailed in this section. Since these yachts are frequently referred to in the earlier sections of the book, you may want to glance at the back to get an overview of them. You will find photographs of these vessels scattered throughout the book as well.

Those of you familiar with previous editions of this book may notice that the sections on seamanship have been omitted. As we came to the end of the book, it was apparent that we'd have trouble squeezing this in along with everything else. Since our *Bluewater Handbook* is still in print and covers much of the same material, we decided to delete it from this version.

Assembling the enormous quantity of photos and drawings has taken some effort. We haven't

always been able to get just the shot or angle we wanted and have included quite a few shots that a professional art director would have trashed because, for us, they show important details.

When using this book, you must keep in mind the fact that there are simply no pat answers to most of the questions of the cruising life, design and systems perused herein. And what works for us or for you today may well need a different twist in the conditions you find tomorrow. As your own cruising plans mature and evolve, so will your needs. The design or systems approach that gets by right now may well have some built-in hazards in different circumstances.

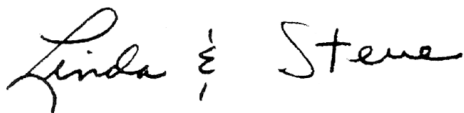
We try to cover many of the issues so that you can decide more efficiently what is best for your needs. But there will still be many areas in which you need to factor in new data or modify what we say to fit your situation.

The entire question of seamanship is one of variables. In any given situation you need to look at the boat and crew and their respective capabilities, and then examine the alternative courses of action which are open to you. If there is one bit of advice in this area we can give it is keep your eyes open. Be alert to the sea, the sky, and what your boat is telling you. And then take the prudent (as opposed to the expedient) course of action.

Finally, a word on authorship and voice. The majority of the book is written in Steve's voice, while Linda does the speaking in the section on *Cruising Life*. Both Elyse and Sarah were involved as well. Elyse has done much research for the new edition, written some of the chapters, and most important, handled the production end. This includes scanning and then sorting almost 4,000 pieces of art, editing, formatting, and indexing. Elyse also manages the printers and binders, along with fulfillment. Sarah has written several of the chapters, and reviewed much of the book for content and emphasis. While the book was in the works, Sarah was preparing her own boat, a 25-year-old, 37-foot (11.4m) Santana 37 sloop that she and her friend Kristin Sandvik rescued from a sedentary life in Marina del Rey. Her experience in this cruising preparation project has helped us maintain a perspective that we hope will be beneficial to you all. This book is definitely a family effort.

Before closing we'd like to emphasize once again that the real issue before us is cruising — not building, not design, not equipping boats, but cutting the dock lines and going. If you spend all your time dreaming, wishing, and saving for the future because you want the biggest, best-equipped boat, you will find the goal of sailing off over the horizon elusive. It doesn't take big bucks or big boats to enjoy this lifestyle. Many of you, right now, have the wherewithal to buy a boat and sail your local waters or head off around the world. What you can afford now may not be as comfortable as something else you can buy years from now, but it will get you out there, away from the rat race. *Don't be seduced by the glamour and sex appeal of some of the things in this book if it means waiting. If you really want to pursue the dream, do it now.*

Linda and Steve Dashew

A handwritten signature in cursive script that reads "Linda & Steve". The ampersand is stylized, and the letters are fluid and connected.

Tucson, Arizona, 1997

PS: We can all learn from each other. If you have comments about this book, information for the next edition, or an experience you would like to share, we'd love to hear from you. You can reach us by mail at Beowulf Publishing, 6140 East Finisterra Drive, Tucson, Arizona, 85750, USA. Or, via the internet, at dashew@concentric.net.

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ACKNOWLEDGMENTS

A book of this nature requires the cooperative effort and input of an incredible array of people. We have talked with and picked the brains of hundreds of cruising friends, designers, engineers, and suppliers, not to mention techno-gurus.

To everyone who has assisted us (and put up with our incessant questions) we are eternally grateful.

A number of people in the marine industry went out of their way to help make sure the data presented was up-to-date. Among these was Bob Williams at Sea Air Land Technologies, with help on systems in general and refrigeration in particular. Kevin Alston at Glacier Bay and consulting engineer and cruiser Tim James supplied us with excellent material for the fridge section. Johnny Lindstrom at Baytronics South answered numerous questions about electronics.

Skip Chetelat, Chief Engineer at Forespar, and his cohort Mark Coholan, were kind enough to work with us on the engineering and rig sections. Phil Garland at Hall Rigging also helped with and commented on rigs.

Our old catamaran-racing buddy, Alex Kosloff of Alex Kosloff Enterprises, was very helpful in supplying data for our section on fiberglass construction. Patrick Mouligne of RP Enterprises also supplied data for the fiberglass section.

Jay Hlaventy of Composite Engineering and John Newton of Tides Marine assisted us with the sections on rudder bearings and steering systems.

Will Hamm of WH Autopilots provided input on powered self-steering systems. Bill Daffron helped us find various bits of engineering data, while Dave Wyman answered numerous questions and gave us his usual valuable feedback.

Dan Neri, now with North Sails Rhode Island, helped us work through the section on sail construction and sail design.

Our circumnavigation buddy Ralph Naranjo, now a professor at the U.S. Naval Academy and technical editor for *Cruising World*, answered numerous questions on everything from metallurgy to storm canvas.

Chuck Hawley at West Marine supplied us with art and kept us up to date on happenings in a number of fields.

Allison Peter, copy editor at *Sail*, helped us with editing the manuscript, a most arduous task. Jeffrey Olsen also assisted with copy-editing chores.

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Finally, we would like to thank all of our readers who have been kind enough to send us letters and e-mail with comments on the first edition and suggestions for the future.