Richard Bennett

INTRODUCTION

For many years our discussions with new cruising acquaintances have followed a predictable pattern—we've been asked about severe weather and the tactics we use to deal with it. When we reply that we've rarely seen any dangerous weather—less than three days' worth in well over 200,000 miles of sailing—our friends are amazed. Sure, we've been in lots of gales and storms, but they haven't been dangerous. Rather, they've been more in the category of something to be endured.

What is surprising, and so unneccessary, is that the thought of *any* sort of storm often triggers fear. This is primarily due to lack of knowledge. As a result, decisions are often made in a vacuum during the process of preparing the boat, acquiring skills, and thinking about tactics. The goal of this book is to help you change that process.

In spite of the fact that heavy weather is so rare, its possibility has been central to our own cruising philosophy, as well as the design approach we've utilized in our yacht construction business. For years we've been conducting interviews with sailors around the world, both professional and amateur, to find out what has worked for them in heavy weather, and, sometimes more importantly, what mistakes were made in the worst conditions.

We will be using this database, stretching back almost a quarter of a century, to provide you with an understanding of the processes for dealing with survival storms. We'll cover every aspect of the topic, from choosing the right boat (or evaluating the one you have) to getting yourself and your crew up to speed by *practicing* various tactics in moderate gales.

We do this from the perspective of the most severe conditions because, by preparing for the worst, the occasional gale can then be looked upon as an opportunity to learn.

In almost all heavy weather situations, a modern vessel handled with a modest degree of skill is able to take an astonishing amount of punishment from the sea. But key ingredients for success are a well-prepared crew and proper maintenance.

No two storms are ever the same, and different boats react in unique ways to the variables of wind and waves. No single cookbook formula offers the best solution all of the time for all boats in all conditions. However, by understanding the full range of heavy weather tactics, you will then be in a position to judge the best approach for the conditions you are presently encountering.

As conditions deteriorate, different tactics will be required. What may be the right approach for certain boats in a gale—heaving to on a particular tack, for example—may be dangerous for others when the seas begin to break.

However, there are universal lessons to be learned from the heavy weather experiences of others—even when a specific boat's characteristics do not exactly match those of your own. This is why we've included stories of so many different types of boats using similar tactics.

There are many schools of thought on how vessel size relates to heavy weather. We can tell you with a high degree of certainty that a properly designed, well prepared small boat will do better in serious weather than a poorly designed, improperly set up large vessel.

Many small yachts have done amazingly well in some very difficult conditions. But, all things being equal, the bigger the vessel, the better the chance it will have.

Storms at Sea

We categorize heavy weather into three types. First are those situations that may be uncomfortable and hard on vessel or crew, but are not dangerous. Normal gales fall into this category, as well as open-ocean storm-force winds where current or bottom shoaling do not cause waves to break. In these types of blows the vessel will typically look after itself without a great deal of assistance from its crew. A serious mistake might result in a torn sail or some broken gear, but will not compromise the vessel's security or the crew's well being.

The second category is where conditions are more challenging, but still not dangerous as long as the crew exercises a reasonable degree of prudence and good seamanship. If major mistakes are made, this type of scenario has the potential to do damage to vessel and/or crew.

The third situation, the survival storm, is extremely rare. Here we are dealing with a sea state that requires utmost vigilance on the part of the crew. In this case, a breakdown in any of the important systems on board can result in severe problems.

You will find that a disproportionately large percentage of the book contains stories of such catastrophic storms. We wish to emphasize again that this type of weather is, overall, an extremely rare occurrence. We place so much focus on these stories because of the excellent lessons they teach. It is worth repeating that if you are prepared for survival weather, the rest of your cruising will be a piece of cake.

But a weak link in the vessel's systems can become the catalyst for a series of events resulting in disaster. A problem which is merely an annoyance in a gale can become a life-or-death issue in storm-force winds with breaking seas.

Cross references:

All of the material in our *Mariner's Weather Handbook* and much of *Offshore Cruising Encyclopedia* bears on the subject of heavy weather—either avoiding or preparing for it. We have tried to make the job of cross referencing to these books easier by including page numbers for appropriate sections.

Heavy-Weather Games

Since all mariners strive to avoid direct experience with heavy weather, how is it possible to practice what to do? The approach we suggest is to learn how to handle your boat in a stiff breeze. This way you will be better prepared if caught in a real blow. Seek out the *opportunity* to learn in gale-force winds.

For truly severe weather we have to rely on the experiences of others. In this context, you may find it helpful to employ a technique of vicarious seamanship.

Try to imagine yourself aboard your own vessel, caught in the situation about which you are reading. What sail would you be carrying, what would be the best tactics, and what would you do if you lost some vital piece of gear? How fast could you jury-rig something else to get going again, and what would you use to do this?

By thinking through potential problems in advance in the same way that military planners play war games, you can gain a leg up on the sea.

Stock Newport

The top photo is taken at the beginning of a minor gale, gusting into the mid-30-knot range. This is the most common form of heavy weather. These situations provide excellent learning opportunities—preparation in case you are caught in something more serious later on in your cruising.

The photo below represents the extreme end of the weather spectrum, 70 knots, gusting higher. Yet with a moderate degree of seamanship, thorough preparation, and a small dose of luck, these conditions can be dealt with. The bottom photo does not begin to do justice to the sea state.

Royal New Zealand Navy

Illustrations

Throughout the book you will find many photos of boats in heavy weather as well as images of waves. When looking at these, bear in mind that the camera tends to flatten waves, making them appear smaller than what you actually see while standing on deck.

To bridge this gap we have used the computer to create wave images in many of the illustrations. The majority of these images have been modified to give a feel for what you would see if you were experiencing the blow firsthand.

Reinforced tradewinds (above), from the vantage point of the cockpit of our 50-foot (15.2m) Intermezzo, en route between Bora Bora in the Society Islands and Suveroff Atoll in the Cooks. It is blowing a steady 45 to 50. The seas are running 15 to 30 feet (4.6 to 9.1m) and only occasionally breaking. Weather like this provides excellent training and a chance to experiment.

Interview Format

You will find many detailed interviews in this book. Rather than let our writing style interfere with the voice of the person speaking, we have tried to keep the interviews in their original form as much as possible. To differentiate, we use a different type of font (shown below) when others are speaking.

`When you see the text switch to this font, it is a signal that someone other than ourselves is speaking.`

Keys to Success in Heavy Weather

Success in heavy weather is the result of many interrelated factors starting with vessel and personal preparation. When both you and your vessel are prepared, total energy can be focused on dealing with sea and wind, rather than trying to fix things that have gone wrong due to maintenance failures.

This includes husbanding your energy so that when the storm reaches its peak, you are in good shape mentally and physically.

Awareness of the weather is another key element. You need to know where the low center is located, and in what direction it and its attached fronts are moving. This helps you to choose the best tactic; whether running, beating, or heaving to; in addition to the ideal course of action for avoiding the worst conditions.

Using the proper heavy weather tactics is the final piece in the heavy weather puzzle. This means being continually alert to what is going on around you. Changes in wind direction and strength may signal the need for a change in boatspeed or direction—or even a totally different approach to the storm.

Photo above: Steve Dashew at the helm of the 62-foot (18.9m) Intermezzo II at the end of a severe Cape Hatteras storm. Intermezzo II has rounded Diamond Shoals Light and is now in "smooth" water in the lee of Diamond Shoals, well outside of the Gulf Stream.

While this list may seem like a tall order at first reading, we can assure you that most of it is pretty basic. And as a bonus, the skills you learn for dealing with heavy weather will pay big dividends in all your voyaging. Your passages will be faster, more comfortable, and that nagging "what if" fear will be gone from the back of your mind.

Perspective

We, as well as most of the professionals interviewed in this book, have spent a lifetime at sea. The accumulated total ocean miles of our contributors is in the millions. Yet most can only relate a day or two (if that) of truly dangerous weather. If you spend a moderate amount of time preparing yourself and your boat, the odds of incurring a major problem are small. Concern about heavy weather is certainly no reason to put off the ocean passage about which you've been dreaming!

We want to close with a request to keep the photos and stories that you'll find here in perspective. We are showing you conditions rarely encountered, so that you can learn second-hand what the options are for dealing with extreme situations.

We wish you fair winds and calm seas.

Linda & Steve