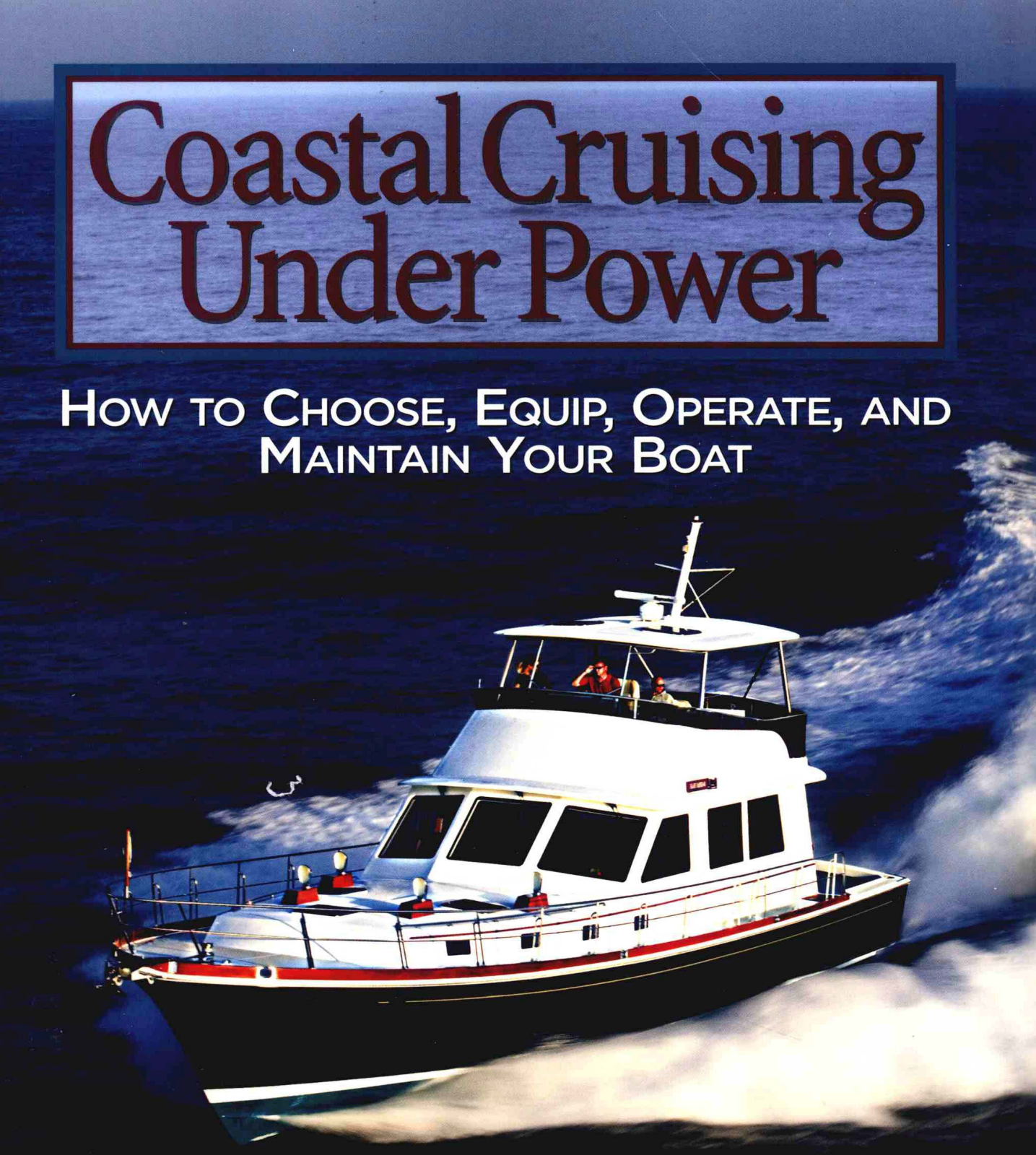
Coastal Cruising Under Power

How to Choose, Equip, Operate, and Maintain Your Boat



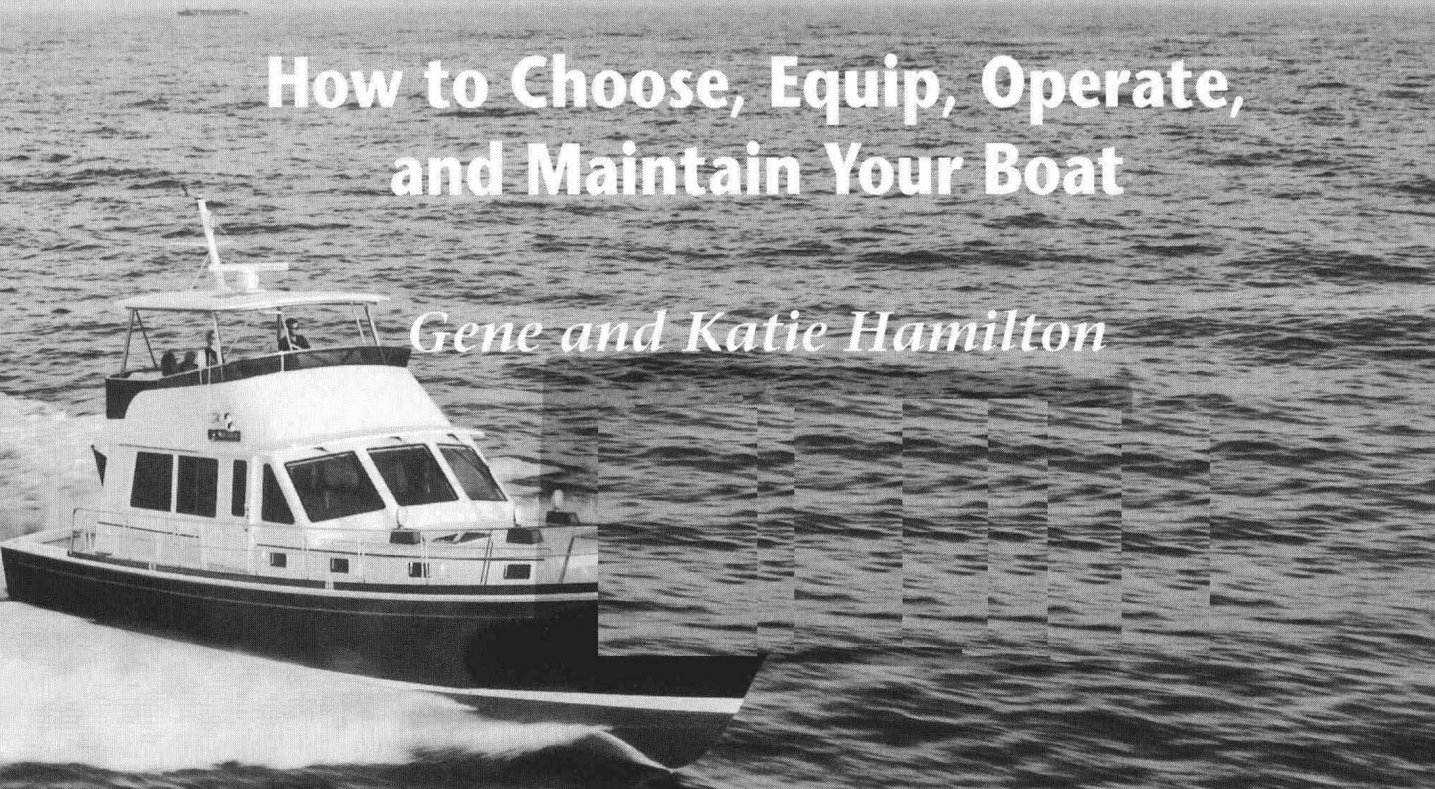
Gene and Katie Hamilton

Foreword by Capt. John Wooldridge, *Yachting* magazine

Coastal Cruising Under Power

How to Choose, Equip, Operate, and Maintain Your Boat

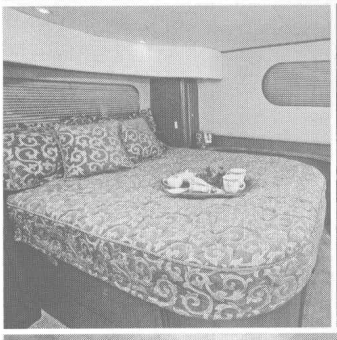
Gene and Katie Hamilton

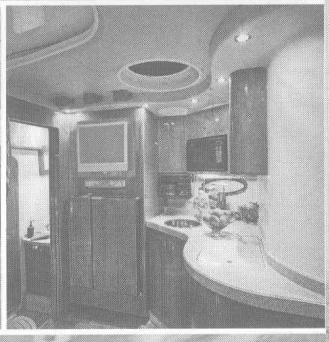


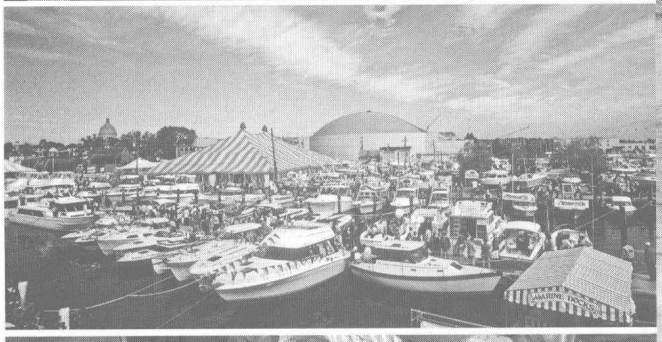
INTERNATIONAL MARINE / MCGRAW-HILL

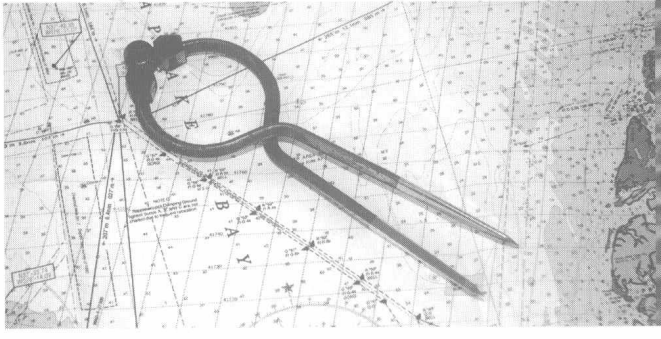
Camden, Maine • New York • Chicago • San Francisco • Lisbon • London • Madrid • Mexico City • Milan • New Delhi • San Juan • Seoul • Singapore • Sydney • Toronto

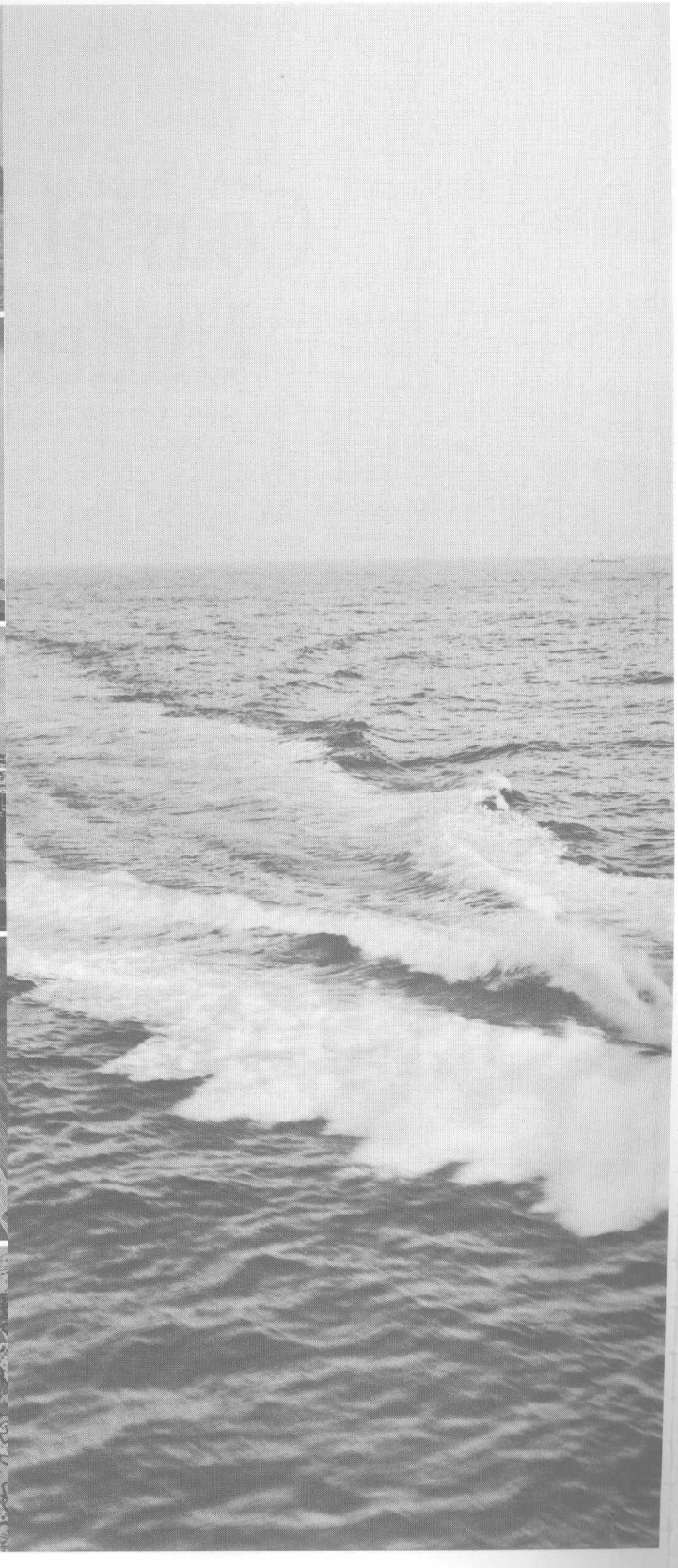

Monterey
Motor Yachts








B A B
B A Y



The McGraw-Hill Companies

1 2 3 4 5 6 7 8 9 DOC DOC 9 8 7 6

Printed in the United States of America.

Library of Congress Cataloging-in-Publication Data
Hamilton, Gene.
Coastal cruising under power : how to choose, equip, operate, and maintain your boat / Gene Hamilton and Katie Hamilton.
p. cm.
Includes bibliographical references and index.
ISBN 0-07-144514-5 (pbk. : alk. paper)
1. Motorboats. 2. Boats and boating. I. Hamilton, Katie. II. Title.
GV835.H26 2006
797.1—dc22
2005037577

Questions regarding the content of this book should be addressed to
INTERNATIONAL MARINE
P.O. Box 220
Camden, ME 04843
www.internationalmarine.com

Questions regarding the ordering of this book should be addressed to
THE McGRAW-HILL COMPANIES
Customer Service Department
P.O. Box 547
Blacklick, OH 43004
Retail customers: 1-800-262-4729
Bookstores: 1-800-722-4726

Photos by authors unless otherwise noted. Title page credits, top to bottom, left to right: authors, Silverton, Regal Boats, authors, authors, authors, Grand Banks. Part opener credits, clockwise from top left: Sea Ray, Silverton Marine Corporation, Monticello Yachts, authors.

Foreword

In July 1977, I became the editor of *Inland Sea*, a Chicago, Illinois-based Midwestern regional edition of the nationally circulated *Sea Magazine*. I met Gene and Katie Hamilton by chance, walking across the street to McCormick Place to attend IMTEC, the largest recreational marine trade show of its day. When they told me that they had returned just the year before from a cruise that took them through the Great Lakes, along the Erie Canal, down the Hudson River, south along the eastern U.S. coastline, and through the Intracoastal Waterway (ICW) to winter in the Bahamas, I wanted to know more—much, much more.

On a cold, wind-whipped afternoon later that fall, Gene and Katie visited my office in downtown Chicago, and we walked across Michigan Avenue to find a bit of lunch. It was the beginning of a friendship that has spanned 28 years. Their stories rang with authenticity, and I soaked up their experiences like a student musician attending a Master class. They explained that they were both teachers, and that they had taken a year off to make their cruise over the winter of 1975. They hoped to make a living writing for recreational marine magazines, and they had a few book ideas to develop along the same lines.

"You *had* to go cruising to write authoritative cruising stories," Gene said. Their first coastal voyage was in a Rhodes 41, which they sold in Annapolis, Maryland in the summer of 1976, after enjoying the Bicentennial activities taking place in the nation's capital and in cities and towns along the Chesapeake shoreline.

Gene and Katie returned to Chicago in 1976, bought a house in need of tender loving care, and began writing about their home improvement experiences as well as their cruising adventures.

I moved to California in November 1979, to take the helm of *Pacific Skipper*. Gene and Katie continued to write for *Sea*, and also did stories for *Lakeland Boating*. Katie's monthly column, "First Mate's Forum," was a staple for Midwestern women who loved boating. Even though their fame was spreading for their home improvement articles, they never lost their love for the water, nor their desire to go cruising again.

In 1985, after being land-bound and boatless for several years, Gene and Katie bought a wooden Grand Banks 42 located on the east coast, named her *Old Grand Dad*, rented out their Chicago-area home, took a year off, and went down to Florida for the winter. On their return trip the following summer, they spent some more time in the Chesapeake, liked it, and stayed, living aboard for a time in Castle marina, Kent Island, on Maryland's Eastern Shore. But because they were working on a book project (as well as articles for *Popular Mechanics*, *Popular Science*, and *Family Handyman* magazines), and needed the reliable phone connection that wasn't easily avail-

able in their marina, they made the decision to move ashore and rented a house nearby. I had moved to Annapolis in 1982 and, when I found that they were living in the area, I urged them to stay. They settled on St. Michaels as their new home.

Gene and Katie sold the GB42 in 1989, bought a J/24, and raced it around the buoys near St. Michaels. Meanwhile they launched a home improvement website that proved to be a huge success. They purchased a C&C 35, a boat they had lusted after since their days in Chicago, and took it to Florida for a winter in 2000. On their return to the Chesapeake the following spring, they sold it and bought a Grand Banks 36, which they still own and cherish. As I write, they are moving it up the Waterway for the third year.

Transiting the ICW and cruising along the coast in the fall and spring they experienced changeable weather firsthand. "The difference was windshield wipers," they quipped, referring to the difference between a sailboat and powerboat. Having made that trip a few times myself, I can tell you that cold and wet seem adventurous for only so long. "You get a different perspective sitting above the waterline," said Gene, "but the speeds from point to point are not that much different. It's very comfortable."

Now, hundreds of boating articles later, Gene and Katie have penned *Coastal Cruising Under Power* to pass along the knowledge and experience they've garnered from numerous coastal passages. It comes just in time, as more and more boatowners turn to displacement and semi-displacement powerboat designs as platforms from which to view and enjoy this country's coastlines—to view America from a perspective most landlubbers hardly know exists.

Coastal cruising is hardly all flat water and bluebird weather. Being knowledgeable and prepared, mentally and physically, is vital. The prudent mariner relies on all sources of printed and electronic information to ensure the safety of crew and vessel. The book you hold in your hand is just such a source.

John Wooldridge
Managing Editor
Yachting magazine

Acknowledgments

We're grateful to so many boating friends who encouraged, nudged, and cajoled us to write this book. We want to thank all of them, especially these kind folks who shared their wit and wisdom with us: Brenda and Mike Appel, Martha and Captain Jack Austin, Nancy and Bob Bartell, Ken and Ardy Bridges, Mary Bowar and Mike Lurie, Ted and Jo Clark, Suellen and John Gargalli, Judy and Jerry Gaston, Gail Greco and Tom Bagley, Debby and Tony Greenwood, Laura and Tim Hanlon, Barb and Vic Hansen, Sheri and Captain Frank Herbert, Jayne and Irv Hetherington, Pepper and Geoff Holmes, Dalton and Louise Marks, Kathy McMahon and Sterling Neale, Debbie and Captain Roger Roark, Millie and Jack Rose, Linda and Harry Seemans, Mimi and Barry Starke, Annie and Sam Thompson, Sandy and Chivey Wieland, Sally and Neville Williams, Peg and Captain John Wooldridge, and Kay and Jack Wurst.

We sincerely appreciate the fine pen and direction of our editor Bob Holtzman, who so kindly guided and supported our efforts along the way.

We're also grateful to Captain Bob Armstrong, whose technical expertise enhanced our work.

We appreciate the work of Ben McCanna, the project editor who guided our book through the publication process, and all the members of the design and production staff at International Marine who took our words and pictures and created this book.

And as always we are grateful to our agent, Danielle Egan-Miller, who has for many years been a good friend and advisor.

Contents

Part VI Cruise These Great Destinations

Introduction
An Invitation to Come Cruising

Picture this scene: you're at anchor in a quiet cove under a starlit sky with a nice breeze to cool the cabin and keep the bugs away. In the forward cabin you're lulled to sleep by the peaceful sound of water lapping against the hull. This is cruising.

You're underway, enjoying crisp weather under sunny skies just a short distance from your destination, a new town and marina never visited before. This is cruising.

The boat is tied to a dock, it's pouring rain, the wind is pitching the boat back and forth making you feel like you're inside a blender. This is cruising, too.

Cruising on a powerboat can be anything from weekend boat camping on a 24-footer to a month or more aboard a 50-foot yacht. The spectrum of cruising styles is as varied as the spectrum of boats and cruisers—of whom we've met plenty in all our years at the helm. Some, who take a leisurely pace, are happy to make 50 miles a day at 7 knots, others are fast-track cruisers interested in getting to new cruising grounds in a hurry. Slowpokes or go-fasts, we all find our niche.

We've been boating since 1969, when we bought our first boat while living in Chicago, and we've been "messing about in boats" ever since. In this book we want to share our enthusiasm and experience of cruising the coastal waters of the United States, and hope it encourages you to do the same. The thousands of miles of shoreline in and around the United States offer an endless number of destinations—close-to-home harbors and protected anchorages—where you can cruise comfortably and safely, without crossing wide oceans.

The book begins with a section on choosing a cruising boat, with a look at all the aspects you need to consider. In Part I we show how the shape of the hull determines the way a boat moves through the water, and how its engine and drive system power it at slow or fast speeds. We also provide an overview of different interior layouts and of a boat's electrical and freshwater systems. Then we discuss the nuts and bolts of buying a boat and how to choose a marina.

A boat is an empty shell until you load it with gear and equipment that help you navigate and communicate, so in Part II we outline how to outfit a cruising boat. We take a serious look at what safety gear to have aboard. To round out this section we review the documents and paperwork necessary to operate and register a boat, and how to keep them organized on board.

In Part III we lay out the necessary skills of operating and using a boat, with a review of the Rules of the Road and the basics of boat handling, anchoring, piloting, and naviga-

tion. Since weather can have such a profound effect on your boating, we include a primer on understanding weather and how to read present and upcoming conditions.

A routine of maintenance and cleaning is necessary to keep all the systems and components of a boat working at their best. Part IV includes three key chapters with our take on keeping a boat working, and what tools and spare parts to carry on board.

Over the years we've met many boaters who enjoy different styles of cruising, so the cruising lifestyle is the focus of Part V. We look at the creative ways people use to pay for cruising, how they cruise with kids and pets, and the many things we've learned from all of them.

The last part of the book, Part VI, features our favorite coastal areas for cruising—charming harbor towns with marinas and safe anchorages for gunkholing—destinations we know and enjoy.

At the end of the book, in the appendices, we list resources and contact information you can use to find out more about many of the topics we discuss in the book.

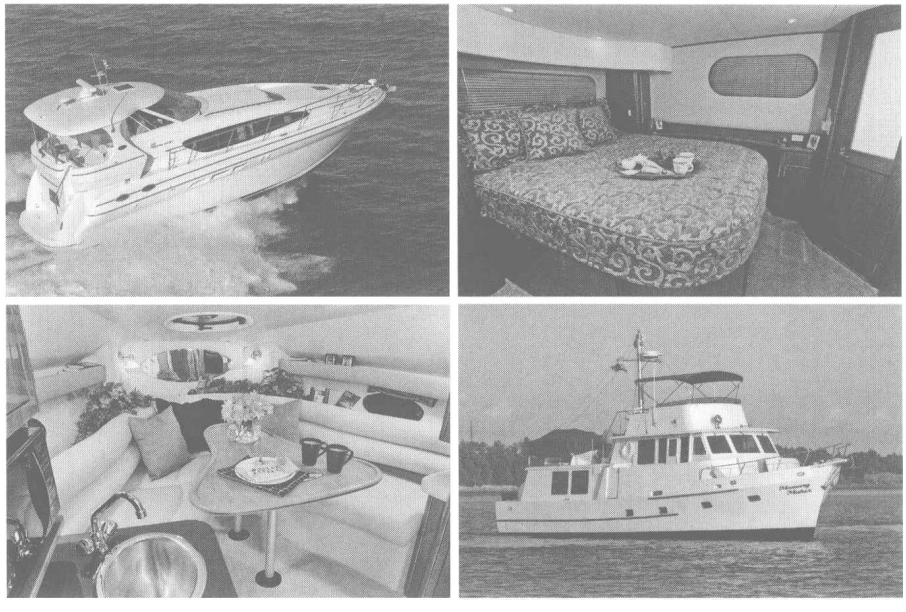
We hope you'll find the book helpful and use it as a starting point to venture out on your boat, exploring coastal waters. As your experience of operating your boat grows, and your confidence builds, you may want to learn more about specifics like navigation and piloting or how your engine works. You'll find plenty of good books about every aspect of boating.

Anyone who cruises aboard a boat will agree it can provide hours of contentment interrupted by moments of sheer terror, but most of the time cruising is being free to go where you want to go, at the speed and comfort level you choose. And that's what we like about it.

A sense of humor, a sense of adventure, and a boat are the key ingredients to attainable cruising along the coastal waters of the United States. In this book we'll tell you what we've learned about cruising and how to enjoy it any way you can.

PART I

Choose Your Cruising Powerboat



CHAPTER 1
Choosing a Boat Design

Over the past 35 years we've owned seven boats, from a J/24 racing sailboat to a 42-foot wooden trawler—and just about every type in between. We didn't start small and work our way up the food chain with larger and larger boats. Each boat was perfect for us at the time, but every time our life situation changed and the boat we had no longer fit our needs, we went shopping.

No boat can be all things to all people and no matter how clever the naval architect, all designs are at best a compromise. Only a finite number of objectives—such as adequate accommodation, good boat speed, and adequate fuel and water capacity—can be achieved with any given design. A change in one area will affect other aspects of the boat, and some compromises prove better than others. Successful designs are the ones that meet or exceed their stated objectives.

In the following sections, we'll present our take on the types of powerboat that we think are suitable for coastal cruising—boats that meet or exceed their stated objectives.

But before we get into the particulars let's make one point clear: it's not the boat that makes a cruise successful, it's the attitudes of the people on board. Anyone can successfully cruise coastal and inland waters in almost any boat. We've met people on modest boats enjoying the cruising life to its fullest, and those on elegant yachts not having any fun at all. Life and boats, as they say, are what you make of them.

IS THERE A BEST BOAT?

The answer is no. Every boat has both its qualities and its limitations. When you evaluate your present boat, or shop for a new one, it's important to envision how you will use it.

A slow-moving displacement hull (we'll explain what that is in a moment), for example, is relatively inexpensive to operate, but the deep *draft* (depth of the boat below the waterline) can limit your choice of cruising areas, especially in the shallow waters of the Bahamas and Florida Keys.

High-speed cruising boats generally have a shallower draft and a wider choice of cruising areas, but they are expensive to operate. As technology evolves, however, boats are being built lighter without sacrificing strength, and engines are becoming more fuel efficient. These developments could result in lower operating costs.

Tank capacity is another major consideration when choosing the right design. If you plan to cruise where fuel, water, and food are readily available, then tremendous load-carrying capacity isn't necessary. However, if

you plan to cruise in remote areas where facilities are limited, then fuel and water capacities are a serious consideration.

There are dozens of questions that you must ask yourself before you decide what type of boat is right for you, and there no simple answers, but the more you learn about boat design, the better you'll be able to select a boat that truly suits you.

WHAT'S IT MADE OF?

Most production boats these days are made of fiberglass. Few wooden boats are built anymore, though there is usually a selection of older ones on the market. Whether an older wooden boat is a wise choice depends on the maintenance it has received. Some are still solid and seaworthy, while others are really only suitable for firewood. Aluminum and steel cruising boats are also available, but usually only in larger custom or semi-custom models. Here's a quick rundown of the characteristics of the major boatbuilding materials.

WOOD

Wood has long been an excellent material for boatbuilding. It still is, and you can't beat the quiet ride of a wooden hull. But few builders currently have the knowledge and skilled labor to produce a quality wooden boat by traditional methods.

Modern epoxy coatings and adhesives allow a skilled builder to create a boat that is essentially wood but is more durable and requires much less maintenance than traditional wood construction. These contemporary hulls are usually described as *cold molded,* and we'll have more to say about them later.

A wooden boat can have a long life expectancy if it's maintained properly, but will quickly deteriorate if it's neglected. There are still good used wooden boats around and they can represent good value when compared to a fiberglass boat of the same size, though they will require more expense and effort when it comes to maintenance.

In the mid-1980s we bought a 21-year-old, well-maintained wooden Grand Banks 42, *Old Grand Dad.* She'd had only one previous owner, she had a good survey, and she cost us about a quarter of the price the fiberglass version was selling for at the time. For five years, she served us well. We lived aboard her during the first year and then cruised on long vacations for another four years. We sold her for what we had paid, but during those five years we did most of the maintenance. We had the yard do some major repairs (like new shafts and engine work), which came to about $20,000.

All boats require maintenance but you can skip buffing or waxing a fiberglass boat for years with little but cosmetic damage. If a wood boat is neglected for any length of time it will quickly deteriorate. All protective hull and cabin paint must be maintained on a regular schedule. Wood is constantly expanding or contracting so chasing down small leaks around ports, doors, hatches, or in the deck is a continuing process. Most of the maintenance you can do yourself and if you keep on top of it, it's not overwhelming.

FIBERGLASS

The introduction of fiberglass construction to the mass marine market in the 1950s and 1960s revolutionized boatbuilding. The evolution continues, as new combinations of materials are introduced to make boats lighter and stronger. Today, fiberglass boats dominate the cruising boat market. The boats are strong—but not indestructible—and require far less maintenance than most other materials, though they are far from being "maintenance free."

One of the big advantages of fiberglass construction is that this material can be molded into just about any shape. Fiberglass boats can also be quite roomy inside, since the structure doesn't require frames, as is usually the case in wood, steel, or aluminum construction.

A typical fiberglass laminate consists of layers of different types of glass fabric bonded together with *polyester*, *vinylester*, or *epoxy* resin. This construction method allows builders to lay up thicker, heavier laminated sections where the hull stresses are the greatest like under the engine mounts, and thinner, lighter sections where the stresses are lower in the side portions of the hull.

Fiberglass, however, technically known as *fiberglass reinforced plastic* or FRP, can have its problems. Variations in quality are introduced by the builder's selection of the types and amounts of reinforcing material he uses and the type (or types) of plastic resin he chooses to bind them.

Quality control doesn't stop with the selection of materials: critical care in their application is important too. Unless the builder precisely controls the mixing of the resins and their application to the fiberglass reinforcing structure, small air voids or areas of uncured resins are created, which reduce the strength of the entire laminate. If the voids are large enough, the structure can delaminate under stress.

Another problem with fiberglass is that laminates thick enough to withstand high stress can become quite heavy. Builders are conquering this drawback by introducing lighter cores, such as end-grain balsawood or closed-cell PVC foam, between thinner skins of reinforcing glass. Today, many boats are no longer "solid" FRP from the waterline up. The hull sides, decks, cabin sides, and interior *bulkheads* (walls) are all cored.

In a further effort to maintain strength without weight, builders are now using other materials besides fiberglass for reinforcing various areas of laminate. Carbon-fiber rods, with a tensile strength six times that of a piece of steel of the same weight, are used to add rigidity to keels, *chines* (where the bottom of the hull meets the sides), and *gunwales* (the top edges of the hull). Stronger materials such as Kevlar are also used in the reinforcing fabrics instead of (or in addition to) fiberglass. And even among fiberglass fabrics, there are now many nonwoven options, such as unidirectional knitted cloth, that provide extra strength without the added weight of more layers.

Fiberglass boats are constantly improving in many ways. But a unique problem in using FRP for boatbuilding remains: a condition known as *blistering*. Blistering occurs when, over the passage of time, water penetrates the outer *gelcoat* by a process known as *osmosis* and mixes with water-soluble materials in the fiberglass layers beneath it. The seawater mixes with the laminate particles and then becomes a more complex solution that cannot flow back out through the passage it entered. As a result, it builds up pressure as it tries to escape, and then explodes, causing blister domes to appear on the outside of the hull.

Not all resins are equally impervious to water. The polyester resins known as *orthophthalic* are the most permeable. *Isophthalic* polyesters are denser and more resistant to water intrusion. Vinylester resins are more resistant still, and epoxy resins are *almost* totally impervious. Of course, increasing the resistance of a hull to water intrusion comes at a cost, but builders will usually tell you the types of gelcoat and resins they use, and paying for the more water-resistant versions can be worth it in the long run.

Blistering is largely a cosmetic problem at first, but the liquid within a blister can eventually penetrate deeper into the fiberglass

and ultimately result in at least partial delamination of the affected area. So blisters must be repaired. Fortunately, epoxy-based barrier coats can be applied over the basic laminate to reduce further water intrusion and, most often, eliminate further blistering. But this treatment, too, is not cheap.

Finally, let us add that fiberglass boats are not expensive to repair. The work is relatively easy and readily handled by most boatyards. In many cases you, the owner, can even do it yourself. No boatbuilding material is perfect but the thousands of old boats built of fiberglass that still exist are a testament to its longevity.

Cold-Molded Wood

Although wood is the major component of cold-molded boats, this method of boatbuilding has many similarities to fiberglass construction. Cold-molded wooden structures are made of many very thin layers of wood, crisscrossed over the form of a male mold and bonded together with epoxy resin. The process is called *cold* molding because the modern epoxy adhesives do not require the application of heat to cure properly. Stainless steel staples may be used to hold the strips in place until the resin cures, but it is the epoxy, not metal fasteners, that eventually holds everything together. The final result is a totally unified plywood structure that is very light for its strength.

Cold-molded construction is even more labor intensive than "hand laid" fiberglass and is more often used for custom-built boats—It is not conducive to production building. For this reason, cold-molded boats are generally more expensive than fiberglass when new, though used models are often available at an attractive price simply because custom-built boats do not have the broader appeal of production designs offered in glass.

Steel and Aluminum

In the United States, steel and aluminum construction is limited mostly to commercial boats or custom yachts, though the Dutch and other Europeans have been building steel cruising boats for decades. A skilled builder can fabricate either material into a beautiful yacht. Steel is heavy, so you won't find many boats under about 35 feet LOA (length overall) built from this material. Aluminum is lighter but more expensive, and is usually used to build custom yachts, especially those of 80 feet LOA and up.

Steel construction is usually associated with workboats, but when a hull is built to yacht specifications it's difficult to distinguish steel from other hull materials. Steel is extremely strong for its weight and can be bent and stretched without losing this strength. This makes for a resilient hull that can take severe punishment. In a hard grounding or collision it will most often be dented rather than punctured or cracked.

If not properly maintained, rust and corrosion can attack steel and damage the structural integrity of the boat, especially if relatively thin plate has been used to reduce the boat's weight. But modern paints and other rust-preventive coatings can reduce the maintenance required to keep a steel boat in Bristol condition.

Aluminum is lighter than steel, and more expensive to purchase and fabricate, but it doesn't rust and requires less maintenance. Like steel, aluminum can be formed into a beautiful, fair hull. It's often used for cabinhouses and for the superstructure on steel yachts since it is lighter. Aluminum is also used in high-speed, lightweight boats. The weight savings enable such boats to carry more cargo for a given displacement.

Aluminum is not without its drawbacks, however. One of them is a tendency for galvanic corrosion in a saltwater environment.