

*The
Globe Star
Voyage*

The First Circumnavigation of the World
Without Nautical Instruments

by
Marvin C. Creamer

To Blanche, Andra, Lynn, and Kurt

Preface

If you look at the significant dates in the Globe Star voyage and the date of this publication, you will undoubtedly wonder why the story was so long in coming. The easy answer is that, in my case at least, the motivation to write about the attainment of a life-long goal is insignificant compared to the motivation to achieve it. Aside from that there were two major demoralizing factors.

The first was the failure of the tracking system to furnish a suitable record of Globe Star's daily locations. Because of battery failure and other problems (I've detailed them in the book), the record was far from complete. I was reluctant to start a book that I thought needed the documentation that full tracking data would provide. Even though the automatic transmitter worked more than half the time, it did not provide a satisfactory ratio of usable locations. On board we established a position each day at what navigators call local apparent noon—that instant in time when the sun crossed the boat's meridian, or north/south line. To be useful for statistical analysis, that position had to be bracketed by a pair of satellite-determined positions recorded less than 24 hours from the time of one taken on board. At the end of the voyage I discovered that locations useful for statistical analysis were supplied for only 78 of the 351 days spent at sea.

The second factor had to do with the intensity of presentation. Editors implied that unless I were willing to “heat up” the material, my writing effort was doomed to failure—that is, would not sell. I grew up in a social group that gave short shrift to “calamity howlers.” Writing in superlatives would have been a denial of my fundamental nature. I felt (and still feel) that, if the story of the world's first circumnavigation without instruments was worth telling, hyping it would be an admission that I believed otherwise.

A long time passed before I resolved to write the story of the voyage with less than

full tracking data and before I found understanding editors and a publisher willing to accept what I had written (and work with it) about realizing a teenage dream.

And you may notice an inconsistency with regard to where I live. Most news stories of the Globe Star voyage have been datelined Pitman, N.J., or have indicated that I reside in Pitman. In an April 17, 1983, letter to the editor printed in **The Gloucester County Times**, (N.J.) William L. Dalton, then-mayor of Glassboro, New Jersey, pointed out that “Marvin Creamer is indeed a citizen and taxpayer of the borough of Glassboro.” Where a citizen pays taxes on the house that he lives in is probably the final determiner of his place of residency. I can readily confirm Mayor Dalton's assertion that I do indeed pay taxes in Glassboro and am therefore a resident of that fair town.

The confusion about my place of residence springs from two sources—both branches of the United States Government: The United States Postal Service and the United States Coast Guard. Even though I live in Glassboro, the Postal Service delivers mail directed to my residence from the Pitman Post Office. And when the Coast Guard issues a document of ownership, it requires that the street mailing address of the owner appear on the document and that the municipality of that mailing address appear on the stern of the vessel as its “home port.” So, because my mailing address is in Pitman, that name had to appear on the Globe Star's transom—even though neither Pitman nor Glassboro has as much as a wash-tub of navigable water. It is little wonder that **The Gloucester County Times** and other newspapers resettled me as it unsettled Mayor Dalton. So if you were to ask me what appears to be a simple question, “Where do you live?,” I would have to ask for clarification before I could give you a satisfactory answer. And yes, I realize the irony of a circumnavigator not “knowing” where on the globe he lives!

In praise of high adventure

The spirit of adventure resides in the hearts of everyone. Who has not at some time dreamed of testing one's physical or mental prowess to the limit? Who has not fantasized about trading the predictable for the unexpected, of setting out on new and uncharted paths? It is the antidote for routine, the salve for humdrum daily activity.

For most people, dreams and fantasies are satisfaction enough. For a handful, however, the call to the unknown is too strong to ignore. Marvin C. Creamer, a Pitman, N.J., geographer and sailor, spent 17 months in pursuit of his own quest for adventure: Circumnavigating the globe with only his eyes to guide him.

Mr. Creamer guided his 36-foot sailboat, aptly named *Globe Star*, around the world relying on nothing more than his powers of observation. No computerized navigational equipment, not even a rudimentary sextant or compass aided the passage. The *Globe Star's* course was determined by the positions of the stars, the waves, the color of the water, the passage of the sun and flights of migrating birds.

With his safe return... Mr. Creamer has fulfilled the ultimate goal of every adventurer. He has done what no man has ever done before. How many humans can say the same?

—*The Philadelphia Inquirer*, editorial, 5/22/84

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Chapter 1

Out of the Womb

Only a handful of diehards saw the attendant at Cape Island Marina throw off *Globe Star's* dock lines in a symbolic severance of *Globe Star's* umbilical. Just after sunset, heavy, black clouds driven by gale-force winds had ended a day of brilliant sunshine. Now, an hour or so later, we groped our way through the lighted and unlighted buoys of Cape May Harbor with eyes more adjusted to the afternoon's crisp sunshine than the nighttime darkness and still smarting from the salt spray encountered on the thirty-five-mile, close-hauled trip down choppy Delaware Bay from our inland staging base at Greenwich on the *Cohansey*. The decision to cast off had been made only moments before. We needed a favorable wind to carry us southeasterly toward the Gulf Stream and away from freezing temperatures. The northwest gale would do the job in spite of the thick cloud cover of an advancing cold front. Without instruments of any kind we needed a source of direction until we were safely away from the land. By positioning the offshore gale directly astern we could be sure of the direction we wanted and a rapid attainment of desirable sea room.

The few faithful watched the white-trimmed, dark-blue sailboat disappear into the glare of Cape May Harbor and wondered how the rugged, thirty-six-foot steel sloop would do against the wintry Atlantic storms and how it would fare in the turbulent waters sur-

rounding Cape Horn. Doomsayers had had a field day. They reckoned we would be lucky to survive for as long as two days. We figured the voyage would take a year and a half.

Creamer seems an unlikely choice for the role of swashbuckling sailor: His gray hair is thinning, his eyes are owlish behind bifocals. He lives in a modest brick home he built himself near Glassboro State College, where he taught Geography for 29 years before retiring.

He also lacks the self-importance one might expect in epic voyagers; in his gentle voice, Creamer cheerfully admits that sailing around the world without a compass seems, well, wacky.

—Joseph Tanfani, *The Press*, Atlantic City, NJ, 12/2/82

Sanity was on their side. Who but a madman would say publicly that he planned to sail a brand-new, untried boat—hauled overland from Canada just twenty days earlier without pulpit, sternrail, lifelines, spars, rigging, or galley stove—around the world without ever looking at a compass, sextant, clock, or piece of electronic gear? Who in his right mind would start out on such a voyage at night, bleary-eyed and in sub-freezing temperatures, a howling gale, and completely overcast sky?

What rational person would so much as set out on the first leg, an 8000-mile jaunt, with a crew he had just barely met and had never sailed with before—a crew that would have to face winter gales, dust storms, tropical heat, the dreaded calms, and rocky, unlighted coasts without ever knowing what night the boom of breaking surf might announce their awful presence?

The sturdy steel cutter that had been promised in August, then September, then October, was finally underway. We managed to find our way among the buoys and set a seaward course from the range lights of Cape May Inlet. Ocean buoy 2CM beckoned as we cleared the rock jetties and felt the pumping of swells created by some distant storm. At that moment it would have been difficult to be jubilant. Our feeling was one of relief in finally getting off. We had seen to the hundreds of details required to keep a boat and crew safe at sea for six months or more. The time had come to concentrate on sailing—setting courses, steering, changing sails, standing watches—and to forget what we had forgot.

The black sky did not concern us. Until it cleared we would find our way by putting the northwest wind to our backs. The southeast course would hasten us away from the now potentially dangerous land and would move us toward the Gulf Stream's mild temperatures. Whereas clearing the land was our primary goal, a strong secondary aim was to keep from falling asleep in our exhausted condition. We didn't have to think about Cape Town, our first intended stop. There would be plenty of time for that.

There was no doubt that the decision to sail that very night was the right one. We had moved from Greenwich on Delaware Bay to Cape May on the Atlantic so as to be poised ready to sail at a moment's notice when condi-

tions appeared to be satisfactory. In spite of some minor setbacks we had gotten to Cape May before dark and were able to top off our fuel tank and pick up a few almost-forgotten items. A few days earlier nighttime temperatures had dropped into the middle teens. Freezing weather that could rupture water tanks and ruin the thirty cases of stowed food was a real possibility. If we were to ward off a costly postponement that might result in a year's delay, it was time to make a run for it. Whatever weather we were sailing into would be mild compared to what we could expect in the Indian and Pacific oceans, especially in the critical areas around southern Africa, Australia, and South America. As for starting off at night, nearly a year of nights lay ahead. One more wouldn't matter. The simple fact was that the wind was blowing in our direction and, moving from land to sea, would not have time to create a nasty sea until it had blown itself out. Another simple truth is that you cannot move a sailboat without wind. It is a most unusual storm that does not provide usable air. In general, calms are the sailor's enemy, not storms.

My grandfather told of a man who was being upbraided for his lack of sportsmanship after shooting a hen pheasant sitting on a nest of eggs. The hunter's response: "It's wild game; you have to take it when you can get it." During the first of the eight trans-Atlantic crossings that I made before starting out on the circumnavigation, I listened faithfully to the hourly weather forecasts in order to avoid storms if at all possible. After some week-long bouts with glassy seas, I began to listen for locations of storms in order to find their winds and use them. Wind had become "wild game." The gales blowing over Cape May on the night of December 21, 1982, were usable. It was easy to say, "**Let's do it.**"

Chapter 2

From Farm to Scotia

The voyage that got under way in Cape May that wintry night began on a truck farm near Vineland, New Jersey, some sixty years earlier. When I was about five, my father fashioned the hull of a toy boat out of white pine boards, stapled a harrow spike to its bottom for a keel and hung a home-sewn muslin sail on a deck-mounted, wooden-dowel mast. By model sailboat standards it was crude, but I thought it was the most beautiful thing on earth. It had two divine traits: it floated and it moved with the wind. At about the same time my father in late afternoon on a clear day would ask my brother, sister, and me to stand at the southwest corner of the barn and note the place on the horizon where the sun disappeared. He suggested we use a tree to mark the spot. Then he would tell us to return to the same corner of the barn on the next clear evening to see if the sun set at the same place. I knew, as we continued to practice this family ritual, that we were learning about the sun's changing positions with the advancing seasons but I couldn't possibly have imagined that nearly half a century later I would refer to the departure of the sun from due west (at the time of setting) as its "amplitude" and would use the information to help guide a steel sailboat around the world. The "twig was bent."

I can understand my father's interest in making the toy sailboat and I think I can understand his interest in teaching us about the apparent movements of the sun, but I

regret never asking him why he had us watching sunsets. As an adult I would like to know what was going through his head while he was trying to put something in ours. In my case he created a lifelong interest. It was that interest that led to a way, decades later, of finding latitude at Cape Horn under completely overcast skies.

Farm life for a growing boy was fun. Chirping frogs told you when it was time to get rid of long underwear; the throbbing call of the whippoorwill beckoned you to shed your shoes and feel the freshly turned earth between your toes. The sequent blooms of arbutus, violets, laurel, lady slippers, honeysuckle, and magnolias provided a calendar guide for closing school and getting plants started for the summer's crops.

There were fascinating things and events. Horses provided the power for tilling the land and hauling the crops over dirt roads to the railroad station where they would be loaded in boxcars and sent to New York for produce merchants to buy and resell. Horses provided the power for smoothing the ruts of the dirt roads after the spring thaw and for hauling railshipped, New York-generated horse manure back to the farm for use in fertilizing tomatoes, peppers, sweet potatoes, corn, and hay. There were the exciting sounds and smells of steam engines, hog-killings, blacksmithing and horse-shoeing, fodder-cutting, wood-sawing, Sunday-school picnics, and church suppers. The seasons regulated the farm-and-social activities

and the seasons in turn were regulated by the annual march of the sun as marked by the ever-changing place of sunset.

Our family left the farm when I was eight. The move of two miles gave us a window on an eighty-acre lake—a lake where a boy could fish, catch bullfrogs, swim, ice skate, row, canoe, sail, and ride a horizontal mill wheel.

My first sailing was done in an abandoned sixteen-foot rowing skiff that my brother and I converted for sailing by installing leeboards and stepping a skinned, swamp-cedar pole as a mast. We sewed a sail of yellow muslin purchased at the local J.C. Penney store. It wasn't a prizewinner but then there were no regattas on Parvin Lake. It got us from one end to the other with an ease that beat rowing or paddling and on occasion provided us with an impromptu man-overboard drill. The same boat that more often than not would wet the seat of our pants would always whet our desire for a bigger and better boat and a bigger puddle to sail it in.

Soon after the move to the lake came books and teachers that told of the ancients who sailed in real ships and on real oceans searching for adventure. My favorites were the Norsemen and Vikings who sailed before the day of the compass. How could they have dared to wander so far from home without having a guiding compass to find their way back? How did they manage to find their way in fog and stormy seas among the treacherous rocks of the forbidding north country? I didn't have to have answers to the questions. That they did it was enough to make them heroes.

Not long after I graduated from high school I got hold of Jack Hanna's series of articles on the Tahiti Ketch and in very short order the articles got hold of me. Hanna promised that if you could scrape up a thousand dollars or so for the materials, you could build your own thirty-foot, oceangoing sailboat capable of taking you anywhere in the world. Why, it had already been proven in seventy-five-mile-an-hour

winds off the coast of Boston!

My brother, a friend, and I plunked down nine dollars of good, hard, depression cash for the plans and spent countless hours poring over them. There were some obvious tough spots. Where could we find a loft to fair the lines from the drawings? Where could we find a rent-free, watertight, and lockable building in the nearby area? Where could we find seasoned timber at a price that we could afford? Could we acquire the skill to shape the keel, set the stations, and fit the planking? Could we learn what we needed to know about steam-bending frames? Could we cast our own lead keel or have an iron keel cast? And last but not least, could the three of us scrape up the requisite \$1000? As time passed our interests diverged and the plans were put aside.

The same inner stirrings that turn a young man's thoughts to sailing the seven seas have a way of turning his eye toward those one-time giggling things that he wouldn't have been caught dead dancing a maypole dance with. It was a natural progression—girlfriend, wife, home, mortgage, kids, and help with college educations for three. Out of high school at 16 in 1932, I had neither the dollars nor the sense to start college at that time. I tried making and selling burial vaults, collecting a life insurance debit, and learned the carpenter trade. When I came down with a severe case of bleeding ulcers, a sympathetic doctor suggested I try something more sedentary. After an eight-year absence I returned to the academic life and earned a bachelor's degree in education. Drafted into the infantry after two years of a teaching principalship, I spent eighteen months in the army and went for a master's degree when released. In the fall of 1948 I joined the faculty at Glassboro State College where I remained as a professor of geography until 1977.

Geography was a natural for a guy who nourished a dream of sailing around the world. The dream was a powerful catalyst and provided a framework for learning about the

places I hoped someday to visit. Long academic summers made it possible to take extended tours of North America, Europe, Africa, and Asia. The dream at the outset was a way of getting to see what was beyond the horizon, but it persisted even after I had encircled the world by plane. Perhaps I could be satisfied if I could just cross one ocean in a small boat.

“I feel that someone hasn’t lived a full life if he doesn’t know the planet he lives on.”

—David O’Reilly, *The Philadelphia Inquirer*,
6/1/84

While our family was getting underway, I outboarded along the New Jersey coast—first in a twelve-foot cartopper and then in a well designed and well built eighteen-foot, aluminum boat. I learned to read charts, deal with sudden squalls and breaking inlets, and ventured farther and farther out to sea in search of game fish. My brother-in-law advised my wife, Blanche, not to give me too much lunch or I would go to Europe.

There was a grain of truth in his quip. I did have a strong desire to break away from the limits imposed by a small, power-driven boat. It simply could not carry enough fuel to go as far as I wanted to go. Our youngest was eleven and the nest egg put by for emergencies and three college educations might be able to withstand the cost of a used, thirty-foot sailboat.

It would not be made of oak frames and cedar planking. It would be of fiberglass, a material completely unknown when as a sev-

enteen-year old I had shared the cost of plans for the Tahiti Ketch. I spent three years sifting through designs, production boats, rigs, and recommendations. In October of 1970 I decided that the boat capable of doing what I wanted to do was the Allied Seawind—a boat that had already been sailed around the world by Alan Eddy of New York.

Within two weeks of making the decision, I was trekking from Glassboro, New Jersey, to Larchmont, New York, to look at a Seawind with a history. The original owner, I was told, had spent two weeks at the Allied plant in Catskill, New York, overseeing the layup of the hull. It came with three backstays, two headstays, extra-heavy fittings, and a hand-crankable, two-cylinder, German diesel engine. It also came with a patch in the cabin top where a rifle bullet had pierced it in mid-Atlantic on its maiden voyage. It was a bullet that signaled the end of a circumnavigation attempt and, as I understand it, the end of a friendship of some standing. The cabin of a small boat is not the most desirable place for relieving the stresses generated by long watches, cold, stormy seas, and social deprivation.

It was just one week after meeting Scotia that I called the owner, a Presbyterian minister in Larchmont, New York, and told him that I would buy his secondhand Seawind for thirteen and a half thousand dollars. I hung up the telephone in a fit of nervous shaking. No one that I knew personally had ever spent that much money on such a foolish idea. I was now fifty-four years old and proposing to try my hand at navigating—perhaps across the Atlantic and maybe with a bit of luck, beyond.

Chapter 3

Scotia Voyages

At eighteen I fretted about being able to master celestial navigation. I was convinced that practicing navigators were among the gods and that after assembling the raw materials, acquiring the necessary carpentry skills, building the boat, and learning how to sail it, I would have to face a problem of even greater magnitude—that of enticing one of these prima donnas aboard to practice the occult art with sextant, chronometer, and sight reduction tables.

By the time I bought *Scotia* I was three times eighteen and had gotten hold of M. R. Hart's *How to Navigate Today*, a sextant, an accurate watch, H. O. 214, and myself. I had to listen to the same self-administered lecture that I heard when I wanted eleven locks for the house I was building to open with a single key. I was given a choice of waiting three months for a special order or hiring a locksmith. I bought eleven locks and heard the lecture: "If a locksmith can do it so can you." There were some rough spots in mastering celestial navigation without instruction but dogged persistence and what seemed like an infinite amount of rereading finally paid off.

The schedule for sailing *Scotia* called for learning how to handle her in the summer of '71, sailing to Bermuda in '72, and trying for the Azores in '73. Departures would be from Cape May, New Jersey. The Bermuda voy-

age, a trip of 650 miles, would test the accuracy of navigation. The 2200-mile passage to the Azores would let me know whether my skin could tolerate prolonged saltwater bathing and whether my bones could withstand being jostled continuously for as much as three weeks at a time. A bonus would be practice in making a downwind landfall. If both the Bermuda and Azores trips went well, I looked forward to a landfall somewhere in Europe—perhaps in the British Isles.

The sailing timetable was set back for a full year because the Cape May-to-Bermuda attempt in May and June of 1972 failed. There had been a tropical depression off the Georgia coast and a more or less stationary low around Georges Bank off southern New England. When the forecasters predicted the dissipation of these threatening conditions, we decided to sail and within twenty-four hours had plunged into neutercane Alpha, the first such storm to be officially recognized by the National Weather Service. Winds that were expected to subside now cranked to as high as eighty knots—more than ninety land miles per hour. The effect was heightened because the northeast winds blew directly against the northeastward flowing Gulf Stream. The porpoises were ecstatic. Swimming four abreast they repeatedly climbed the backs of the white-capped waves and body surfed down the steeply inclined faces. It was hard to share the dolphins' glee. The

three crew members lay helpless in their bunks and for the first time ever I "went over the side." Even with all sails furled the high-speed wind brought damage. One of the two headstays was set into a rhythmic vibration that fatigue-cracked the tang connecting the stay to the top of the mast letting the stay fall limp. The triatic stay gave way allowing the mizzen mast to gyrate wildly around its point of attachment. We retreated safely but two other east-coast, Bermuda-bound sailboats were unable to return to port under their own power. The unfortunate skipper of one died of bleeding stomach ulcers aggravated by severe retching.

The bout with neutercane Alpha was only one of numerous encounters with violent weather during a decade of land and water travel. It started in the summer of 1967 while I was attending classes at the University of Minnesota. My wife, three children, and I were in a movie theater in Minneapolis when the screen darkened and all lights went out. After waiting ten minutes for what we thought was the bungling of an inept projectionist, I groped my way to the exit only to find what appeared to be a flood and all of Minneapolis blowing sideways down the street. We heard later that the University Weather Station's anemometer had blown away while registering wind speeds of 168 miles per hour. Miraculously, our two cars and travel trailer escaped damage. The following summer we limped into a trailer park in Los Mochis, Mexico, after a high-speed, cross-country bus had sideswiped our trailer, only to be hit by a full-blown hurricane hours after we had parked. Thirty-five hundred area homes were destroyed that night. Trees crashed all around us but because we had arrived after dark we had been temporarily parked in the center of the courtyard where there were no trees. In the summer of 1971 while practicing night sailing off Cape May we got roughed up by the winds accompanying that seashore resort's first tornado. And winds from hurricane Agnes greeted us as we returned to Cape

May from our Bermuda attempt aborted because of neutercane Alpha. Brushes with five more hurricanes (an unnamed one reported by a Navy destroyer and "Alice", "Cleo", "Amy", and "Belle") at sea occurred before the string ran out. I began to wonder if I were jinxed and my buddies were convinced of it. They would inquire beforehand where I planned to sail during the upcoming summer so they could plan their trips accordingly.

And so it came as no surprise when, as my brother Richard and I approached Bermuda in early July of 1973, the National Weather Service, through the government's broadcasting station WWV located in Colorado, warned of an impending hurricane. The announcer needn't have told us where it was headed. We could have told him. We backed off 150 hard-earned miles while it played through and let the after-gales propel us over twenty-foot seas to be the first yacht to enter Bermuda waters after the Islands' second earliest hurricane had paid a Fourth-of-July visit.

It was an unnamed hurricane of 1974 that provided a gentle but definite nudge in the direction of instrumentless sailing. Scotia was homeward bound from Horta in the Azores when a succession of heavy seas created by the hurricane slammed against Scotia's outboard rudder and racked up our electro-mechanical self-steering device. Ed Twardowski, a staunch companion from my outboarding days, had replaced the two-man outbound crew after they had suffered terribly from seasickness. Ed and son Jan had been with me on Labor Day weekend of 1966 when we decided to chase leaping bluefish on the flat, triangular bar of Hereford Inlet, New Jersey, in breaking surf created by swells coming from hurricane Faith. Even when we could get Scotia to steer herself, tending the helm occupied a great deal of time. What with cooking, dishwashing, sight-taking, sight reduction, log keeping, and other daily chores we were kept fairly busy.

Almost nightly compass light failure began to overload us. One night it would be the bulb, and then the socket, splices in the wires,

and connectors. All were in good repair when we left our home port but the constant exposure to splashing salt water was taking its toll. And the almost daily repair was encroaching on our sack time. Using a flashlight violated a fundamental law of safety—that of “one hand for the boat.” It doesn’t require above-average mathematical ability to figure out, given a basic knowledge of the human anatomy, that the practice of steering with one hand and gripping a flashlight with another does not leave “one hand for the boat.” The penalty for disregarding the “law”—a battered nose, broken ribs, or bruised thighs—is assessed and executed with a speed that rules out any possibility of appeal to a higher court.

Small-boat sailors have always used stars for steering between glances at the compass but the constant failure of the compass light prodded us to depend on them almost entirely for nighttime steering. We soon discovered that the accuracy of our dead-reckoned positions using the stars was comparable to that of using the compass.

When our eyes were freed from staring at the “tyrant of the binnacle,” there was more time to look around and wonder about the five-mile diameter “world” that surrounded us and moved at a speed identical to ours. Even though self-steering might have made night watch easier, steering by the stars produced a relaxed state that invited a flow of thoughts. One that seemed to recur ran something like this: “If you can steer fairly accurately at night without a compass, could you find a way to steer with reasonable accuracy in the daytime?” It was fun to kick the idea around and it served a very desirable purpose—that of helping to while away the long hours of night watch. More and more I found myself turning the possibilities over in my mind. There was no thought of avoiding the compass by day; it was just an interesting problem to think about.

The sun would be of some use but during middle latitude summers between sunrise and sunset it has a way of working its way around as much as two-thirds of the horizon.

How could you hold the boat on a steady course while the sun was “doing its thing?” There was little inclination to think about the problem by day but each stormless night the phantom of fantasy returned to help pass the time away. The sun would afford excellent direction at the time of rise and set provided a way could be found to determine latitude but it would be practically useless from midmorning to midafternoon. There would have to be something else to use in the middle of the day. Gradually, an idea emerged.

Why not use the surface of the sea itself as a guide in determining direction? Long distance swells are directionally constant for a relatively long period of time; perhaps they could be used. And if no swells were discernible why not key in on the direction of the waves generated by the currently prevailing wind? And what if there were neither waves nor swells to use for direction? There would be no problem because that would mean there was no wind and without wind there would be no need for direction. How about wind shifts? Sudden wind shifts could be detected by using the sun as a guide. If the boat changed direction on a sunny day because it followed the changing wind direction, the sun’s bearing, constantly kept in mind, could be used to restore the boat’s heading. The problem on a cloudy day would be of greater concern. The helmsman would have to sense the changing wind direction by observing the direction of curls falling down the face of a wave or the cross chop that accompanies shifting wave direction. Waves do not change direction with the first puff of air from a new compass point. It takes a while and my speculation was that the interplay between the old and new waves could furnish a clue to the new direction. Cloudy nights would be the worst. But then as the boat changed direction the change in the water’s rhythmic slap against the hull just might provide the needed clue. By the time Ed and I reached Cape May at the end of the twenty-nine-day voyage, I had convinced myself that direction finding by day without a com-

pass could be done and had already begun to search for a way of finding latitude without a sextant.

The landfall in the Azores was selected so that if gales prevailed at the time of arrival we could run past on a downwind course and return to make port when the storm had died down. After the successful passage to Horta I felt ready to make a landfall nearer to the European continent. My choice was England but because my daughter was going to be married in the summer of 1975, my wife decreed that there would be no expedition that year. It took a while to work out a strategy. I would have to settle for something less than a full ocean crossing. To the betrothed I proposed a honeymoon in Bermuda and to my surprise the offer was accepted. So Scotia made her second voyage to Bermuda in June of 1975 and I became a father of distinction—the distinction being one of the few if not the only father ever to accompany his daughter and son-in-law on their honeymoon.

The voyage to England in 1976 went well in spite of stormy Gulf Stream seas that knocked us down and flushed two compasses, one after another, out of the cockpit binnacle and in spite of a brush with hurricane Belle that we beat to our home base at Cape May by four hours. Frequently, during the 7000-mile voyage I would ask myself how I might feel without a compass or sextant. I would ponder the question and then answer, “O.K.”

I loved being at sea. When Ed Twardowski and I were sailing from Bermuda to Cape May, he asked me one day what we were doing at the thirty-sixth parallel of latitude when both the Azores and Cape May were about 180 miles to the north. Actually, we were trying to avoid the main current of the Gulf Stream, but my reply was, “Ed, I saw all that water up there on the way over, I’d like to see some different water on the way back.” It was my way of saying that I felt at home on the ocean and wanted to see as much of it as possible.

Because I was sailing to England at the time of our country’s Bicentennial Celebration

and because I was a member of Glassboro’s Bicentennial Committee, I was asked by fellow committee members to carry books, glass, and best wishes to the citizens of our Mother Country. It seemed appropriate to make Portsmouth the focal point of our gestures of friendship because the Stanger Brothers who founded Glassboro in 1779 had made a lengthy stopover in Portsmouth on their way from Germany to America. Mayor and Lady Gibson received me at an afternoon tea to which they had invited the press. In response to a reporter’s question, I spoke publicly for the first time of a possible ocean crossing without navigation instruments. As I recall I said that it would be fun sometime to try sailing across the Atlantic without compass, sextant, or time-piece. I merely put into words what had been rattling through my head for two years.

Marvin Creamer had just finished a long, heavy day working on his boat, and he was tired, thirsty, sweaty and generally looking a mess.

He was preparing his 30-foot sailboat for a five-week trip across the Atlantic Ocean to England.

His son Kurt looked at him and asked him the obvious question, Why?

“I had the obvious answer,” Creamer recalled. “Because it’s there.”

“But it’s more than that,” he said. “It’s pleasant most of the time out there—and it’s fun. It’s stimulating and it’s a wilderness area in the sense that you’re on your own. And if you can learn to live with it, it’s relaxing.”

Now Creamer plans to sail 3,500 miles to Falmouth Harbor, England, in what he insists is still a prelude to his real ambition—circling the globe in his sailboat.

—Larry Reibstein, *Courier-Post*, Cherry Hill, NJ, 4/27/76

By the time I returned from England, I realized that a true non-instrument voyage

would have to be made without a clock or radio. Timing a sunrise or sunset would be equivalent to shooting the sun with a sextant at zero degrees of elevation and would yield a comparable line of position. Crossing a morning line with an evening line would provide a reasonably accurate fix so if a voyage was to be truly without instruments both the clock and the radio, which also could provide correct time, would have to be avoided. So would depth sounders, direction finders, loran, radar, and all other electronic devices.

Before making his first Atlantic crossing, Mr. Creamer sailed from New Jersey to Bermuda and back twice.

Lone sailing? -- "Not yet. Perhaps that will be the next step, and hopefully, after that, circumnavigation of some kind."

His ultimate sailing ambition is to become the first 20th Century yachtsman to sail the Atlantic like the ancient mariners, with no compass, chart, or modern equipment -- not even a watch.

"Perhaps I may permit myself one aid which I guess even the ancients had . . . an hour glass," he said.

—*The News of Portsmouth, England, 6/9/76*

At this stage I was sure direction would not be a problem provided I could find a way of obtaining reasonably accurate latitude. And if latitude could be determined then I could make respectable landfalls without a clock, i.e., longitude. For years after Columbus and before the development of the chronometer in the eighteenth century, ship captains sailed the world's oceans by "sailing down the latitudes." Their scheme was to sail northward or southward to achieve the latitude of their destination well ahead of reaching land and then sailing east or west knowing that if they sailed long enough they would literally run into their objective. The major obstacle to non-instrument sailing

was a way of finding latitude. Published information on the navigation methods used by the Norsemen and the Polynesians provided very meager clues on latitude finding. There had to be a way! Navigators almost instinctively turn to the horizon as a reference for finding the elevation of celestial objects—this elevation being essential for obtaining latitude. I spent a lot of spare time musing in my favorite living room chair. One idea that seemed to have promise was that of using a star that was as far from the pole as a desired objective was from the equator—a polar distance equal to latitude. To provide latitude the selected star would have to be visible when it barely grazed the horizon sometime during its nighttime rotation around the pole. The theory was solid but the method completely unworkable because even the brightest stars or planets dissolve in murk well ahead of touching the horizon.

Months passed. I was busy preparing for retirement and there was no rush about all of this. It was only an extension of the speculation that was touched off by compass light failure several years earlier. But almost without sensing it, I had eased from soft fantasy into the hard reality of planning an ocean crossing without instruments. I felt compelled to dream up a way of finding latitude.

It had to come from a different way of looking at the problem. Gradually I came to the point of view that the horizon, whereas it was ideal for use with instruments, was totally useless as an elevation reference without them. What then? Why not use the zenith, that imaginary point directly overhead no matter where you are on earth? The trick in determining latitude would be judging whether a particular star was at or near the zenith. It would mean pointing to an imaginary spot in the sky and identifying it as being directly overhead—a seemingly difficult job on land but at sea? It sounds preposterous to think that anybody could stand on a pumping, twisting, rolling, pitching platform and pick, with any degree of accuracy, a point directly overhead, i.e., ninety degrees from the horizon. Yet

that is exactly what I was proposing.

It made sense to try out the idea on land before giving it “sea trials,” so on clear nights I would identify stars that would pass near the zenith, try to guess when they were on the local meridian and estimate the zenith distance, i.e., the angular distance in degrees between the zenith and the chosen star. As an example, Vega is about 39 degrees north latitude and Glassboro is about 40 degrees north thus when Vega was on the meridian in Glassboro it should have appeared to be about one degree south of the zenith. Sometimes it did, but at other times it didn’t. And practice with the method did not seem to increase the accuracy. There was an uncontrollable inconsistency.

It was back to the living room chair for some serious thinking. I suspected that the problem in consistency stemmed from not knowing when the star of choice was on the meridian, i.e., as high in the sky as it would be during the night. The naked-eye observation had to be made at that time. But the stars move constantly from east to west. How could the time of meridian transit be determined without some kind of clock? All the while I was practicing my zenith estimates and my neighbors were reaching conclusions about my sanity because of the frequent nocturnal sallies into the front yard accompanied by skyward gesturing, I pondered the problem. There had to be a way.

There was. After months of musing it occurred to me that some simple sky geometry could be used in working out the time of a star’s meridian transit. For practical purposes the northern pole star, Polaris, is at the center of the apparent rotation of the nighttime sky, thus it is on the meridian in the northern hemisphere. If a line drawn from Polaris to a star, e.g., Vega, divides the sky into two equal parts, an eastern part equal to a western part, then the star, Vega, is on the meridian. To find latitude from Vega you would 1) choose a time of year when it would stand at or near your zenith some time during the dark hours, 2)

draw an imaginary line between Vega and Polaris, 3) watch the imaginary line, as it is pivoting on Polaris, rotate counterclockwise as Vega rises in the east, 4) determine the instant when the line divides the sky into two equal parts, and 5) determine whether Vega is at the zenith or, if not, whether it is north or south of the zenith and by how much, making the judgment in degrees of arc.

What I had hoped for happened. Estimates of latitude were consistent and accuracy improved with practice. On nearly every clear night I would draw the imaginary lines in the sky, make an estimate of zenith distance, dash inside to consult the **Nautical Almanac**, perform the necessary trigonometry on the calculator and then dash outside to catch yet another star. Neighbors by this time, I am sure, had confirmed their worst suspicions.

The method worked on good old solid terra firma, but would it work on a bobbing boat at sea? Long before the latitude-finding method evolved, I had decided to try a small-boat, east-to-west Atlantic crossing. I reasoned that it would be very difficult, if not impossible, sailing westward to miss the North American continent. Now with the potential for finding latitude I shifted into high gear.

Our aim would be to make a landfall within sixty nautical miles of Cape May, Scotia’s “berth” place. The choice for the departure point in Europe was easy. When I was in Falmouth, England, in 1976 I was told of the charming harbor at Baltimore, Ireland. It was ideal for the purpose. It lies within a few miles of the southwestern corner of Ireland and by embarking from there we would encounter much less risk of being blown onto land should overwhelming onshore winds occur soon after our departure. We could choose to run eastward along the south coast or northward along the west coast to escape any gales with an onshore component.

Earlier I had considered enlisting the aid of a sponsor. When Baltimore, Ireland, was selected as the starting point for the no-instru-

ments voyage, I wrote to Mayor William Schaefer of Baltimore, Maryland. Baltimore's public relations department had been active in seeking publicity for its port and I thought they might respond favorably if the trip were to be billed as a Baltimore to Baltimore endeavor. His response seemed cordial enough but I knew we did not see eye to eye on any possible mutual benefit when I read in his letter dispatched in 1977 that he was referring mine to Baltimore's (U.S.) Bicentennial Committee.

There was a general consensus that it was suicidal to tackle an ocean crossing in a small boat and complete idiocy to start out without a single navigation instrument. Cliff Shafer at nineteen crewed on Scotia between Cape May and Falmouth in 1976. Before we left, his friends had all but convinced him that they would never see him again. When my son, Kurt, told his fellow-freshmen at Brown that he was going to crew on Scotia from Ireland, they told him flatly that he was crazy and when they discovered we were navigating completely without instruments they were ready to prepare his memorial service.

Dick Burgin, backyard neighbor, gave me a hand getting Scotia ready for the trip to Ireland and joined me for the slow 35-day trip getting Scotia in position for a try at non-instrument sailing. For a time I thought we would have to abort the main event because of adverse gales and calms. Two days off the Jersey coast we were pounded by a storm that produced winds up to 65 miles per hour and seas to 25 feet. I wondered if the sea gods were trying to tell us something when a small bird sought shelter in the cabin and died of exhaustion perched in our dish-draining rack. Northeast winds persisted for three weeks during which we were lashed by six more full-blown storms. The calms that followed were, if anything, more disconcerting.

The night before Kurt and I departed, the Baltimore—Skibbereen Harbour Commissioners at the end of their formal meeting trooped down to New Wharf to seal our in-

struments as they had agreed to do when I corresponded with them prior to departure from Cape May. Thinking that I would save them time I had very carefully wrapped each instrument in bubble plastic and sealed it with masking tape so all they had to do was apply their seal to the closed duffel bag. But no! If they were going to certify that they were sealing my instruments, they would have to see the instruments. So each instrument was unwrapped and rewrapped in their presence. I left with a deep respect for the integrity of these people.

It was a gentle ride down the lovely, green-hill-rimmed, one-and-a-half-mile wide Baltimore Harbour. There was a feeling of being suspended in space and time as our genoa and a light east wind joined to nudge us in the direction of the inlet. We reviewed our "float plan." It was to sail from under the star Eltanin which stands at its meridian transit directly over Baltimore southwestward until we came under the star gamma Cygni. At that point we would turn directly west and sail through blue Atlantic and Gulf Stream water into the green coastal waters bordering northeastern United States. Shortly after entering green water we would turn south and proceed until we came under Vega. When we arrived under Vega we would turn west and head for Cape May. This dogleg route was planned in order to avoid the main eastward flowing current of the Gulf Stream located at approximately 39 degrees north latitude. Our straight east-to-west route would lie about 75 miles north of this potentially adverse current. With no way of obtaining longitude information we preferred to avoid the big Europe-bound conveyor belt called the Gulf Stream.

We joked about our backup float plan—one that we might use if all else failed. The essence of it was the finger test. We would immerse a finger in the water and if it became numb with cold we were obviously too far north. We would have to veer off to the left. On the other hand if the temperature of the water

matched that of a body fluid generally abundant on night watch especially when gussied up in heavy clothing, foul weather gear, and safety harness we were too far south and would have to veer off to the right. The aim, then, was to move westward in water temperatures that were somewhere between numbing and tepid. We reminded ourselves how hard it would be to miss North America.

The moment of truth was at hand. Before us lay the north Atlantic noted for its stormy seas. Scotia had just plowed through seven of its storms. Could we find our way in periods of foul weather? How long would these periods last? Would we be able to detect nighttime wind shifts? Would overcast skies obscure our chosen latitude stars when we had to see them at critical way points? Could we pinpoint our zenith, vital to our latitude-finding method, from a pumping, rolling, pitching, yawing platform? Could we clear the danger zone of the rocky Irish coast before the winds of some unpredicted storm drove us on an unseen, surf-washed boulder? We motored through the narrow break in the coast and felt the open-ocean swells take control of Scotia. We squinted at the brilliant morning sun, deduced a heading from its position, and set a course for a target twelve degrees to the south and 3000 miles away.

The standard sailing route from the British Isles to the mouth of the Delaware Bay lay far to the south of the track that we planned to try. I had studied the tracks of the OSTAR racers and decided that even though ketch-rigged Scotia could not point into the wind as high as the racing boats we had a good chance of making headway against the prevailing westerlies if we constantly chose the tack lying closest to the desired heading. The west-to-east-moving weather systems within the westerly belt are characterized by winds from all directions but mainly winds from the west, southwest, and northwest. In general we planned to adjust our position to the north and south during periods of west wind and to move westward on the port tack

in southwest winds and on the starboard tack when the wind was northwest. If we did get periods of north, south, or east winds, we could adjust our latitude and make good westing at the same time.

The weather gods hit us with a pop quiz on direction-finding as soon as we were out of sight of land. They challenged us to find our way in a series of small, circular, and fast-moving systems that churned the surface into a hodgepodge of waves crossing in all directions. Steering clues were hard to find by day and almost nonexistent on cloudy nights. Scotia, kept on a constant angle to the wind by an Aries vane-steerer, would follow the shifting wind and at times be as much as 100 degrees off course. Fortunately, the early June nights were of relatively short duration so Scotia's errant behavior could be corrected before too much "ground" was lost and in two days time we were able to sail clear of the pesky depressions.

When we left Ireland we knew that the latitude of our landfall would be the ultimate test of our latitude-finding methods and that the overall length of the voyage would give us a hint on how much wandering we had done en route. However, we hoped to be able to establish some points along the way. Enter Frank Casper, erstwhile circumnavigator and veteran of twelve singlehanded Atlantic crossings. In a brief, mid-Atlantic meeting, he agreed to send a letter to my wife, Blanche, when he reached his next port. We asked him not to tell us what that port would be nor give us any other clue to our position. We were not surprised, however, when we arrived home and found that his letter was postmarked at Horta in the Azores. According to Casper's log we were at 40 degrees, 41 minutes north latitude when we met. Our log showed a latitude just one degree north. In fifteen days of sailing we had moved about 1400 miles in the direction of our goal and were off by 60 miles in our latitude estimates. Incidentally, Frank was 74 at the time of our encounter. When I responded to his question about my age by telling him

that I was 62, he exclaimed, "Why, you're nothing but a kid." Curiously, Frank was the Cruising Club of America's *Blue Water Medal* winner in 1970, an honor that I was to receive seven years after our chance meeting.

We were able to fix two other points of our track. Three ships passed close enough for us to copy their names. We got addresses from **Lloyd's Register** when we returned and two of the managing companies that we got in touch with provided us with position information from the ship's logs. We were astonished to learn that each of the two respondents gave us the same exact latitude—40° 19' north. The Stavanger out of Oslo sighted us at 49° 9.5' west; the Alabama Getty at 66° 18' west. In nearly 800 miles of travel we had maintained the same latitude. In both cases we were within five miles of our desired latitude and were less than eight and eleven miles of our logged latitude.

When we set out from Baltimore we hoped to hit Cape May dead on. That goal was to elude us for six years. Shortly after we sailed into the green water, as per our float plan, we ran into fog. In some patches visibility was near zero but in others there was some vertical thinning so occasionally it was possible to get a glimpse of a very pale sun by day or fuzzy points of light near the zenith at night. The script called for a turn to the south to get from 40 degrees north latitude to 39 degrees. But the wind was south of southwest which meant the starboard tack would have taken us away from the coast and the choice of alternating tacks called for to reach Cape May as directly as possible would have required beating a zigzag course across the shipping lanes radiating outward from New York harbor. After a near-miss by an oceangoing tug at night and a freighter in the middle of the day it would have been foolhardy to press on to Cape May in the fog. Our safety dictated closing the coast as quickly as possible. Shortly after our decision to stay on the port tack we ran onto "B" buoy moored fifteen miles off Barnegat Inlet. Two hours later in somewhat improved visibility

we sighted buoy "2R" five miles off Barnegat Inlet. Our landfall was at 39° 45' north—about 49 minutes or miles north of our target. However, our log shows that at the time we sighted "B" buoy our estimated latitude was 39° 50' north. Our logged latitude was within five miles of correct latitude after a voyage of 3000 miles. Our success in obtaining latitude with naked-eye observations of the stars

BLUE WATER MEDAL AWARDED CREAMER

At the November meeting of the Governing Board of the Cruising Club of America J. Ross Pilling Jr. recommended that the 1985 Blue Water Medal be awarded to Dr. Marvin Creamer for his circumnavigation and two transatlantic crossings in his sloop "Globe Star" without benefit of compass or other navigational instruments.

—*Cruising Club News*, January, 1986

A series of increasingly bold sea ventures has earned Marvin Creamer, Pitman's globe-girdling sailor, the Cruising Club of America's Blue Water Medal, long-distance yachting's equivalent of the Pulitzer Prize.

Creamer, a 69-year-old retired Glassboro State College professor... received the award Thursday night at the New York Yacht Club...

The CCA Blue Water Medal confirmed Creamer's place in the pantheon of small boat voyagers beside such legendary figures as New Englander Joshua Slocum, who, in a voyage lasting from 1895 to 1898, became the first person to sail alone around the world.

...Creamer relied solely on his system of naked-eye celestial observations and his highly developed sea-sense.

—Tony Muldoon, *Courier-Post*, Cherry Hill, NJ 1/18/86

helped to lessen our disappointment in not making our landfall directly at Cape May.

There were two main questions concerning non-instrument sailing when we embarked from Ireland. How accurate would our latitude estimates be and how would off-course wandering affect the length of the voyage? Latitude from Frank Casper, the Stavanger, the Alabama Getty, and from the landfall when compared to latitude from our log shows an average error of sixteen minutes or miles—roughly a quarter of a degree. There were two measures of wandering. The one provided by the sightings which suggest a minimum of

wandering, e.g., logs of the Stavanger and the Alabama Getty, and the other manifested by the number of days required for the passage. The “downwind” voyage to Ireland took thirty-five days with instruments. The “upwind” return trip was made in thirty-eight days. The British Admiralty publication **Ocean Passages for the World**, lists 40 to 50 days as the average length of a summer-months sailing passage between the English Channel and New York. Measured against the trip over to Ireland or the Admiralty averages Scotia’s thirty-eight-day return trip suggests little time was wasted because of off-course sailing.

EYEBALL NAVIGATION

Marvin Creamer and his son, Kurt, recently completed an Atlantic crossing in their 30-foot ketch. Their navigation was adequate—landfall was close enough to make it to their destination at Cape May, New Jersey. But perhaps their navigation was better than just adequate—considering that they used no nav aids, not even a compass. Instead, the Creamers navigated by estimating heading and latitude by simply looking at the stars. A recently retired Geography professor and veteran of three

Atlantic crossings, Creamer had theorized that the Irish and Norse sailors of pre-Columbus days must have been able to navigate without navigational tools. After much practice, on land, Professor Creamer was able to prove with his journey that such navigation is possible. And for you more meticulous types, the answer is no; Professor Creamer did not apply P&N or Coriolis.

—*The Navigator*, United States Air Force,
Winter, 1978, Vol XXV, No. 3

Chapter 4

The Navstar Voyage

In spite of six storms, prolonged calms, and a sky that was overcast much of the time, we managed to find our way across the Atlantic in a reasonable period of time. But had we been blessed with beginners' luck? Could it be that our apparent success was a fluke? Our methods seemed to work but had we proved that non-instrument navigation could be reasonably accurate? Further exploration was in order. The first trip was made upwind to avoid the possibility of being overwhelmed by onshore gales at the time of making a landfall and was designed to end on a long stretch of familiar coast. Goals for the next trip should include finding some islands and landing on an unfamiliar coast. Why not a Cape May-to-Africa round trip? Why not? I had spent some time nosing around Dakar harbor in Senegal a decade earlier and felt it would make a satisfactory landing site. In the broader picture it was an ideal location. Dakar at Cape Verde stands at the climatic divide between the Sahara and more humid lands to the south. In making our approach we would be able to tell whether we were north or south of Dakar by noting the type of vegetation—desert or steppe—on shore. It made sense to aim for the African coast somewhat north of Cape Verde because the wind and water both move southward in that vicinity. It also made sense to try to avoid landing south of Dakar not only be-

cause of the adverse air and water currents, but because there are large areas of muddy shallows at the mouth of the Gambia river immediately south of Dakar.

After the voyage back from Ireland, Kurt and I decided that a larger crew would make life on board a lot easier so for the new venture I looked around for a somewhat larger boat and chose the Southern Cross 39. It had the storage capacity that we would need for the anticipated complement of four and for the extra provisions we would carry as a precaution in case of a miscalculation in navigation.

Jean Neel of nearby Absecon stood on the dock at the Farley Marina as we pulled away in fanfare provided by the Atlantic City Public Relations Department. An unidentified man standing at her elbow turned and said, "We'll never see them again!" No doubt many in the crowd shared his attitude. Generations of school children have been taught that no serious navigation was done before the introduction of the compass in the fifteenth century and historians have tended to ignore any evidence to the contrary. We were aware that we could not prove the ancients engaged in long-distance voyaging but felt we could prove that information taken directly from the sea and sky could be used by navigators to guide small boats over the ocean with a considerable degree of accuracy. With that in mind four of us aboard the new cutter-rigged Navstar set sail from Atlantic City on April 11, 1980, bound for

Dakar. The Coast Guard had generously fitted Navstar with a radio transmitter that would send coded position information to Washington, D.C. several times a day. We had told the media that we hoped to find three sets of islands en route but would be very happy to find any two of the three—Azores, Cape Verdes, and Bermuda. There was no doubt in our minds about finding Africa.

Some navigation basics are in order. A ship's navigator keeps a continuous record of the distance and direction his ship travels and can at any given moment come up with a position expressed in latitude (distance from the equator either north or south) and longitude (angular distance from the prime meridian which extends in a north-south direction through Greenwich, England). Because waves, water currents, and the wind can affect the distance and direction that a ship makes through the water, the position as deduced from records of distance and direction (dead reckoned position or "DR") may not coincide with the ship's true position. The true position of the ship is determined from celestial or electronic "fixes" obtained several times a day. Dead reckoning begins anew from each celestial or electronic fix. A compass is used to determine the direction of the ship's travel, a log is used to measure distance traveled, and a sextant and chronometer (accurate clock) are used to determine latitude and longitude. Latitude can be ascertained with the sextant alone but an accurate clock must be used to measure the rotation of the earth in order to determine longitude. The ship's position is defined in terms of its latitude and longitude. Normally the navigator working with precise distances and angles uses plane geometry in finding the DR position and spherical trigonometry to determine a celestial fix.

Guiding a ship without using instruments is something of a navigator's nightmare. The direction of the ship's heading is dependent not only upon the position of the landfall but on its present location. That location on any day after departure has been dead reckoned after

sailing in unconfirmed directions through unconfirmed distances. In the absence of currents or leeway, sailing due north or due south changes latitude only and sailing due east or due west changes longitude only, but sailing in any other direction changes both latitude and longitude. The amount of change in each depends on whether the course is nearer to a north-south one or an east-west one. An inaccurate assessment of direction traveled can result in an overestimation of one at the expense of the other. Steering angles deduced from the angle waves make with the boat's center line and measured with the hands, palm to palm, used as a pelorus are not as precise as those taken from a compass; thus, dead-reckoned positions may be a considerable distance from a boat's actual position. Latitude can be corrected by observing stars or planets at or near the zenith but longitude cannot be retrieved at sea without an accurate clock. The non-instruments-navigator does not have the luxury of knowing exactly where he is, exactly which way he is headed, exactly how far away his goal is, or exactly what direction he must steer to get there. He has to work out strategies to deal with these interrelated variables and learn to live with a certain amount of uncertainty.

As we neared the Azores we were overtaken by a week-long series of westerly gales. After a week of thirty-five knot winds seas were thirty-five feet high. Although Kurt and I had encountered six major storms returning from Ireland we had not seen seas that high. Navstar rose and fell and rolled from port to starboard in a seemingly endless cycle as wave after wave slipped under her stern. I wondered how accurate our latitude estimates could be as I watched the mast making wide sweeps through points of light in the nighttime sky. Our latitude-finding stars Cor Caroli and Vega appeared to be at or very close to our zenith as they passed in sequence over our heads but they, too, appeared to yield, if only slightly, to Navstar's rolling motion. I did not feel comfortable with our latitude judgments so when visibility

began closing down, the DR showed us well beyond our target, Pico, and the crew began grumbling about signing on for Africa and not Europe, I relented and gave the order to turn southward for the latitude of Senegal.

When I called my wife, Blanche, from Dakar about three weeks later the first thing I heard was, "You idiot, why did you turn away from the Azores when you were headed straight for them and only forty-four miles away?" The answer was that I did not believe I could judge latitude, with any degree of accuracy, from a platform that was being constantly buffeted by turbulent seas. I felt sick. The methods had worked but I had failed. I resolved never again to lose faith.

The appearance of cool, green water signaled our approach to the African continent. A day later an arid, treeless coast rose slowly out of the early morning light. We had made a landfall north of Dakar. In the absence of navigation markers we had difficulty in establishing our point of contact but knew that we needed to sail southward to find Cape Verde and Dakar. At dusk there was still no hint that Cape Verde was close and there would be no shelter in the unbroken coast. The moon was in the dark phase so it would be impossible to steer a parallel course during the night. If we tried to sail southward we would run the risk of running onto the westward-projecting Cape Verde in the dark. If we tried to anchor or sail in a tight circle near the coast we risked being blown aground by a sudden windstorm. The only safe option was to head offshore by sailing east. Light air turned heavy as I luxuriated in a deep sleep that I could not have afforded while searching the night skies for clues to our latitude. In the morning I only vaguely remembered someone asking whether Navstar should be slowed down as she flew in a homeward direction. To a man the three crew members agreed that I had said "Let her go." The sun was beyond the meridian before we had land in view again and darkness came before we found Cape Verde. Navigation lights that appeared dur-

ing the night gave us lines of position that we used to steer clear of the rocky shoals surrounding Cape Verde in finding our way into Dakar harbor.

Even though the winds had blown steadily from the east during the two weeks Navstar was berthed in Dakar, they turned light and variable the day before we left. Winds that are constant in direction and speed make non-instrument navigation much easier. Both speed (therefore distance) and direction are almost infinitely easier to estimate. But we were committed to finding the Cape Verde Islands and would have to make do. In spite of some calms and periods of light air we sighted Monte Gordo on São Nicoláo through Saharan dust five hundred miles and five days later.

By now we had achieved our landfall in Africa and had found one group of islands. The best that we could hope for, having missed one of the three sets of islands, was finding two out of three. Our target was Bermuda. We didn't expect it to be easy. It lies nearly 3000 miles north and west of the Cape Verdes, has a maximum elevation of about 300 feet, presents only an eight-mile-wide target when approached from the east, and is bordered on the northern edge by a shallow, wreck-strewn reef. The latitude stars we planned to use, zeta Herculis and gamma Lyrae, are faint and difficult to identify.

We shaved the west end of Santa Antão a little too close and struggled several hours to escape from the wind shadow it creates in the northeast trades. Then for ten consecutive days we flew toward Bermuda, logging fifteen hundred nautical miles (eighteen hundred land miles) before the bubble broke. We aimed well to the east of Bermuda so that after arriving at its latitude we could use the easterly winds to run it down by the parallel sailing method. We aimed a little too well and landed right in the middle of the Bermuda High and the so-called horse latitudes where the Spanish explorers are said to have made their steeds walk the plank to lighten ships becalmed in the light

and variable airs of the subtropical high pressure belt. Lacking horses to sacrifice to the wind gods we sat out nine hot days of almost dead calm. Dead calm might have been better. When the possibility exists that a stray puff of air might advance the boat a mile or two there is an inclination to keep sails aloft. Unfortunately, while the air is calm the glistening surface becomes a graveyard for dying waves that creep in from beyond the horizon and move the boat as though it were resting on the back of some restless monster. As the hull rolls back and forth the spars in a quick motion slap the sails against the still air turning them inside out with a popping noise that resembles suspended bed sheets being harassed by gusts of wind. Snaps, shackles, bails, and other bits of hardware grind against themselves and bang against mast, boom, and stanchions. The howl of a gale in the rigging would be preferable to the slatting of unfilled sails in a dead sea.

A day or two of calms can provide relaxing contrast to the normal shipboard routines and make available time to inspect and repair gear normally under load. Clothes can be washed and dried, provisions checked, inventories reworked, the galley and head cleaned, the bilges inspected, sleeping bags aired out, and thoughts and events recorded in diaries and journals. A kind of infield chatter develops in an attempt to reassure ourselves that this condition cannot last. All the while each member of the crew keeps an eye on the sky and sea watching for the cloud or shiver on the surface that will herald the return of Aeolus to his earthly realm. Conversation drifts to the atmospheric mechanism that creates the gigantic swirl of air with gently settling warm air at its center. It also drifts to the amount of food and fresh water on board. Slowly over a period of days fewer words are spoken and each man buries himself in a book or his writing. Banter becomes a casualty lest an offense be committed. The bathroom-size cabin of a small sailboat becalmed in the middle of the

Atlantic is no place to ignite tempers aggravated by a feeling of helplessness, and goaded by the incessant banging of rigging and slatting of sails. You are bound to wonder if by some quirk of fate you have stumbled onto a spot where the wind has never blown or never will. You try to convince yourself that the wind having blown you to this damnable spot, will, in due course, return to waft you away. Should this not happen, surely underlying currents will bear you toward the land of the living wind and sea. You look at the charts only to discover that the currents in this part of the ocean resemble a dog chasing its own tail. When energy levels are a little higher we try to match sails to the shallow puffs in an attempt to milk every last ounce of movement out of each one. It is probably useless but there is always the hope that not too far beyond our five-mile-wide circle the air is blowing and we might just be able to find it.

There was plenty of time to think about sailing around the world—the goal that I had set when I was eighteen. Would I be finished with non-instrument sailing after returning to Atlantic City, or would I want to try making the circumnavigation without instruments? How would I feel about the long passages required for such a voyage? Well aware of what stress can do to the mental health of men at sea, I wondered whether I could find a crew tough enough to endure the inevitable anxieties inherent in such an undertaking. What route would I choose? Would it be west around through the Caribbean, the Panama Canal, across the island-studded Pacific to New Zealand and Australia? Then north of Australia through Torres Strait and the Arafura Sea, across the Indian Ocean to Cape Town, and back home to New Jersey via the south and north Atlantic Ocean? Or would it be east around—South in the Atlantic to Cape Town, around the Cape of Good Hope and Cape Agulhas in Africa, across the Indian Ocean and south of Australia, and across the Tasman to New Zealand? Then across the Pacific, around fabled Cape Horn, and return to New Jersey in

the Atlantic? As I pondered my aims and options it became clear that making an instrumentless circumnavigation by way of the Panama Canal didn't make sense. There was a touch of ancestor worship in what I was doing—a tip of the hat to ancient sailors who could not make the choice of sailing with instruments. I do not honestly believe that pre-Magellan sailors completely encircled the world but the possibility was there via the Cape Horn Route. It certainly was not via the Panama Canal.

The choices were being narrowed. If I chose to go with instruments I could go either way. Without instruments it had to be the Cape Horn route—east around. I leaned toward the latter. It would take at least two years to get an expedition underway and by that time I would be well into my sixty-seventh year. Would I have the muscle, stamina, and mental acuity required for such an undertaking? I considered an alternative plan whereby I would do the research, lay out a route, train a skipper and crew, and sail vicariously while acting as the on-land coordinator. Even though in the end I discarded the idea as impracticable, it served as a vehicle for cataloging and assessing my own capabilities. My lowest grade was in the age category. I seemed to be able to hold my own with crew members less than half my age, but what if something happened to me en route? I would have to make sure the crew was capable of sailing without me.

Aside from the problem of selecting a boat suitable for the heavy weather of the southern oceans and that of finding direction and latitude in the southern hemisphere where there is no visible pole star, there were two major obstacles: 1) convincing my wife that this was fitting and proper retirement activity and 2) finding a way to get around Cape Horn under a completely overcast sky. Sometime earlier I had asked two oceanographers, whom I had met at a meeting of the Explorers Club in Philadelphia and who had been to Antarctica twenty-one times each, how many nights a month I could expect to see the stars in the vicinity of Cape Horn. In concert they said,

“One!” I couldn't conceive of starting serious preparations until I knew how to find latitude at Cape Horn in cloudy weather and was sure that Blanche would give her O.K., if not her blessing. My inclination was to leave the departure date open but to begin working on solutions to the problems involved in getting an expedition underway. At least I would have a project to think about and I would be able to engage in what has become a lifetime habit—mulling over and over what appears to be an unsolvable problem. Blanche has learned that wild schemes are being hatched when I sit for hours in the living room chair with eyes closed, apparently asleep. I would have to be careful not to tip my hand before the time was right.

Fitful winds accompanying a passing front got Navstar moving again. The relief was akin, I'm sure, to what farmers feel when rains bring an end to a prolonged drought. It was time to get down to the business of finding Bermuda. By now we had had plenty of practice in locating our two latitude stars. Projected down to the earth's surface, zeta Herculis and gamma Lyrae bracketed our target, the former lay about forty miles south and the latter about twenty miles north. They crossed our meridian about two hours apart. It would have been much easier to place ourselves between the two stars if they crossed simultaneously. But they didn't.

Our motivation to find the island playground was strong. We had missed the Azores and although we had come upon the Cape Verde Islands, our credibility would suffer if we failed to fetch Bermuda. Ed Gibson was certain we were too far north and Gary Doyle was equally sure that we were too far south. Poor Ken Helfant, who had tried numerous *mal de mer* remedies to no avail, was too sick to make the nighttime observations or care. That gave me the deciding vote, but I would have had it anyway. Shipboard democracy went overboard when we got to Dakar and I learned we had missed the Azores by turning aside half a day too soon.

Late in the afternoon of July 7, 1980, the

heavens yielded a clue that no ancient sailor could have stumbled onto. We spotted a condensation trail and heard the drone of an aircraft engine. Rumors have surfaced from time to time telling of skippers sailing from the east coast of the United States to Bermuda or the west coast to Hawaii by following the vapor trails of island-bound aircraft. In five previous approaches to Bermuda I had seen an occasional trail but nothing that would be of help in locating the island group. I crossed my fingers lest suddenly a score of trails would converge to give away its location. Whether we welcomed the clue or not, we couldn't ignore it. It brought a flood of adrenalin and a lot of speculation about our position. The night watch searched the horizon in vain for a glimpse of a distant loom.

The wind died at sunrise on July 8. We cranked up the "iron spinnaker" to move about five miles to the southwest and charge Navstar's batteries. At noon we estimated our position at thirty-two degrees and twenty-five minutes north latitude and sixty-five degrees and fifty-four minutes west longitude. The latitude fell within the range of Bermuda's latitude but the estimated longitude placed us about forty miles to the west. If the longitude was correct we had already passed by Bermuda. We did not believe that was true. We had been very careful with our latitude observations and felt that we would have gotten some indication of Bermuda's presence if we had gone beyond it. During the afternoon we ghosted southward in a weak west wind. Our strategy was to make our approach from as far south as possible in order to avoid running onto the eight-mile-wide coral reef lying just north of the islands. At sunset a strong breeze sprang up from the southeast. We hoisted our mainsail and genoa to get us moving to the west. Three hours later Ed Gibson, on night watch, wakened the rest of us to see Bermuda's loom on Navstar's starboard bow. We were "very happy" we had found two of our three sets of islands. When I called Blanche next day from Saint Georges, I asked her

what latitude she had us down for at noon the day before (July 8). She referred to her notebook and said, "The ARGOS System listed your latitude at thirty-two degrees and twenty-five minutes north." It was the exact latitude recorded in Navstar's log. As I recall she did not call me an idiot.

Bill Elliott of the Atlantic City Public Relations Bureau was in charge of our media relations. He handed us a stiff assignment for the final leg. Via telephone he told me that the return to Atlantic City would get the best press if we arrived on a Friday. He went on to say, "Today is Wednesday, the ninth. I know you can't make it by the eleventh, but I want you to be five miles off Absecon inlet at nine in the morning Friday, July 18." When I protested that we had no clock to go by and were sailing completely without instruments, he replied, "Marv, I know you'll be there."

We kept the date. It was nearing midnight on the sixteenth when we identified electronic buoy "D" at the southern entrance to Delaware Bay. We sailed well offshore to stay out of sight and moved northward slowly so as to arrive at the rendezvous point after dark on the seventeenth. We didn't want to spoil the homecoming Bill Elliott had planned for us. We were plenty early for his party and just in time for a real hellbender that Mother Nature hosted. It was just not the ordinary garden variety electrical storm. There were terrific winds and a magnificent lightning display. We had an "adventure" in the last few hours of the voyage keeping Navstar "on station" in the gale-force offshore winds.

The party was a media event. A water-spouting fireboat led a parade of Coast Guard and private boats while two helicopters and a small plane towing a welcome-home banner buzzed overhead. The Coast Guard Band from the Cape May Training Base provided spirited music. Resorts International hosted a gourmet luncheon for family, friends, and the media.

When all the usual questions had been asked and answered, Joanne Fishman, boating editor of **The New York Times**, took me aside

for an in-depth interview. Her final question came as a shock. She looked me straight in the eye and asked, "Professor, do you have any plans to sail around the world without using instruments?" My response: "I have no plans." Then she followed with, "Can you honestly say that you haven't thought about it?" No, I couldn't and told her so. I would have preferred keeping a lower profile until I had had time to mull over the problem of getting around Cape Horn in cloudy weather and until I had had a chance to figure out how I was going to convince Blanche that such an undertaking was an acceptable if not a good idea for a 66-year-old retired geography professor.

As for his next voyage, he reluctantly conceded that he was considering a circumnavigation—without instruments.

—Joanne Fishman, *The New York Times*,
7/20/80

Step one in preparing my case was to seek help with an internal bleeding problem that had bothered me for several years. Ed Gibson, a retired surgeon, had urged me in that direction during the trip to Africa. My reluctance to seek help sprang from the failure to discover the cause in earlier meetings with physicians. I called them faith healers. They had faith that if I would learn to relax the bleeding would stop. Fortunately, I found a gastroenterologist who, instead of lecturing, listened. After finding nothing in a preliminary examination such as I had had before, he questioned me very carefully and within fifteen minutes told me that my problem was a polyp in the colon. In less than three weeks time, he had removed the one-and-a-half-inch-diameter polyp in an incisionless operation. I celebrated by doing a few round trips between my sixth-floor hospital room and the ground floor two hours after I came out of the anesthetic.

Ten days later I began feeling sharp pains in my left leg. The right one had given me sim-

ilar pain before and during the early part of the African voyage. Our family doctor had recently died of cancer and we had been sluggish in selecting a new one so I went to a local physician who diagnosed the ailment as an inflammation of the gastrocnemius. He prescribed butazolidin which is also used, I understand, to treat the sore legs of race horses. When the pain became excruciating, I appealed to the gastroenterologist who had found a polyp by listening to what I was saying. When I described the pain he saw me immediately and had me admitted to the hospital that adjoins his office building. Tests showed that I had lost the saphenous vein in the left leg and they revealed scar tissue in my left lung that resulted from a clot that had traveled from my right leg just before making the African trip. With prodding from the doctor I remembered the severe pain and extreme shortness of breath climbing the stairs to my office at Glassboro State College. Dr. Anthony J. DiMarino, the gastroenterologist, read me the riot act. He couldn't understand why I had not sought help with the right leg and why I went to sea without having it checked. He let me know that the moving clot could easily have done me in and that I was in danger of a similar one from the left leg—one that might finish me off. Only after a month-long regimen of blood thinners and hot soaks on the phlebotic limb did he let me out of bed. He warned me that in all probability I would not regain full use of my leg. I joked with him saying that I would cure it like I did its mate—by taking it to sea for a summer.

Predictably, Blanche's prescription was just the opposite. "You just couldn't risk your life knowing what could happen." She was right. I would have to go to work restoring veinal circulation. As prescribed, I started walking a mile a day. In three weeks I was up to three miles a day. In a few weeks I was allowed to change over to bike-riding which I had done regularly for a quarter of a century. The circumference of the calf of the right leg became the control for measuring my success

in rehabilitating the left leg. At rest the impaired leg was badly swollen but after exercise the skin grew almost drumhead tight. Gradually, I worked up to twelve miles a day and continued that stint for a year and a half. And very gradually the swelling diminished. The leg problem was solved.

During this period I began to explore ways of finding latitude and direction in the southern hemisphere. Seeing stars at the time of their meridian (north-south line) passage would be just as important down under as in the northern hemisphere. But judging the time of meridian transit would be more difficult because there is no star visible to the naked eye at or near the pole to mark the polar point. Any line drawn from a star to the polar point is a celestial meridian. When such a line divides the observer's sky into two equal parts, the line (celestial meridian) coincides with the observer's meridian and the star anchoring one end of the line is on the observer's meridian. By using a polar point for one end of the revolving line, an imaginary meridian can be drawn for each visible star. Therefore, any star making a meridian transit during the nighttime hours could be used for finding latitude. However, without a polar point it would not be easy to find celestial meridians.

A few celestial meridians might be had by pairing stars on the same meridian (same sidereal hour angle). These could be used if they transited the meridian during the dark hours at the time of year they would be needed for finding latitude, and if one of the pair made its transit at or near the zenith of the observer when it was needed for finding latitude at that point in the voyage. A short distance between the stars of a pair would not provide an imaginary line long enough to determine whether it divided the sky into two equal parts. And the pair would be usable only if both stars were bright enough to be found under adverse conditions. I made a list of pairs that could be used but decided that depending entirely on meridional pairs would be risky, especially if delays were to upset the schedule.

“Am I a chance taker? My response to that is I'm a fairly cautious person, Creamer said. “I stick to the speed limits. I try to solve problems ahead of time.

“I'm more inclined to wager than to gamble, if you recognize the difference, and if I bet I like to bet on a fairly sure thing.

“But once within the framework of my caution I decide my chances are pretty good for making it, I do not mind taking the risk.”

—Malinda Reinke, *Vineland Times Journal / Millville Daily*, 5/5/82.

Two stars even though too close to each other and too high in declination to use in the zenith-distance judging process, would be useful in picking out an imaginary polar point. Gacrux and Acrux in the Southern Cross, bright and easily found, lie on almost identical meridians, therefore a line drawn through them would pass very close to the pivotal point of southern hemisphere skies. The pole would lie twenty-seven degrees beyond Acrux or four and a half times the distance between the two stars. I had gotten acquainted with the Southern Cross on the recent trip to Africa and felt that I could use Gacrux and Acrux to identify an imaginary point near enough to the pole to serve as a focal point of meridians as Polaris does in the northern sky. The imaginary point would also provide direction for nighttime steering south of the equator as Polaris does north of the equator.

Some thought had to be given to steering in the equatorial band. In theory pole stars appear on the horizon when you are at the equator. However, haze ordinarily obscures stars within five to ten degrees of the horizon. This means that Polaris ceases to be useful for direction finding about ten degrees north of the equator. However, because Gacrux and Acrux in the Southern Cross are thirty-three and twenty-seven degrees away from the polar

point, they are visible as a pair well into the northern hemisphere and could be used for guidance when they were above the horizon during the dark hours. They would come into view at about twenty degrees north latitude during March and April and would be above the horizon before March and after April and for longer periods as progress was made to the south.

Orientation in the original sense could be had from stars that stand above the equator at the time of their rising or setting. Any celestial object on the celestial equator rises due east and sets due west. The stars in Orion's belt are within two degrees of the equator and delta Orionis is within one third of a degree—twenty nautical miles.

Thoughts about rounding Cape Horn floated through my mind. There had to be a way. I looked for clues in David Lewis's book **Icebird** and consulted the British Admiralty publication **Ocean Passages for the World**. Even though the latter recommends staying fairly close to the Horn in order to avoid pack ice and icebergs, Lewis in his circumnavigation of Antarctica had deliberately sailed his steel-hulled sloop into the pack ice surrounding the continent. I woke from a sound sleep about four o'clock one morning in January 1981. While asleep, my subconscious had put the ideas together. To get through Drake Passage and around the Horn safely, "stay close to the ice and you will avoid the horn farther north." I smiled inwardly and went back to sleep.

In the cold light of dawn I examined the thought. With a steel boat I would not have to be overly concerned about contact with pack ice. If I were blown into it, I stood a chance of getting out. If the ice were blown toward me the wind would be favorable for making a getaway. Suddenly, the pack ice had become a navigation aid. I could find my way from Cape May to New Zealand by using the stars to obtain latitude. I would start across the Pacific using stars for latitude and as I neared South America I would turn right, go to the ice

and make a left. If I got lucky and was able to see stars near Cape Horn that would be fine, but if overcast prevailed here was a backup method. I didn't relish the prospect of maneuvering close to the pack ice or possibly encountering icebergs that would be a real possibility at that latitude, but at least here was a practical scheme for getting around the notorious cape without crashing headlong onto the storm-washed rocks scattered about the southern tip of South America. What I would have liked at that point was a large-scale chart showing the character of the northern edge of the pack ice so I could work out defensive tactics.

In my search for information I wrote to Bernard Moitessier, the French sailor who had twice rounded the Horn in his steel sloop Joshua. I wanted to know whether he had encountered gales and fog simultaneously and whether he had any suggestions for getting through Drake Passage safely without instruments. He wrote that he did not recall running into fog and gales at the same time and recommended that I aim for South America about three hundred miles north of the Horn, and then, after sighting land, keep the land to port while working southward and eastward through Drake Passage and around Cape Horn.

The suggestion was a variation of the aim-off method used by Francis Chichester in his early flying days. The problem that it created sprang from the requirement of getting close enough to land to see it. When land is that close there is always the danger of being blown ashore by gale-force winds. A look at the **Pilot Charts** for the area during all months of the year showed that onshore gales were normal in all seasons.

At this point in my search it appeared that I had a choice of bouncing along the pack ice surrounding Antarctica or ricocheting off the rock-bound shores of southern Chile. I wasn't thrilled by either prospect. It was back to the living room chair! When time permitted I would sit and let my mind drift over elements

of the problem. These elements included not only the gales, the enormous waves, the strong ocean currents, low temperatures, and overcast skies, but also the matter of visibility for sighting dangerous shoals and rock outcrops, and the whole matter of timing. Was there a time of year when winds would be most favorable, gales at a minimum, skies least cloudy, temperatures least bitter, icebergs least numerous, and lighting best?

Signs seemed to point to the high-sun time of the year. Maximum lighting for the sighting of breakers, rocks, and icebergs would occur in late December at the time of the solstice. According to **Ocean Passages for the World**, winds in December and January made those months the best bet for a west-to-east passage in a sailing vessel. Reviewing my recollections of Alaskan twilight at the time of the June solstice led me to examine the nature of twilight at Cape Horn during the December solstice and I got a surprise.

I discovered in studying the **Nautical Almanac** that at the latitude of Cape Horn, for about a week before the solstice and a week afterwards, twilight lasts all night. To the north some darkness occurs at midnight and to the south twilight would lighten with increasing latitude. I felt my heart pumping as the idea took hold of me. Could this be what I was looking for? A way to determine latitude without seeing a single star? Could twilight be detected in complete overcast? I had always taken the dark to daylight watch on previous voyages and had always watched carefully and usually longingly for the first sign of approaching day. I had come to recognize what I labeled "the first blush of dawn." It always brought a warm inner feeling something like the one that had just come over me. I waited until my pulse had settled down to explore the idea further, but nothing that I could dredge up from my experience in 30,000 miles of ocean sailing suggested that twilight could not be detected in periods of overcast sky. Obviously, the coming of morning twilight would differ between clear and cloudy weather but that was a matter for future study.

To use what I came to call the "twilight method" of finding latitude would require timing the voyage so as to be at Cape Horn during a two-week window centered on December 22. For a small sailing vessel subject to the effects of calms, gales, and adverse winds this would be a tall order. How could it possibly be done with a small vessel without instruments to provide location information needed for timing the final approach? I pored over the **Pilot Charts** studying wind directions and speed in the southern Pacific and reread logs of my previous trips for clues to boat speed under comparable conditions. I concluded that by jumping off from the right place at the right time it could be done. I knew that if something threw us off schedule as we crossed the Pacific we would have to improvise. Dead reckoning our way from previous star "sights" was a possibility or we could go southward to the pack ice and make a left.

My farm-born and depression-bred background had taught me to make do with what was at hand. Our carpenter-gang foreman's way of getting us going in the morning was to call out, "O.K. men, all aboard. If you can't get a board, get a shingle." I liked the ring of it. It had a touch of humor and it symbolized making do. Another expression, one that made the rounds during the 1930's, appealed to me: "When you come to the end of your rope, tie a knot in it and hang on."

I recalled an incident that occurred in 1950 when with my 1946 Plymouth I was towing a travel trailer eastward over northern California's Coast Ranges. Eight miles from the summit the car stalled from what I diagnosed as fuel pump failure. From the summit it was another thirty miles to the nearest town but that was downslope. If somehow we could get to the summit we could probably coax the rig to Williams where help would be available. I had a gallon of gasoline that was to be used for fuel in a camping stove. Perhaps I could hang the can above the engine and siphon gasoline directly into the carburetor. Where could I find a piece of tubing? Ah! The

vacuum-type-windshield-wiper hose. Would it fit the carburetor-fuel-line port? I unscrewed the fuel line and squeezed the hose into the opening to make a snug fit. I found some wire, hung the gallon can over the engine, immersed the tube, sucked until I tasted gasoline and jammed the hose into the carburetor. The starter revived the stalled engine and we were well beyond the summit when the gallon can ran dry. I reconnected the fuel pump line to the carburetor. Fortunately the ailing pump supplied enough fuel to make the downhill run into Williams.

Through the years I had come to realize that I enjoy a moderate amount of chaos. Now that there existed a strong likelihood of finding a working latitude at Cape Horn I was ready to deal with whatever uncertainties were involved and gamble on hitting the “two-week window.” There would be a somewhat greater risk to the undertaking than a circumnavigation with instruments but I felt that the risk could be reduced to a minimum by careful preparation and execution. **The time had come to have a serious talk with Blanche.**

Chapter 5

Talks with Blanche

The “talk” became a series of discussions that lasted for several weeks. To me the voyage would be the culmination of a lifetime spent in contemplation of a circumnavigation and of nearly a decade spent pondering the possibilities of non-instrument navigation. To Blanche it would mean becoming a “grass widow” for a year and a half and, although she never alluded to it, there existed the possibility of experiencing real widowhood. During six of the thirty-five summers we had been married we had been separated while I was on long trips. Whereas she did not take seriously the recommendation of the local “tar and feather” committee, (“If he were my husband, I’d have him tarred and feathered,”), she was not averse to sprinkling a little salt on my tail. Her big gun went something like this: “You’re the best friend I’ve ever had. Why would I want you to be away for such a long time?” Of course, I couldn’t answer that but I was aware of the emotional cost involved. Subtle and not-so-subtle hints were dropped at family gatherings. My two sisters joined the lobbying effort in Blanche’s behalf. I didn’t want to cause pain in others but I knew that if I said no to the inner stirrings the personal pain would be close to unbearable. Now that I had hit upon a practical way of clearing the notorious cape in foul weather, it would have been far harder to sit on the idea than to carry it out.

Blanche was the family’s self-appointed safety officer. She always made sure windows

and doors were locked when we went away, cautioned us to drive safely, packed blankets for emergency use in winter, guarded our diet against carcinogens, checked on safety equipment for the home, automobile, and boat, and followed as far as possible recommended safety procedures. In a moment of weakness in 1976 she, who never wanted the whole family to fly in the same plane, had agreed to let her husband, son, and son-in-law sail together on the last leg of a round trip Cape May to England. The leg was from Bermuda to Cape May during the hurricane season, and in spite of forecasts to the contrary, a hurricane—Belle—formed and was breathing down our necks as we reached home base. The safety officer was beside herself and vowed never to let her menfolk go to sea together again.

It was against this background that Kurt and I in 1978, when I was planning the first no-instruments trip, tried to convince Blanche that it was in Kurt’s best interest to join his father. An ocean passage in a small boat has a great maturing effect on a young man. Blanche and I had seen it happen to nineteen-year-old Cliff Shafer who signed up for the voyage to England in 1976 for just that purpose. Cliff had his father’s approval but not his mother’s. But after the voyage was over both parents were ecstatic about Cliff’s metamorphosis. My plea to Blanche was that the experience was going to be an enormous gift to some young man. Wouldn’t we want to bestow it on our own son? En route from Ireland to Cape May Kurt and I got a lot of conversation

material out of the discussions with his mother and how we had won her over.

At this point I had a deep-seated desire to try for all the marbles but I did not want to commit so much as one dollar of the family resources to the circumnavigation project until Blanche felt comfortable with it. She knew how much the voyage meant to me, but until this time we had not examined what our feelings might be if I were to give up the whole idea. She agreed that for a while at least I would be unhappy but felt that eventually I would become absorbed in some new hobby and would forget the circumnavigation. I did not share her feeling. I was afraid that because of the lifelong desire to sail around the world a denial would bring continued bouts of fretting about what might have been. I saw denial as a lifetime sentence of frustration and confinement. I feel strongly that a person born on this planet has a right and perhaps an obligation to explore and know the planet to which he is born. I had seen a large measure of the world's land area but only a small portion of the water area that makes up seventy percent of the earth's surface. I had an elemental urge to thrust my hands into the water of the world's oceans from the side of my own boat. During the 1950's I had crossed the Atlantic four times in ocean liners and felt deprived each day because I could not immerse my hands in its bosom.

My first "blue water" experience came as a toddler with the water my mother used in her "rinse" tub. I loved to watch the "bluing" disperse in the freshly hand-pumped water. When mother bucketed the water discolored by farm-soiled clothes into the pump box for disposal, I would stop up the drain and pump fresh water into the box to see if I could make

the dirty water clear again. Then there was the ditch at the front of the house where the green frogs chorused in spring and the wooded stream behind, which our team of horses splashed through going to and from the back hay field. When I was eight we moved off the farm. Our "new house" not only lay within a stone's throw of Parvin's lake, it had a ditch in the back yard. However, the water that fascinated me most of all was the tidal Cohansey River that I saw every time the family went shopping in Bridgeton. That it reeked of tomato cannery waste for a good part of the year didn't bother me. It was a river whose water floated heavy log barges and sleek oyster boats and whose wharves once handled cargo bound to and from England. For me it was a magical artery—one that touched the world's great ports—London, Cape Town, San Francisco Sydney, Shanghai, Yokohama,—at their level—sea level. I dreamed of the day that I might see them but never dreamed that it would happen.

The time had come in my campaign to bring up my big gun. "Blanche, do you really want to make a 'house pet' out of me? Are you sure you would be happy with the result? Would I really be the kind of person you would want to spend the rest of your life with?" What I wanted her to see was that no matter how hard I worked at forgetting the dream, its death would cause part of me to die. The love affair with water that began at the pump box and progressed to the world's oceans was embedded in my soul. When Blanche said "Don't expect all the help getting ready that I gave you on your other trips" I knew it was her way of giving her blessing. And in spite of what she said, we both knew that she would see to the provisioning and a multitude of other details.

Chapter 6

Green Light to Cape May

It was early March of 1981 when I got the green light. It was a good time to get started. The setting sun was advancing toward the west and nature was responding to the longer days. The annual march of the seasons was in a phase that has always got my blood flowing. In spite of my sixty-five years I felt youthful and ready to tackle the job of getting a voyage underway. Its success depended on a lot of decisions—decisions that had to be made in terms of available resources.

Most of the decisions focused on the boat. Length overall and on the waterline, draft, beam, freeboard, hull configuration and material, rudder design, type of steering and self-

steering, number of masts and their heights, and sail types were some of the elements to be considered. My experience in the north Atlantic would serve as a guide but I knew that I would have to be prepared for even harsher conditions in the southern oceans.

The calms and light airs of the doldrums, which we would have to cross twice, called for a light boat with fin keel, tall mast, and light sails. The storm-ridden southern oceans on the other hand demanded a stout boat with a long keel, a low rig, and heavy sails. When I thought about the two situations, the one trying to coax a sluggish vessel over calm seas and the other watching enormous waves crashing down on a lightly built craft, I opted for the heavier boat with a longer keel and a relatively low rig. It would mean slow going between the tropics and perhaps days without movement. But unless the crew went berserk from frustration there would be no threat to life—provided, of course, plenty of food and water were on board. This would require a generous amount of storage space. On the other hand it would be downright dangerous to expose a light boat to the rigors of the southern hemisphere.

Richard Henderson in his book **Sea Sense** outlines the ideal boat for the heavy weather and mountainous seas of the southern oceans. It should be between thirty-six and thirty-eight feet in length, wide of beam and have good freeboard. The keel should be cut away at the forefoot and should carry a

Why does he do it? His wife Blanche doesn't like him to go, not really. And people who don't know him think he's crazy.

"There are times when you're bound to ask yourself that," the navigator said.

"It puts my life together.

"People I've known through all the times of my life have gotten in touch with me and it's sort of knitted my life together in more ways than one.

So it's been a fun experience, it has. You've probably guessed that."

—Malinda Reinke, *Vineland Times Journal* / *Millville Daily*, 5/5/82

Marvin C. Creamer says he knows that a lot of people probably think he's crazy to try to sail around the world without a compass, sextant or chronometer in a 36-foot sailboat he got just 10 days ago.

Add to that the \$125,000 and the hours of preparation he's invested in the voyage and people become curious about why he's doing it.

The question evokes answers from the 66-year-old former Geography professor that range from the scientific -- trying to prove mariners don't need artificial aids to circumnavigate the globe—to the personal— "I've always been in love with the ocean."

Some of the other reasons... follow:

* "I can't help myself."

* "I like to achieve goals. I'm goal-oriented."

* "I'm an observer of the world and its inhabitants. I like finding the mainspring of other people."

* "It's a shame for a person, who has one crack at this life, to not know the earth. Well, the earth's 70 per cent covered with water, so I sail."

* "It's a jolly romp on the ocean."

* "The ancients did a lot more sailing than we give them credit for. While I can't prove that, I can prove that the information (that would have allowed them to do it) is there in the sea and the stars."

* If I can do this, it will establish that circumnavigation is possible. If it's possible now it was possible 1,000, 2,000, 3,000 years ago. The ocean and the sky haven't changed that much. I'm not optimistic about convincing present scholars. But the young scholars may realize that the ancients' travels were not haphazard."

* "In the end, maybe I love to sail -- that may be why I'm doing it."

* "Who knows why we do the things we do? Maybe I'm doing this because my Dad had me looking at the position of the sun on the farm (near Vineland) and told me to look again a few days later to see if the position had changed. He had me doing this when I was eight years old."

* "I enjoy a moderate amount of chaos. It's an ego thing to some degree. I like to think that I can make order out of it. It's a challenge."

* "Since I was 18 years old, I wanted to do an ocean crossing and circumnavigation."

—Tracy Bernthal, *Asbury Park Press*, 12/15/82

rudder attached to the keel at the aft end. Navstar's underwater body did not match Henderson's specifications. It had a fin keel with a rudder attached to a separate skeg. It might have served the purpose but my instincts told me that in view of the built-in risks associated with non-instrument sailing I should minimize other risks wherever possible. I began a search for a suitable boat knowing that to buy it I would have to sell Navstar. The more I thought about it the more I was convinced that I should choose a boat that could stand up to the gales and turbulence of the southern hemisphere without question.

There was another argument in favor of the heavier boat. Over the years I had learned that the mental health of the crew is a significant factor in the success of a voyage and that a well-found boat promotes a healthy attitude. It is almost impossible not to cringe when that first rogue wave hits your new fiberglass boat broadside and the sound you hear is akin to that of a "season crack" ripping across a frozen lake. You survive but have to wonder if the next juggernaut will finish you off. My father used to say that you might just as well kill a man as scare him to death. For various reasons sailing long distances in a small boat is

bound to produce stress in the crew. There is extra mental strain that results from the inability to fix an exact position in non-instrument sailing. Crews for centuries have had an inborn desire to know how much farther they have to go. Without a precise position both distance and direction to the landfall remain uncertain. There is always the possibility that this extra element of doubt when superimposed on a load made up of cold and wet watch, layers of heavy, damp clothing, adapting to constant motion, much of it violent, thinking about a wife or girl friend left behind, an extremely limited social life, confinement to a small space, companions not of one's own choosing whose manner, manners, or mannerisms may be annoying, restricted diet, and repetitive duties twenty-four hours a day, seven days a week for as much as a hundred days in a row may just add the last straw. When I have been asked about crew selection I have joked about the mental state of someone who would sign up for such an adventure, by saying in some truth, "A guy has to be crazy enough to volunteer but not so crazy that he goes off the deep end en route." I had to find a boat that could not only withstand potential knockdowns and rollovers but one that would be perceived by the crew as indestructible. I also had to find a buyer for Navstar.

The selection of the hull material had top priority. I looked at some of the well-built fiberglass boats and talked to Newbold Smith about his experience sailing Reindeer in ice along coastal Greenland. He had no fault to find with "glass" boats. For a brief time I considered aluminum and even had a momentary flirtation with titanium but spent most of my time in pursuit of a steel hull. Twenty-five years earlier I had spent a very pleasant summer afternoon in Haarlem, Holland, discussing the pros and cons of steel yachts with the president of Feadship, an association of Dutch small boat builders, and had come away with a bias toward steel construction.

Another bias would figure in the final selection. This one was a lifetime preference

for round-bottom boats. I had rowed flat-bottom boats on Parvin Lake, had fished in the Gulf of Mexico in a flat-bottom inboard, and had piloted a fourteen-foot, flat-bottom boat around Manhattan Island. I did not find them as easy in their motions as the round-bottom boats that I had used. I had fished in my twelve-foot Grumman Cartopper eight miles off the Florida Keys at Bahia Honda in winds of fifteen knots and had duplicated that off the Jersey coast in my twelve-foot Alumacraft. Both of these were of round-bottom construction. My Alumacraft, eighteen-foot Queen Merrie, took on no more than a few drops of water when the Twardowskis and I had tested it in hurricane-spawned breakers fishing for bluefish on a flat sand bar near Wildwood, New Jersey. When I spoke to Alumacraft's designer, Swedish-born Erich S. Swenson, about our experience, the first thing he said was, "It was the round bottom that let you do that." One of my reasons for giving weight to Richard Henderson's recommendations was that he made a case for the strength and seaworthiness of a round-bottom boat.

There were only a few United States boat manufacturers building steel boats. All of them, as far as I could find out, made hard chine boats and most had backyard operations with very limited production. Normally the welded hull was delivered to the buyer who would do his own finishing. It was hard to find a company that would turn out a ready-to-sail boat. And that is what I wanted. At sixty-five I did not know how much time I had left and wanted to make sure of getting the circumnavigation in before I was too feeble to set out.

While poring over hundreds of boat specifications, I ran into a soft-chine, steel boat named the Goderich 35. Ted Brewer, naval architect, had designed the cutter-rigged sloop for Huromic Metal Industries, Ltd., of Goderich, Ontario. It would have taken a practiced eye to perceive that it was not a round bottom boat. It had the right length, beam, and draft, was designed with a cut

away forefoot, keel-attached rudder, good freeboard, single mast, low rig, and was available with tiller steering. More than thirty of the design had been built and they had compiled good sailing and maintenance records. Bob Patterson, president of Huromic Metal Industries, Goderich, Ontario, assured me that his company marketed a finished boat. The quoted price made it seem affordable. While I was in the process of making up my mind, orders were piling up on Patterson's desk. When I talked to his secretary in September (1981) she could not promise delivery before late 1982 or early 1983. Navstar's sale was completed in early October and by mid-November when I was finally ready to place an order, a business recession had brought cancellations and Patterson projected delivery by August of 1982.

That was good news. It meant that we could rig it, test sail it, and be ready to head for Cape Town as soon as the Atlantic hurricane season was over—late October or early November.

Marvin Creamer, a 66-year-old retired New Jersey geography professor who sailed to Africa and back two years ago with only the stars to guide him, now plans to sail around the world without the use of any navigational instruments.

In an age of sophisticated satellite-navigation systems that can tell a mariner precisely where he is any where in the world, Creamer's planned voyage will be in the tradition of the ancient polynesians and Norsemen who sailed across oceans by the stars. If successful, Creamer's journey would probably be the first non-instrument circumnavigation.

—Joanne Fishman, *The New York Times*, 8/8/82

It was time to focus on lesser, but not necessarily insignificant items. In making choices, an effort was made to ensure a dry boat. Dampness can never be eliminated but seeps and springs are another matter. Salt water damages more than charts, logs, books, food,

tape recorders, and cameras. It erodes morale. There is little else so depressing as wet clothes, a soggy sleeping bag, or a sodden mattress cover especially when temperatures are in the forties and fifties. Water cannot penetrate a welded steel hull, so how does it get inside? The answer is through the openings—hatches, portholes, and possibly around the mast.

When I talked to Bob Wallstrom, one-time Ted Brewer partner, about mast specifications, he broached the subject of where the mast was to be stepped. Brewer's design called for stepping it on top of the cabin shored up by an internal compression post welded to the underside of the cabin top and to the keel. Even though Wallstrom insisted that it be stepped directly on the keel for added strength, I went with the original design for two reasons: 1) an aluminum mast bleeds heat out of the cabin when it is keel-stepped and 2) the opening in the cabin top where it passes through cannot be effectively sealed. How water can bypass the best-laid, waterproof boot is one of life's eternal mysteries. But the water that trickles by it is no apparition.

Wallstrom insisted also that the mast be shortened, a topic that I had discussed at length with Bob Patterson. He thought the rig was too low for North American waters but would be fine for heavy weather sailing. I planned to have the mast built at design height until Paul Rosenfield, Jr. at Metalmast Marine in Putnam, Connecticut, told me that he could supply a one-piece extrusion just eleven inches under the recommended mast height. It didn't seem worth the splicing effort for eleven inches.

One of the hazards of sailing in heavy weather is that of being knocked down, rolled over, or pitch-poled. A stout hull usually survives, but spars and rigging are likely to be carried away by the rollover or pitch-pole. To increase the chances that our rig would survive a capsized, we chose a stout mast, added an extra forestay and an extra backstay, and increased the diameter of our rigging wire

from quarter inch to five–sixteenths inch. To obtain the maximum strength of the best wire available—Universal Wire’s Super Stainless—we used patented terminals (STA LOK™) on all stays and shrouds.

When I spoke to John Zurich at the Bomar company about the need for clamping opening hatches down tightly, he suggested ones with slotted hinges and four dogs—two forward and two aft. These he assured me would solve the leakage problem and I can say now that they did. Our opening hatches did not leak. Opening portlights can be a problem because they swing open to the inside. This means that the hydraulic force exerted by a breaking wave tends to pry open the movable portion rather than seal it shut. I was able to find portlights that had a shoulder around the outside of the opening that could be fitted with caulking and an extra pane—a kind of storm window. These proved to be watertight in the worst of conditions.

Undoubtedly, the ultimate test of accurate navigation is the position of the landfall, but I wanted a series of reference points that could be treated statistically for presentation to the scientific community. For the African trip in 1980, we had had no difficulty in borrowing an ARGOS transmitter from the Coast Guard so that we could be tracked en route. The unit sent a silent signal to a NOAA satellite that relayed position information to an earth-bound decoder. Our home base was briefed on our whereabouts nearly every day. By 1982 the Coast Guard budget had been decimated by the Reagan Administration, the Oceanographic Unit which had control of the transmitters was disbanded, and their tracking units put in storage. After many telephone calls I located the senders in the hands of the U.S.C.G. Office of Law Enforcement in Miami. The officer in charge, Commander Howard B. Gehring, saw no problem in lending us one provided we got the O.K. from the U.S.C.G. Office of Search and Rescue (S.A.R.). The

multi-key transmitters had a “panic button.” It was a search and rescue key that would send a distress signal along with the position information. Because of their stringent budget, S.A.R. could not afford to mount a costly rescue effort should we push the “button.”



Captain “Bubble Head” Marv carried an extra hatch in case his bubble ever broke.

My attitude in going to sea has always been that if I got myself out there it was my responsibility to get myself back. When I took my eighteen-foot outboard forty miles offshore, I learned outboard repair, carried two engines, extra fuel, spare parts, and the special tools needed to make serious repairs. I studied weather, watched it closely, and practiced piloting in rough water near shore. In fact, I couldn’t have asked the Coast Guard or any one else for help. I didn’t carry a transmitter. I succeeded in convincing S.A.R. that I had chosen a “well-found ship,” would be well prepared, and would not think of sending out an S.O.S.

The ARGOS satellites are dedicated to environmental study projects so it is necessary to have an approved project in order to use the system for locational purposes. This presented a problem. I did not feel that I could spare the time to work up a suitable proposal. What I needed was the collaboration of an established

institution that could make use of any environmental data that I might gather so when I wrote to Service ARGOS in Toulouse, France, about getting on the system I asked them if they knew of an American institution that might be interested in a joint project. They suggested that I get in touch with Doug McCallum at NASA in Washington. He recommended that I contact private consultant Lee Houchins there in Washington. Lee was most enthusiastic and promptly arranged for a joint Smithsonian—National Weather Service project. Our yet-to-be-named boat would become a “ship of opportunity” and would transmit weather data from areas seldom traversed by commercial vessels. Transmitted data would be used by the NWS and the World Meteorological Organization to corroborate information collected by satellite sensors.

When I thought of depending on stars for finding latitude in the southern hemisphere, I believed I would have to spend time, perhaps six months or a year, in South Africa or Australia in order to learn the star patterns of the southern skies. As the time neared to sail, that idea became an unaffordable luxury. When I pored over star charts and thought about the problem, it occurred to me that because I learned the nighttime skies from near forty degrees north latitude, I had seen stars to nearly forty-five degrees south and therefore was already familiar with about two-thirds of the southern firmament. I decided that we would have no problem extending our knowledge of the southern skies as we worked our way toward Cape Town on the first leg. There wasn't much danger of blurring the sky at five miles an hour. As a precautionary measure, however, I spent a morning at the Franklin Institute's Fels Planetarium in Philadelphia where Val Gonzalez provided a preview of southern skies as seen from various latitudes at different times of the year. I came away feeling confident that we would have no difficulty finding latitude or direction in the southern hemisphere.

Well-found small boats rarely come to grief in mid-ocean. They are most likely to be done in by a brush with the land. The approaches to land therefore must be made with caution. Normally, a small-boat skipper sailing in unfamiliar waters relies on the written or pictorial information found in copies of **Sailing Directions** or **Coast Pilots** for help in making a landfall. Occasionally there is the admonition printed on charts to seek local knowledge before entering a particular waterway. Knowing that making landfalls without instruments would be tougher than with them and knowing that without access to radio it would be impossible to obtain local knowledge while making distant landfalls, I decided to do some sandbagging before shoving off. Because the rocky coast of southwestern Africa rises abruptly out of the southern Atlantic, has few indentations where a small craft might find shelter, and is bathed by the cold, fog-producing Benguela Current, I consulted Manie Jooste, naval attaché, at the South African Embassy in Washington. He said the best time to approach Cape Town is in February, March, or April—late summer or early spring.

Prudence dictated a route south of Tasmania rather than through the relatively shallow and rock-strewn Bass Strait that lies between Tasmania and mainland Australia. From southern Tasmania the shortest route to Cape Horn lies south of New Zealand where several offset groups of islands occur and where storms are stronger and more frequent. There were two other options: sailing through the oftentimes-turbulent Cook Strait between the North and South Islands or going around the northern end of North Island. Before deciding whether to risk the southern route, Cook Strait, or sail a longer and potentially safer route around the northern end of New Zealand, I called Captain Lincoln J. Tempero, naval attaché at the New Zealand Embassy in Washington. When he heard that we planned to sail by naked-eye navigation, he strongly advised taking the long way around, i.e., north around North Island.

In late summer of 1982 the selection of a name for the form taking shape in steel and wood at Huromic Metal Industries, Ltd. in Goderich became a serious pursuit. Possible names had been offered by family and friends. Names had been gleaned from the pages of literature and the dictionary and were listed on a legal size pad for evaluation. I wanted a name that was in keeping with the mission. I had coined the name "Navstar" for my previous boat and liked it very well, but didn't want to give the same name to the new one and disliked the idea of adding Roman numerals. Because we would depend primarily on stars for navigation I leaned toward having "star" as part of the name. My four-year-old granddaughter was named Star, which provided an added incentive. Too, I liked the continuity that the incorporation of "star" in the name would give. At the time Star was constantly repeating the phrase, "my turn, it's my turn." The name My Tern was added to the list. The graceful bird was one that I had always admired. When I thought of rounding Good Hope, Leeuwin, and the Horn, another name came to mind, "The Caper." The idea of sailing without instruments brought "a cappella" to mind, but like the preceding two it was discarded for being too frivolous or "cutesy." I searched in vain for a descriptive, palindromic name that could be sewn back to back on the mainsail so that letters from the opposite side would not bleed through and make the name hard to read.

I suppose I knew all along that the name would be a combination of "globe" and "star" but would never have guessed that a sign painter in Canada would create the final form and earn me a rebuke from a Coast Guard officer. From time to time at odd moments I would find myself pondering the exact spelling of the name. I preferred a one-word name and thought about it over a considerable period before opting for "Globestar." Knowing that Coast Guard documentation might take weeks and that it would be too cold to paint the name on after delivery from Goderich, I sent the name "Globestar" to Bob

Patterson to have it painted on the blue hull and at the same time certified to the U.S. Coast Guard that the name of the new boat was "Globestar." What I found the Andrews Trucking Company unloading at Greenwich on the afternoon of December 1, 1982, was a beautiful blue and white boat named "Globe Star."

An officer in the Coast Guard documentation office at Philadelphia gave me two options: I could have the mistake corrected (exceedingly difficult if not impossible because of the low temperatures), or I could have the boat's document amended at a cost of \$100 to read "Globe Star." I suggested in view of the weather that I would have the name corrected at my first stop, Cape Town. His reply: "You sail and we'll lift your document." I didn't ask for a second opinion. I forwarded a check for the \$100 and my document for endorsement. My home for the next year and a half was officially named Globe Star.

The standard engine for the Goderich 35 was the Volvo MD11d, a two-cylinder, twenty-four-horsepower diesel. Bob Patterson agreed that when rocks appeared out of the fog at point-blank range, it would be a good idea to have a little extra thrust. We chose the Volvo MD17d, a three-cylinder, thirty-six horsepower engine that Volvo Penta of the United States agreed to furnish. They asked me to pick it up at Chesapeake, Virginia. That meant the engine would have to go into Canada and back out again. That applied also to the RVG self-steering gear that was manufactured in Florida. I loaded the engine on my utility trailer and used the RVG as the ridge-pole for a tent that I built over the engine to protect it from rain en route to Goderich. My worst fears materialized. Canadian Customs officials did not know how to deal with a private importer bringing in an engine that was going to be re-exported. I became the "bird" in a Canadian Customs badminton game. I bounced back and forth between offices for hours before a sympathetic official agreed to stick his neck out by allowing the engine to

enter, but not before he collected \$150 to ensure its re-exportation. I smiled as the Customs buildings grew smaller in the rear-view mirror. In their confusion the Customs officers had completely overlooked the protective tent's "ridgepole." I might have felt a twinge of conscience were I not dead certain of its exit from Canada. Unfortunately, the driver of the truck that carried Globe Star to Greenwich did not ask Canadian officials to verify the engine's installation when he left Canada. This spawned another badminton game. It was *Canadian Customs vs. Blanche Creamer*. I had already departed when a letter arrived demanding the balance of the import duty due on the engine. Canadian Customs was aware the boat had crossed the border but they did not have verification that the engine was in it at the time. Alas, when Blanche tried to contact Huromic Metals for an affidavit, she learned that the plant had been permanently closed. The game continued until after I arrived in South Africa. I was sure that I would have to get an official from the Canadian Embassy in Cape Town to inspect Globe Star's engine, but before it happened I got word from Blanche that the game was over. Score: *B.C. 1, C.C. 0*. When Canadian Customs officials discovered for themselves that Huromic had folded they decided to accept Blanche's word. In a magnanimous gesture they returned the original deposit.

The self-steering gear did not escape the watchful eye of customs officials, however. When I got to Hobart, Tasmania, I decided to install a locally manufactured vane steerer. Confident that the old gear was salable, I placed a classified ad in the local newspaper. Hearing footsteps one Monday morning, I looked out of the hatch and was greeted with, "You have 'brohken' Australian law." The Australian Customs official standing before me, in reading his newspaper on Saturday night, had spotted the ad and was now informing me that I would not be prosecuted for importing the gear illegally, i.e., not paying the duty, if I accompanied him to his office across the street and paid up immediately. It

did not matter that I had bought Australian gear as a replacement. I protested that I had not sold the gear and might not be able to sell it and asked if duty payment could be deferred until I found a buyer. To my astonishment he agreed. Days later when I walked into his office with a buyer, he determined that the rudder portion of the gear would be taxed at one rate and the rest of the gear at another. I weighted the estimated values of the two pieces in accord with my self interest and "rendered unto Caesar that which was Caesar's." Caesar's due amounted to \$65.

By early fall, 1982, it became obvious that there would be little support from the business community for the non-instrument undertaking. Food and other companies that had helped on the African trip had tightened their "promo" budgets because of the current recession. This and cost overruns on the boat were threatening the financial parachute I'd hoped to leave for Blanche in the event I did not return. The boat represented the family nest egg and my pension was Blanche's source of income. If she became a widow, she would have had small monthly payments from my state pension and widow's benefits from Social Security. She said that she would be able to survive but I didn't want to leave with that possibility hanging over my head. I knew that because of what I was doing boat insurance would be costly; I did not know at that time that no insurance company, not even Lloyds of London, would quote me a figure. It never occurred to me to try life insurance.

The day after a local newspaper published my plans I received telephone calls from two different life insurance salesmen wanting to sell me term insurance. Each was sure his home office, even when informed of my plans, would issue a policy. I thought the one-year premium of \$1369 for \$100,000 of protection at my age (66) was a bargain and signed an application. I felt that, in the event of a catastrophe, if either the boat or I survived, Blanche would be taken care of financially, but if both the boat and I were lost she

might not think too kindly of the husband who “ran off to sea” and turned her involuntarily into a penny-pinching widow.

Apparently the rigor of the life insurance physical increases with the amount on the face of the policy. Having dabbled in life insurance for a short period in the thirties, I was surprised at the thoroughness of the examining physician. And I was even more surprised when he touched my left groin and asked, “Do you know you have a hernia here?” I was floored! No, I did not know. He assured me that it was reducible and therefore not dangerous but I knew how strenuous deck life could be wrestling with sails, lines, poles, booms, and sometimes a bo’sun’s chair and mast simultaneously. I did not want to have to beg off when the dice came up with my number. Repair of the hernia was not a condition for the issuance of a policy, but I had it repaired anyway. It was a stroke of good luck. The surgeon told me afterward that the extent of the tear had been obscured by soft flesh and that the hernia could easily have strangulated and killed me. Although I was able to mow the lawn with the riding tractor three days after the early October operation, the surgeon warned me not do any heavy lifting until he examined his handiwork two months later. I would not be able to sail before early December but that didn’t appear to be in the cards anyway.

Two more health problems surfaced that could have resulted in postponement or cancellation. One was the onset of vertigo. I had had touches of it before but never when I was at sea. How would it affect my ability to judge perpendicularity—a vital ingredient of the latitude-finding process? When I closed my eyes, I reeled. Ouch! How would I dare risk the lives of crew? I resolved to keep an eye on it. I found that it was worse when I was dog tired and persuaded myself that when I got out on the ocean and got rested up, I would be O.K.. The other problem hit suddenly. When I returned from a press conference on December 1, the day *Globe Star* arrived, I pulled the car up in front of the white garage door and saw, to my horror, hundreds of tiny

jet-black dots in front of my right eye. I was stunned. Was this to become my Achilles heel? I had been bothered with “floaters” in both eyes from time to time but had never seen anything like this. Questions erupted. Was the condition permanent? Was it just the tip of the iceberg? Would it require treatment? An operation? Would I lose sight in that eye? Would the left eye be affected? Could I judge perpendicularity of stars with one eye? Would the judgment be as accurate as it was with binocular vision? Ophthalmologist Barry Galman quickly quieted the eruption. He said simply, “It’s a very temporary condition. Send me a postcard.” I kept my fingers crossed.

Boat manufacturers are notoriously poor at forecasting delivery dates of their products and Huromic Metals was no exception. *Globe Star* was first scheduled for delivery in August (1982), then September, and then October. When Bob Patterson called on August 21, to say that *Globe Star* would not be finished in time to be entered in the Annapolis boat show (an annual early October event), my heart sank. I had mistakenly convinced myself that the boat show would spur boat-building activity at Goderich. It didn’t. The two boat carpenters assigned to the interior finishing operation had elected not to postpone their previously arranged vacations. On November 11, Patterson called to say that *Globe Star* would be ready by the middle of the following week. Eleven days later I was told, “The truck will roll early next week.” I didn’t hold my breath. It was December 1 when the truck arrived at Greenwich.

If there was a miracle connected with the *Globe Star* voyage, it was the way my friends and sailing buddies, their friends and sailing buddies, and their enlistees pitched in to get *Globe Star* ready to sail. All of a sudden it became an all-South Jersey project. She arrived without pulpit, sternrail, lifelines, mast, boom, standing rigging, running rigging, or galley stove. I got a single phone call each night asking what had to be done next or later what re-

mained to be done. Volunteers did not use up my time in lengthy discussions. They sorted themselves out by jobs and skills and fell to work. It was heartwarming to feel the enthusiasm and watch the accomplishment. They worked in rain and even swept six inches of snow off the deck and cabin top one cold Sunday to keep the schedule moving. I felt guilty and Blanche wondered how all these people could ever be repaid. My reaction was that the best reward I could offer was to accomplish what they were so generously helping me to get ready for. It gave me a strong incentive to make it happen.

Dr. Edgar Gibson had just finished showing slides to a group of Camden County (New Jersey) doctors—pictures he had taken during Navstar's non-instrument voyage to Africa in 1980. When Nils Jeffrey Herdelin, Sr., throat surgeon, heard him say that the next non-instrument voyage was to be a circumnavigation via Cape Horn he made a mental note. Next day he called his son, Jeff, in Houston, Texas, where Jeff worked as a "head hunter" for an employment agency. "Jeff, this may be the trip for you."

Three weeks later when Jeff arrived for an interview, I found that he had crewed in sailboat races in the Gulf of Mexico, had worked summers for an Audubon (New Jersey) sailmaker during his high school years, had played Rugby during his four years at Washington and Lee, was twenty-three, and unattached. I made my decision on the spot. Jeff called the next day, November 14, to say that he was ready to go.

A week later Nils and Pat Herdelin stopped by to find out what their son was getting into. Their questions showed genuine concern. For the most part, Nils' were as routine as questions could be for such an undertaking but Pat's showed more than a touch of apprehension. She directed questions to both me and Blanche, but Nils wanted to hear what I had to say. Toward the end of the visit he popped the jackpot question: "Does it bother you starting out in a boat that hasn't had a shake-down cruise?"

My answer was immediate: "Yes, it does." I went on to explain that I had given much thought to the boat, had consulted with the designer, Ted Brewer, had talked frequently with Bob Patterson, who had built thirty of the same design, had visited the plant at Goderich six times during its construction, had developed rapport with Patterson and believed that he took professional pride in turning out a well-built boat. I pointed out, too, that I was familiar with engine repair, boat rigging, metal working, and had logged thirty thousand nautical miles in sailboats on the Atlantic. His next question was about provisions. Blanche showed both of them the cases of food stacked in the garage. Nils remarked, "I see you're going to eat well."

While the volunteer crew was readying *Globe Star* for launching and I was recovering from the hernia repair, I was searching high and low for a cinematographer. I contacted colleges and universities having cinema studies, telephoned television stations and networks, tracked down leads, and interviewed a number of candidates. I wanted to find a cameraman who had sailing experience so he would know what to expect but I failed to connect. Neither did I find one who had a spirit of adventure—not when it came time to sail, that is. Maybe that was the problem. Sailing time had been pushed back from October to November to December. I'm sure one of the four who had expressed serious interest would have been tempted if we had gotten away in "October's bright blue weather." But we hadn't, and it would be hard to fault a non-sailor for not wanting to leave amid the dire warnings of doomsayers.

And doomsayers and critics there were. Didn't I know that the freighter *Poet* had been sunk off the Jersey Shore in October? What chance will you have in December? And how could you leave your family only four days before Christmas? When *Globe Star* was being loaded on a truck for transport to Greenwich, a Goderich TV station televised the operation. The interviewer asked builder Bob Patterson, "Is this guy normal? Does he have all his bolts?"

In a question and answer period following a presentation to the Woodbury (New Jersey) Rotary Club I was asked what I thought my chances were of completing the voyage. When I replied "Ninety-five percent," there was a titter of disbelief. There is little wonder that the list of cinematographers resembled a row of falling dominoes.

Although I was not crazy about the idea, I was willing to sail double-handed but Blanche felt we should have a third crew. When it became obvious that we were not going to find a cinematographer, she got in touch with George Baldwin, who had expressed interest several months earlier. George, a retired army officer, owned his own thirty-foot sloop, had some blue water experience, and was familiar with navigation. He jumped at the chance. Our crew for the first leg was complete.

Although I had flagged December first as the latest possible date to leave, as it neared I found myself poring over the **Pilot Charts** to find out what we might expect in the way of winds and seas should we leave later that month. I remembered the stern words of warning hurled by the mate of the Mohawk II when he spotted my eighteen-foot, open outboard ten miles off Cape May on the last day of December 1959. They were, "The guys in the white coats are looking for yooouu!" For that trip we chose our day and kept a lookout for any signs of bad weather. Knowledge of weather conditions and weather forecasting had advanced tremendously since then. Why not sail Globe Star to Cape May and leave when the weather was suitable? The **Pilot Charts** showed that if averages prevailed we could expect far worse wind and wave conditions at Cape Horn in midsummer than off the New Jersey coast in early winter. The only foreseeable problem was that of icing in the Delaware. I knew we might encounter ice when we brushed close to Antarctica but wasn't keen on starting out in it. It was something else we would have to play by ear.

If the thought occurred to me to postpone leaving until spring, I suppressed it. The project had been in the works for two years and I

wanted to get on with it. Waiting for spring meant more than a three-month delay. Because we needed to be at Cape Horn in late December, the schedule would be set back a full year. I couldn't face it. I just couldn't tell the group of enthusiastic supporters working for an early departure that I was not setting out post haste. There was an even more compelling reason. The island-dwelling British had laid claim to many if not most of the small-boat-sailing accomplishments. When Chay Blyth finished his single-handed beat to windward in his fifty-nine-foot British Steel, he allowed as how about everything to be done by small-boat sailors was now done. But I knew that British sailors were always looking for another sailing adventure. I also knew that my methods of non-instrument navigation had been reported by the press and therefore were available to anyone who wanted to try them out. I knew, too, how Amundsen had gotten wind of Scott's plan to reach the South Pole and subsequently upstaged him by getting there first. Now if some other sailor wanted to try out his ideas, fine. But I felt that having worked through mine, I was entitled to the first try at finding out if they worked. If I failed, O.K.; then I could not only accept my failure, but would probably encourage someone else to try. But I felt strongly about taking the first turn at bat.

The press now had a place to find Globe Star, the volunteers, and more often than not, me. It was hard to concentrate on the race to get off before ice clogged the Cohansey and the Delaware with the media constantly peering over my shoulder, asking for interviews, and taking pictures.

I thought of the method my father said foxes use to get rid of fleas. According to him a flea-infested fox would seek out a pond or stream, use its teeth to tear out a large tuft of soft belly fur, hold the tuft in its front teeth, and back slowly into the water. When the fleas had migrated forward into the tuft, the fox would submerge suddenly and release the island of fleas to float away.

My opportunity came when Gloucester County Parks and Recreation invited us to begin our voyage from Red Bank Battlefield park, fifty miles up the Delaware. We would attend the ceremonial sendoff and then return quietly to Greenwich to finish fitting out. There would be several benefits: It would provide Globe Star with a short shakedown cruise; it would accommodate a host of reporters, interviewers, and photographers at a single session; and it would give us a few uninterrupted days to attend to the thousand and one things that crop up at the last minute.

Globe Star's debut on December 15, 1982, was a media event. On hand to record the proceedings were five television crews, a news helicopter providing live coverage for a Philadelphia television station, and reporters from wire services, press and radio. Two tugs from the port of Philadelphia stood by to escort Globe Star down the Delaware. The marching band from nearby Gateway Regional High School provided music, and guest speakers U.S. Congressman James Florio and freeholders Donald Wagner and John Maier offered words of encouragement and wished us god-speed. Officials of Gloucester County Weights and Measures Department were on hand to seal instruments—compass, sextant, watch, and radios for use in the event of a catastrophe—in a heavy canvas duffel bag.

The TV crews did individual interviews

and by the time Cheryl Nathan of Channel 48 got to me I thought I had heard every possible question. I hadn't. Couched among the usual was, "Professor, aren't you scared?" I was stunned—partly because I had never thought about it. Recovering, I managed to say that we expected to have problems along the way but would try to handle them one at a time as they came up. To get a two-camera effect with one camera, I was photographed from over Ms. Nathan's shoulder and then she repeated the same questions on camera from over my shoulder. I was instructed to just move my lips a little after each of the repeated questions. The hocus-pocus routine gave me time to mull over her challenging question so when she asked again, "Professor, aren't you scared?," I had my answer ready: "You're damn right, I am." Later I was surprised to see her among the press party aboard one of the escorting tugs and even more surprised when she asked to be included in our crew. Had she been a photographer instead of an interviewer her request probably would have been taken seriously.

To be close to shore for the ceremonies, Globe Star was anchored in a slough that shoaled downstream so when we began the downriver leg to Greenwich we had to head upstream to cross over to the navigable channel—much to the consternation of the gathered crowd. Charles O'Neil offered what he thought was the best of all possible advice by

Gloucester County gave its seafaring native son a rousing sendoff yesterday with farewell ceremonies held under a sparkling late autumn sky at the Red Bank National Battlefield Park on the banks of the Delaware River here...

(The dignitaries) offered the crew of the Globe Star their best wishes in remarks kept short so Creamer would not miss the start of the ebb tide he needed to help speed his seaward passage down the Delaware River.

The sealed seabag also provided fuel for a moment of humor. Before heading downriver towards the sea, Creamer had to take Globe Star about a half-mile upriver to clear some sandbars off National Park.

"Open the bag! Open the bag!", an onlooker shouted in mock alarm as he watched Globe Star sailing off in what seemed to be the wrong direction.

—Tony Muldoon, *Courier-Post*, Cherry Hill, NJ 12/16/82

yelling across the water, “Open the bag, open the bag.” He meant, of course, the bag of navigation instruments.



At the sendoff at National Park, New Jersey, a special “bon voyage” from Glassboro Intermediate School students.

It was near noon on December 21, 1982, when I felt we were ready to head for Cape May, our point of entry into the Atlantic. The ARGOS transmitter was installed, a radar reflector was hung from the spreader, the galley stove was gimballed and in place, lee cloths attached to the pilot and settee berths, water and fuel tanks filled, spare water jugs stowed along with a ton of provisions—canned and dried fruits, vegetables, and soups, soup mixes, canned juices, flour, oatmeal, spaghetti, macaroni, cocoa, cheese, oranges, apples, potatoes, carrots, cabbage, onions, eggs, canned fish, and a good supply of home-canned meats. For the afternoon trip we had on board a cinematographer, a still photographer, and several supporters. Our plan was to take Globe Star from Greenwich to Cape May and wait there for a favorable weather forecast. I cranked up the engine for maneuvering away from the floating dock, which had been moved to its winter position alongside the river bank, called for the lines to be thrown off, shifted into gear, and eased forward on the throttle. Globe Star didn’t budge. Without having moved as much as an inch, she had received her first grounding. Globe

Star behaved like a balky steer. It took more than an hour of prodding, rocking, tugging, sweating, and tidal rise before she broke loose and got under way. I wondered when we might expect the next exciting adventure. It wasn’t long in coming.

His boyhood heroes were the Viking explorers Eric the Red and Leif the Lucky, he says. “In a sense, these trips are a tip of the hat to the ancients,” he says and addresses them out loud: “I think you may have done it, and I salute you!”

“I’m not into the macho,” he said. It’s really about the exploration of an idea. Really following an idea; it’s the only way you can find out whether it can be done. That’s why you do it.”

—Joseph Tanfani, *The Press*, Atlantic City, NJ, 12/2/82.

“People talk to me about courage, but when an idea takes hold of you, it’s harder to let go than go through with it.

Courage has nothing to do with it. The information is there, and I think I can do it”

I’m not one to start and hope we’ll find a plan en route. I like to have it all laid out. It may not go according to plan, but at least we’ll have a plan.”

—Tony Muldoon, *Courier-Post*, Cherry Hill, NJ 12/5/82

The Delaware Bay, whipped by a fresh southwester under bright, sunny skies, was in its normal choppy state. Before we had beaten our way the thirty miles to the Cape May Canal entrance both photographers were over the rail. To ensure making Cape May before dark, we had supplemented the sails with the “iron spinnaker.” I thought I detected a strange sound but a farmer-me-

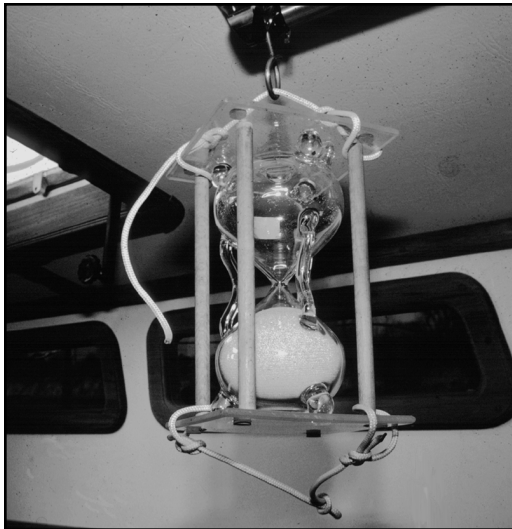
chanic on board said it was normal. Just as we got to the ferry slips inside the canal the engine broke into a deafening clatter. Of course, the wind in the canal had all but died so we maneuvered away from the ferry turning basin as best we could and dropped anchor. My suspicion was right. The locks on

the rocker arms controlling valve push-rod clearance had worked loose to create an excessive gap. I went to work with manual, wrenches, and feeler gauges and had the problem corrected in less than a half hour. Shedding my anxiety took a little longer.

Chapter 7

Cape May to Cape Town

The form that grew from bundles of wood, steel, and welding rods six hundred miles away was now rolling, pitching, and yawing its way toward the Gulf Stream, urged forward by her sails and straining jib sheets. There was little resemblance between the mass of steel and wood that sat so solidly in the builder's cradle and the sprightly creature galloping into the nighttime darkness. The lively gait and the double-head rig demanded the helmsman's constant attention, which helped each of us to stay awake during two



The custom-made hour glass used to time watches.

hours of watch as marked by two turns of an hourglass especially blown for the voyage. *Globe Star* was fitted with vane steering but none of us had read the instruction manual. That could wait for the daylight hours. So for steering direction during the early part of that first night we sensed the wind direction with an exposed cheek and worked at keeping the sails full. A luffed sail, requiring immediate action, was the penalty for lapsing into reverie. Although I did not believe we were tempting fate in pursuing what to some seemed like a ride with Charon on the Styx, I did feel strongly that within the framework of our "idiocy" we would have to exercise extreme caution. It would require paying heed to the smallest detail while keeping in mind the broadest perspective.

A small boat is most vulnerable as it approaches or leaves the land, so in our depar-

"Sea Fever," that famous poem by John Masefield, may have been in the back of Marvin Creamer's mind, particularly the lines "I would go down to the sea again," and "All I ask is a tall ship and a star to steer her by," or maybe it was just a dream of his own fostered by a love of the sea and of ships.

—Richard E. Beecroft, *Bridgeton Evening News*, 12/11/82

ture we had to keep a sharp lookout for fishing boats towing nets, tugs towing barges with submerged cables, and ships using the coastal or Delaware Bay entrance/exit lanes. It takes a keen eye and an alert mind to detect the slow turning of a ship as it changes lanes and to project its new course and positions along that course as you proceed on yours. There is a simple visual test to determine whether you are on a collision course with another vessel when both vessels maintain a given heading and speed but there is no sure way to tell when the vessel you are watching is changing course and speed. A small sailboat is not without rights sailing offshore in deep water, but to be granted those rights it would have to be seen—and what ship operator would expect to see the lights of a small sailboat at night in December? And without radio communication there was no other practical way of letting mariners know of our whereabouts. From the outset we knew that it was entirely possible for *Globe Star* to escape detection by ship's lookouts or radar operators and that if we were going to avoid being run down we would have to make our decisions in the light of that assumption regardless of our rights or obligations under the rules of the road.

As coastal lights gradually disappeared and the reality of finally getting off began to sink in, I couldn't help wondering what might lie ahead and how we might function as a crew. Both Jeff and George were knowledgeable sailors but neither had any experience sailing without instruments. Would the winter departure in an untried boat and the uncertainty inherent in non-instrument navigation increase anxiety and susceptibility to cruising depression that sometimes besets crews and turns cabins into battlefields—or even worse into silent, hostile cubicles? In less than twenty-four hours we had been stuck in the mud and had a problem with our auxiliary engine. Health problems had forced two crew members to withdraw at the last minute. Would one of us succumb to an as-yet-undiscovered malady? At what moment might some major flaw, unde-

tected in a decidedly foreshortened shakedown cruise, burst into view? Suddenly, Cape Horn, once only a place of myth, became a real place—a place of mountainous rocks, sweeping currents, scudding black clouds, screaming winds, and gigantic, gale-driven waves—a place not too hard to imagine given the ambient weather conditions. However, there is something very calming about downwind sailing and I felt sure that we would be able to clear old Cabo de Hornos in due time. I knew from past experience that I enjoyed dealing with a moderate amount of chaos and in my euphoric state I felt sure that with a bit of luck we would be able, as I had promised Cheryl Nathan, “to handle any problems, one at a time, as they came up.”

It was about one a.m. when the sky cleared and Cassiopeia pointed out the location of Polaris. *Globe Star* was right on course. By daylight we were beyond the zone of fishing boats and coastal shipping. We also had the sea room we needed for defense against a severe onshore blow. During the day the wind, as predicted, backed and lightened. We elected to crank up the engine to speed our approach to the Gulf Stream and entry into warmer waters. We sailed into the exquisitely blue current around nine o'clock the next morning, about thirty-nine hours into the voyage. Two days later we ate our Christmas dinner in the cockpit. We didn't bother to dress for the occasion; we just luxuriated in the profusion of warm air and sunshine in our shirt sleeves. We had cause to celebrate: we had escaped the clutches of the land, had put all danger of freezing behind us, and had offset any possible disadvantage of leaving in December.

Before we got into the doldrums—both literally and figuratively—there was work to be done. Jeff and Blanche had gotten a crew together to ready provisions by delabeling and waxing canned goods, storing flour, oatmeal, sugar, and other items in both large and small, sealed plastic containers, labeling and relabeling all items, and weighing and labeling all containers. Heaviest containers of both provi-

sions and supplies were stowed near the boat's center, fore and aft and port to starboard, in the lowest compartments. Items were also stowed with regard to availability in an emergency, frequency of use, vulnerability to water damage, and flammability. I had seen evaporated milk running out of cans rusted through by salt water in less than six weeks on the African trip and I didn't want rusted cans to dispense volatile and explosive solvents into the bilge. Because of the paramount need to beat freezing weather, we had not had time to stow all the items that appeared on our last minute lists and the odds and ends of materials and tools that were being used right up to the time of our hasty getaway. We had secured everything against possible buffeting by heavy seas but now had to sort and assign permanent places for these items and make shelf lists of everything on board.

We had chosen a day with a good breeze and plenty of sunshine for our operation, which involved getting at all storage space including the bilge. George was straddling the open bilge in the galley when the boat lurched and flung him face first into the chart table opposite the galley. When he got to his feet, blood from a facial gash flowed in a crimson stream down his yellow foul weather jacket. I closed the cut with a butterfly dressing but couldn't do much for his broken nose which in very short order doubled in size. It took nearly two weeks for our first casualty's face to return to normal size and color.

We set up a watch system that was to continue for the rest of the voyage. The dark period, as it varied in length with latitude and the time of the year, was divided equally among the crew. Because I wanted to establish direction from the position of the rising sun, I always took the last tour. Having been advised by a dermatologist to avoid exposing any part of my skin to the direct rays of the sun, I struck a deal with crew members on each of the first five legs. In exchange for being excused from day watch, I volunteered to do all the cooking and all of the dishwash-

ing. For me it was a good deal and, I think, for the crew as well. When I came off watch in the morning I prepared breakfast for myself, the man going on watch, and for the third crew if he was willing to rouse himself after taking the middle night tour. Some preferred a cold breakfast—fruit juice and dry cereal with powdered milk—others wanted a cooked breakfast—hot cereals, especially oatmeal, eggs, toast with jam, or pancakes. To a man the favorite hot drink day or night was cocoa. We made a mix of dry cocoa, powdered milk, and sugar and kept it in gallon containers ready for preparation with the addition of hot water.

Soup and sandwiches were standard fare for lunch. We started out with about forty cases of Campbell's and Progresso soups and other canned goods. Egg salad, cheese, tuna, and peanut butter provided the filling between the slices of homemade bread. Dinner normally consisted of a meat dish, made from the pint jars of meat that Blanche had preserved in a pressure cooker before we left, two vegetables, e.g., fresh potatoes, carrots, or cabbage or canned vegetables, a serving of canned fruit, and cookies. I found meal planning a very pleasant diversion. I usually caught up on sleep after breakfast and then planned lunch and dinner from my bunk after waking up. I worked for balanced meals with plenty of calories to keep us warm both in the cockpit and the cabin. I liked meals to be somewhat of a surprise so did not adopt any kind of regular rotation such as spaghetti every Tuesday. I didn't want to serve cheese two meals in a row or beans in any form—baked or in soup—on sequent days. I liked, also, to provide as much contrast as possible—contrast in color, taste, and texture.

There was another reason why I wanted to do the cooking: to maintain food inventory control. With one person in charge, keeping a record of what had been served and an inventory of what remained was much easier. The other side of the coin was to ensure that a portion of favorite foods would still be available

toward the end of the voyage when items perceived as less desirable might have a demoralizing influence. On one of my previous trips we rotated the cooking. What I discovered was that each chef in turn sought out favorite foods in order to win crew approval without regard to principles of nutrition, food contrast, frequency of use, or inventory.

Blanche always interviewed crew members or their wives about food preferences. She never found one who didn't say he liked everything. At sea, however, likes and dislikes surface quickly as do potential problems. "I don't care for the coconut macaroons so just give me the pecan crescents instead." Fine, except that pecan crescents might be everybody's favorite. If there were unlimited quantities of each there would be no problem but a small boat being provisioned for as long as six months cannot be stocked with all favorite items because there is no way of telling ahead of time what the favorite items are going to be. The claim of one crew that he can't eat this or that has to be weighed against rights of others to an equal share of whatever might be considered the "goodies." An equitable distribution is paramount in maintaining good morale on board. On the other hand, unless intra-crew swapping of rations could be arranged, e.g., coconut macaroons for pecan crescents, a crew might lack needed calories, especially in wet and cold weather. My safety valve was to carry a limitless supply of candy bars, nuts, peanuts, peanut butter, and jam or marmalade and to have homemade bread on hand all the time.

Bread-making at sea had become a ritual by the time I started the circumnavigation. My first two sailboats did not have ovens and the bread was "baked" in a heavy aluminum pot on top of the stove. I first read of the method in a booklet that Alan Eddy wrote after his circumnavigation in his *Seawind Ketch*. His recipe called for flour, yeast, and seawater. He said that if there was any disadvantage to the stove-top bread it was the temptation to wolf it down as soon as it was done. I was certain

that he was kidding until I tried it. It was delicious! The secret of the baking process was to use a heavy pot such as a cast-aluminum pressure cooker to spread the heat and "bake" it for a half hour over a slow fire and then turn the loaf over for another half hour of "baking." The loaf emerged with what appeared to be two bottoms but the taste was indistinguishable from the finest oven-baked bread. *Globe Star* was equipped with an oven which made bread-making a lot easier. But one problem remained—getting the dough warm enough for the yeast to work and make it rise. Through the years I had used various schemes for warming the dough. When it was sunny I would make a miniature greenhouse from a clear plastic bag, put the pan of dough inside the bag and then place both in a sunny corner of the cockpit. Sometimes I rolled the dough pan up in a sleeping bag with a canteen of hot water, and on several occasions I crawled in the sleeping bag with the pan of dough, sourdough fashion. On the long voyage to Cape Town there was time to think about the problem of getting the dough warm. I had always warmed the water, with sugar added, to get the yeast started but had never thought of the effect of pouring the liquid into cold flour. When I tried warming the flour over a hot burner, the dough rose rapidly and with very little coaxing. I found that the flour was warm enough when it felt warm to the backs of my fingers.

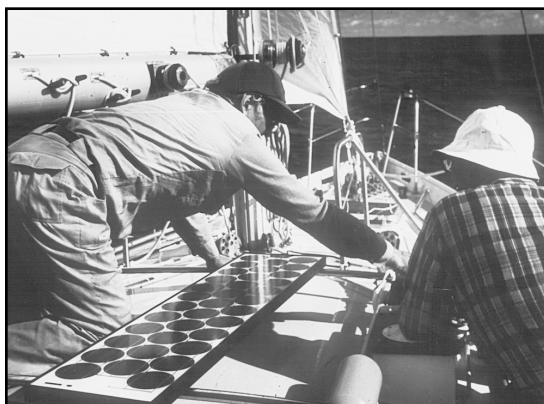
January ninth was a delightful day for sailing. It was warm and sunny, the wind was steady, and the surface smooth. It was just the day we had been waiting for to mount the solar panels on the brackets that had been carefully fitted between the cabin-top handrails by the "miracle makers." It was also a good day for baking bread. When the oven reached baking temperature I put the loaf in and joined George and Jeff topside. When it was time to check the bread, I stepped to the hatch and was horror-struck. The galley was on fire! Four columns of flames and black smoke shot upward from the four corners of the galley stove. They flattened as they

reached the cabin headliner, and filled the cabin with acrid kerosene fumes. It was a terrifying sight. I emptied the entire contents of a large Halon-filled extinguisher before getting the fire under control. Even then the near-red-hot metal kept re-igniting kerosene that somehow had accumulated in the bottom of the oven. Fortunately, the extinguisher had been stowed near the companionway, opposite the galley. When I first saw it, I wasn't sure the whole cedar-lined cabin could be saved. It was a sobering experience. It used up one-third of our fire-fighting capability and sent me searching for our supply of sodium bicarbonate. When the oven was cool enough to approach, I found a blackened loaf and decided that the crew and the circling gulls would both benefit from a last-minute menu substitution.

Our log for the following day, January 10, 1983, reads, *another fire in oven*. Luckily, it was smaller and yielded to the sodium bicarbonate. How did it happen the first time and how could it have happened again? Both fires were caused by a puddle of kerosene that leaked from the oven burner onto its supporting platform. But we had wiped up the oil after the first fire and inspected the platform before the second. Where was the oil coming from? A loose fuel-line connection? No. We discovered two contributing factors. The bottom of the oven door rubbed against the knob that

controlled kerosene flow to the oven burner. When the oven door was opened it nudged the control valve ever so slightly. That accounted for the oil under the burner before ignition but could not explain why oil appeared after the burner had been primed and lit. Any oil released from the burner after ignition would have to go through the heating generator and be consumed in normal flame. It seemed as though there was a reservoir of oil beneath the burner. In fact, there was. The five-inch-square burner platform, made of stainless steel sheet, stood above the compartment bottom about three-quarters of an inch. Sandwiched beneath the platform was a five-inch-square piece of porous insulating material. This was the second factor. Opening and closing the oven door opened the burner so that oil was released into the burner compartment. Much of the oil was absorbed by the insulation and held in place until the heat generated by the hot burner forced the oil out of the insulating material into the surrounding compartment where it caught fire. Mopping up the oil from the burner compartment did not extract the oil trapped in the insulation. After the offending insulation was removed, I checked the temperature of the underside of the burner compartment as the stove swung side to side in its gimbals. There was no threat of fire there. But there was a twist of irony. The device installed to prevent fires turned out to be the device that caused them. It brought to mind a ruptured oil line that could have ruined Scotia's diesel engine on the way to the Azores in 1974. The only purpose of the oil line was to call attention to a dangerous oil level. It, like the hazardous insulation, had created the condition it was designed to prevent.

Contrary to the predictions of the doom-sayers that disaster would come within forty-eight hours, the only full-blown storm that we encountered on the 100-day leg to Cape Town held off for three weeks. It was a solid blow that produced wind speeds of forty knots and waves twenty-five feet high. Seas crashing on



Marv and George Baldwin install solar cells to power the refrigerator as they sail on the first leg in the North Atlantic.

deck swept away one of two fifteen-gallon drums of kerosene we carried for emergency use as stove or diesel fuel. No storm at sea can be considered a ho-hum affair but we took the blow in stride. We had already sailed through two smaller blows and knew what to expect of the boat, the sail inventory, and ourselves. The gales, which lasted four days, came just before daybreak on the heels of a cloudy night making it impossible to note the direction of the wind in the accompanying squall. Without a direction reference we chose to wait for a look at the sky rather than set storm sails and make use of the air being lavished on us. We supposed the wind was from the northwest but we did not want to risk upsetting our dead reckoning. Two days passed before we got our bearings and got moving again. It proved to be the longest period without sun or stars on the whole voyage.

Bouncing around in lumpy seas is not altogether unpleasant if you know your boat is moving toward your landfall, but being battered by gales and heaving seas while dancing in place is downright frustrating. Time seems to stand still. On deck, you search the sky for the break that might provide a clue to direction. You feel the tremendous power of the gales and wish you had the way-finding ability of the migrating birds. With safety harness tether sliding on cabin-top safety cables, you crouch and inch your way around the cabin hand over hand along the grab rails looking for signs of line chafing or gear failure. Below, you cock an ear to pick up the hint of letup that never comes. You work on a letter, try your hand at the crossword puzzle you put aside yesterday, hum a few favorite tunes, wonder how things are going at home, plan a tempting menu for dinner, check the bilge, pore over sea and star charts, and perhaps crawl into your bunk for a catnap. You sink your knees into the lee cloth and push against the back of the berth in a wedging action that you hope will let you get some quality sleep. It might happen if only you could get that

water-filled balloon sloshing between your navel and spine to hold still long enough for you to drop off. The miracle happens and you catch a few winks, but when you rouse, your head seems dull and thick. It takes a while to figure out that you feel better rather than worse. You have succeeded in getting an increment of time to pass but you can't help wondering how much longer it will be before you return to that joyful world of sensuously curving sails and rhythmic, purposeful movement.

The "float plan" that we hoped to follow for the first leg was close to a match for the old Z-shaped sailing route used for two hundred years by sailing ships bound for South Africa and Australia from eastern North American ports. The first segment was to the vicinity of the Cape Verde Islands, the second a little east of south to the approximate latitude of southern Africa, and the last nearly east to Cape Town. The main difference was that because we were restricted to parallel or latitude sailing we would not dare dip into the higher latitudes of the southern Atlantic to



Globe Star pushes a wall of white water on the outbound trip to Cape Town.

pick up steadier and stronger winds as the sailing ships did. It was tempting to try but the risk of missing the southern tip of Africa was too great. Although we carried enough food to sail on to the next continent—Australia—water supply would have been a serious problem. Our approach then would be to turn abruptly eastward when we got to the latitude of Cape Town and hold that latitude as best we could until we ran into the African land mass. Our problem in adhering to a modified version of the sailing ship route was to know when we were in the vicinity of the Cape Verdes so we could make our turn to the south. On the return trip from Dakar in 1980 we had found the islands and I felt we could find them again or at least pick up clues to their presence. We did not have to see them provided we were reasonably sure that we were in their vicinity.

The first hint came on Jeff's watch during the night of January 24. The masthead lit up with an eerie glow that spread a soft, yellowish light over the deck below. Little wonder that ancient sailors were awed by its presence and named it after their patron saint by calling it St. Elmo's fire. The first time I saw it was on the way back from Ireland on my first voyage without instruments. When I looked out of Scotia's cabin I was sure that Kurt had turned the running lights on.

Perhaps I need to explain about running lights. International regulations call for white stern and mast lights and red port and green starboard lights. These lights use up energy that has to be replaced. One or two fully charged batteries will not maintain lights for very many nights. Normally, batteries are recharged by running the boat's engine, which is equipped with a generator or alternator. It is obvious that the use of fuel for lights competes with other uses for fuel. Admittedly, the regulation calling for lights is a safety measure, but if other possible uses of fuel are examined they turn out to be safety-related. Should there be a prolonged calm that threatens the water supply, fuel might be needed to move toward an

area of better winds. Or the fuel might be needed to claw off a dangerous coast. It might be needed to make port facing into strong currents or offshore winds. When fuel management priorities are rated from a safety point of view, having running lights turned on at night gets a relatively low ranking.

The possibility of a collision with another small boat is nil. Collision, if it comes, will be with an oceangoing ship. Ships must avoid each other and do not dare to disregard international regulations, therefore they carry all required lights. These are hundreds of times brighter and can be seen many miles farther than those required for small boats. My practice has always been to keep lights off until we see the lights of a ship and then if it appears that there will be an approach within a few miles to turn them on. By maintaining a careful, all-night watch a considerable amount of fuel is saved. There is another safety factor involved also. Unless a separate battery is maintained to start the engine for emergency use, it is very difficult to use a battery for lights and at the same time be sure there is enough of a charge left to get the engine started. Not having enough charge to crank the engine that is needed to restore the charge is a dilemma that no safety-minded sailor wants to face. I should add here that the solar panels we carried on Globe Star would solve the dilemma. Still, I had a greater peace of mind knowing that batteries were fully charged at all times ready to kick the engine into action at the touch of a button.

Soon after the ghostly night light appeared, we plunged into a spectacular display of bolt and sheet lightning. Brilliant blue streaks turned the pale green sky into a flashing network and, amid resounding kettle-drum rolls and earsplitting crashes, arc-welded it to the ocean below. Nature's magnificent exhibition lasted for hours with only an occasional intermission. In nearly a year of sailing time that I had previously logged, I had never seen anything like it on the ocean and rarely if ever on land. But if we were to deduce location

information from nature's pyrotechnics, e.g., nearness to land, we needed more clues.

Two days later, in early afternoon, a school of friendly porpoises paid a social call and a short time later we caught a glimpse of a land bird. Late in the day fog shut visibility down to about a mile, which meant we were in the proximity of cold water. Had we entered the Canaries Current which flows past the Canary and Cape Verde islands? Our logged latitude matched that of the Cape Verdes but our longitude showed us 500 miles to the west. However, the clues were beginning to fit a pattern. Porpoises feed on fish that are abundant in shallow water. Land birds may be blown many miles to sea but one's presence hinted of nearby land. The cold water suggested nearness to the island chains off the African coast. The final piece of the puzzle fell into place silently and unobserved during the night of January 27. When daylight came, our sails bore reddish-brown streaks where fine red dust and sand had been turned to mud by the dew-dampened sail cloth. The fabled Sahara had dropped by during the night and left its calling card. The maroon grit not only tie-dyed our new white sails but found its way into the cabin and even got inside our circuit breaker panel box!

There was no doubt about it. We were very close to the Cape Verdes. Naomi James wrote about the Saharan dust in the vicinity of the islands in her book, **Alone Around the World**, and I had encountered it when I passed through the islands on the way home from Dakar in 1980. On sunny days the dust makes the sky a deceptively bright blue even though it greatly diminishes visibility. On that voyage we got within eight miles of 4300-foot-high Monte Gordo on São Nicoláo before we picked up its faint outline.

The dust gave us notice to be on a sharp lookout for huge black rocks looming ahead. It was a tense period, especially at night when our ears strained for the boom of breaking surf. We rehearsed getting the preventer off the main boom and Globe Star shunted

away from danger. A review of the positions provided by the ARGOS tracking system shows that we passed southward just thirty miles west of Santo Antão, the westernmost island in the Cape Verdean archipelago. We had also passed our first test of finding longitude by sky and surface observation.

[By January 26 after thirty-six days at sea we had traveled 2693 nautical miles from Cape May, an average of 75 miles per day. Our estimated position, 20° 30'N, 34° 10'W was 2365 miles from Cape May—298 miles closer than our actual position. We had underestimated our speed about eight miles per day or about one-third of a mile per hour. At that time we judged our latitude to be forty-four miles (minutes) south of the ARGOS latitude. There was a much greater disparity between our logged longitude and that shown by the ARGOS system. The angular distance was 7°44', an equivalent at that latitude of 432 miles.]

For two weeks we saw neither sunset nor sunrise. In the afternoon the sun would slowly dissolve in the blue-gray haze ten degrees or so from the horizon and in the morning the sun would gradually take shape from a luminous place above the horizon much like a photograph emerging in a darkroom tray. We had looked forward to a few days of romping through the northeast trades, but found them weak and variable. We alternated between our largest head sails held open with poles and our multi-purpose spinnaker but the going was slow. On the entire leg we were never able to put as many as three good sailing days back-to-back.

North of the equator we cut across uncountable bands of riffled water that resembled gentle tide rips. These were equatorial countercurrents flowing against the main east-to-west flowing equatorial current—the supplier of tropical water to the Gulf Stream. The **Pilot Charts** showed the speed of the west-flowing current but gave no hint on how the countercurrents might affect our longitude. In the end the current probably compensated for the previous underestimation of our speed in moving east.

Unlike the western equatorial Pacific, the western equatorial Atlantic is not punctuated with a great array of islands and their accompanying shoals. There are, however, several islands and a few small rocky outcrops that could have brought an abrupt end to our experimental voyage. The unlighted St. Paul Rocks which lie about 60 miles north of the equator and about 500 miles from the nearest land in South America and the Arquipélago de Fernando de Noronha about 230 miles south of the equator and 130 to 200 miles off Brazil were cause for concern as we neared the equator. Accurate information on either latitude or longitude would have been of tremendous help in trying to avoid an unintentional nighttime grounding on one of these rocky outposts or on near mid-ocean Ascension Island and St. Helena or on Ilhas Martim Vaz and Trindade 630 miles from the Brazilian shoreline. Without it we coped by keeping a very close eye on the horizon ahead, on the color and surface of the water, and at night being alert for any change in Globe Star's rhythm or motion that might provide a clue in the form of reflected waves or shoaling water.

When our estimated longitude showed we were sailing over South America we would intersect our estimated latitude with the coast, find the longitude of that point, subtract the angular distance represented by visibility to the imaginary coast, and adopt that longitude as our estimated longitude. Our log entry for February 17, 1983 illustrates the point: *Longitude is adjusted to about eight miles off the Brazilian coast since we are obviously not sailing on land.* We knew it wasn't correct but the figure gave us a western limit from which to make calculations.

Afraid that the equatorial currents would thrust us too far west, perhaps even far enough to put us in the unwelcome position of being north of the bulge of Brazil, we used every conceivable means short of body English to hold our easting. The tracking record shows that we worried needlessly and could have made a lot better time if we had

not tried so desperately to maintain an easterly component in our heading.

As Polaris sank toward the northern horizon, we began acquainting ourselves with the stars of the Southern Hemisphere—our home for the coming year. On cloudless nights the cluster formed by the Southern Cross, Hadar, and Rigil Kent were easy to find and we spent hours studying star charts and the skies to learn southern constellations and individual stars. As Polaris faded in the haze at the horizon, the "Cross" became our new nighttime direction finder. By going beyond Acrux four and a half times the distance between Gacrux and Acrux we were able to establish a crude but satisfactory polar point.

But knowing direction did not help us move a heavily laden, short-rigged boat through the light airs of the doldrums. We relied heavily on our drifter and spinnaker as we inched our way southward under Orion's Bellatrix, Alnitak, and Anilam. Cloud cover was unusually dense for days at a time and we could often see as many as three cloud decks. One or more of these managed to keep the sun hidden from view for long periods. At one point a swirling nighttime squall left us under an enormous jet-black umbrella with no clue to direction except for one lone orange star or planet which by itself was of little use. On one occasion, when the self-steerer followed a 180-degree wind shift, we were able to correct our heading by noting that a particularly long and heavy bar cloud appeared to shift from the port to the starboard side. At another point a wall of solid rain approaching from the starboard side signaled a wind shift; as the wall reached Globe Star's center line, we let the boom blow across to port and changed jib sheets without so much as moving the tiller or altering the heading. Such were the doldrums.

The South Atlantic was a watery desert. From January 25 to March 19 we did not see a single ship in the sea, jet in the sky, nor, after crossing the equator in mid-February did we see birds, porpoises, or flotsam of any kind—

not even an oil slick. Our last contact with visible life for a long period was a lone brown shark that inspected Globe Star's bottom minutes after George had spent two hours scraping away masses of gooseneck barnacles. Jeff and I speculated on whether the shark homed in on the trail left by the barnacles or George but gave him the benefit of the doubt inasmuch as he was out of the water before "Jaws" appeared.

Gradually, we worked our way eastward and southward, measuring our longitude by estimating our speed from the wake and our latitude by looking upward to our zenith at night. We gauged our southward progress from the meridian transits of selected stars as they approached from the south and receded northward. During the day we determined what stars we would look for at night and alerted each crew member to be on the lookout for those that would make meridian transit during his tour of watch—three turns of the hourglass. Rigel, Spica, Sirius, the planet Jupiter, Antares, alpha Pyxis, theta Centaurii, and epsilon Scorpii logged our progress to the latitude of Cape Town. Our method of navigation was parallel sailing, which was universally used before the invention of the chronometer. To find Cape Town, we had to reach its latitude, $33^{\circ} 54'$, and then sail east until we "ran it down."

When the toggle connecting the starboard headstay to Globe Star's bow parted about noon on a day in late February, we were not overly concerned. We had spare toggles and made the repair in no time flat. Luckily, the tack grommet held and the sail's sewn-in, luff bolt rope kept the headstay and attached turnbuckle contained. But five weeks later when the toggle on the port side broke, the genoa's tack grommet gave way, releasing the headstay and its turnbuckle to flail wildly in the stormy night air. The weighty turnbuckle swinging in a wide arc immediately became a lethal weapon capable of dealing death with a single blow. By releasing the halyard we managed to dampen the gyrating stay with the wet

mass of the heavy dacron sail and drag both sail and stay onto the deck. When we bagged the sail, I noticed a tear and made a mental note to inspect it later. It remained in the bag until I rolled it out on the sailmaker's floor in Cape Town. Our final count was twenty-five, foot-long tears. I asked whether the worst areas could be replaced with new panels, but the sailmaker could not match the American-made cloth and assured me that the patched sail would work quite well. It did.

At the end of February we noticed a weakening of the green light that blinks every minute as the ARGOS transmitter sends a radio signal upward to be received by an orbiting satellite as it passes overhead. On March 1, it quit altogether. We tried a new bulb without success. We cleaned a corroded antenna connector and tried the emergency antenna but still could not restore the indicator light. Months later we learned that the lithium batteries were drained by the constant transmission and there was nothing we could have done about the failure. We were sure the press would report us missing, and it did, but our greatest concern was how our families and supporters would interpret the lack of a signal. Fortunately, we were in an area free of known hazards and had been making good progress. There was no reason to suspect disaster, although it had to be considered a possibility. There was nothing we could do to relieve this home-base anxiety. We gritted our teeth and concentrated on getting Globe Star to Cape Town.

[On February 25, the day the ARGOS transmitter died, it gave Globe Star's position at local apparent noon as $17^{\circ}34'S$; $21^{\circ}52'W$. On board we listed our estimated position as $19^{\circ}37'S$; $37^{\circ}07'W$ which was 876 miles west southwest of our actual position. Although we had covered a greater distance to increase our chances of finding favorable winds, our airline distance from Cape May was 3030 miles. The mileage from Cape May to our estimated position was 2267. Our latitude was in variance with our actual latitude by a distance of $2^{\circ}3'$, or

123 miles. The longitude error was much greater, $15^{\circ}15'$, or at that latitude 872 miles. As explained in the appendix, longitude without a clock has to be deduced from courses and distance made good. Whereas latitude can be corrected by observation of stars at their meridian transits, there is no way short of identifying a landmark to correct longitude.]

I couldn't have imagined what was happening back home. Blanche, infuriated by the headline, "Creamer Missing at Sea," got on the telephone and tracked down Ernie Ebberwein, Miami-based Coast Guard technician familiar with the transmitter. When he told her there was a forty-percent failure rate, she promptly got out charts and a calculator and went to work. I was amazed at how calm she was when I called her on arriving at Cape Town. It was my turn to fret. I wondered if she had found someone else or had gone "round the bend." When she emphasized that she expected me to call that very day, March 31, I was sure she had flipped. "Honey," I asked, "How could you possibly have expected me to call today?" "It was easy," she replied, "I calculated your average daily run up to the day the transmitter quit, and divided the remaining distance to Cape Town by that figure. It came out March 31." NASA navigators couldn't have done better.

Failure in a vital part of the vane steering gear called for immediate action. Shortly after midnight on March 7, George, who on watch was presiding over a glassy but heaving sea, called for help. The independent rudder of the vane steerer had slipped out of its retaining bushings and was banging against the transom. It was held only by a badly twisted aluminum strap that normally connects the end of the vane shaft to the trim tab. It had to be salvaged before the strap fatigued and let the steering rudder float away in the dark. This required sitting at the water level on the steering vane's bottom support bracket with safety harness attached to the stern rail. Under the glare of a spotlight and with legs dangling in the subtropical water, I worked with a wrench in each hand, making sure that no bolts, nuts,

parts, or wrenches were let slip, while the writhing, bucking sea drove water, externally at least, from my "keel" to my armpits. In the morning light it was obvious that temporary repairs would be impossible. The aluminum end cap that held the steering rudder's solid nylon supporting shaft in place had been worn and battered through. We would have to hand steer to Cape Town—an added incentive for finding it.

The calm that did in our self-steering rudder was part of the so-called "latitudes" of the South Atlantic. Had we been sailing with instruments, we would have dropped several degrees farther south to avoid the high-pressure, calm area and then sailed northward again as we approached the longitude of Cape Town. But we could not use this tactic for fear of overshooting the southern tip of Africa thus exposing us to the 6000-wide Indian Ocean prematurely. We were fated to coax a sluggish boat through a belt of extremely light air. The period was not without compensation. There was a quiet serenity by day and incredible beauty after sunset, when a ring of pink-and-gold-fringed clouds was mirrored in the glassy surface that surrounded us. The double image dissolved the horizon, which for three months we had strived so hard to reach, and wafted us into a soft, fluid fantasy where time and space seemed not to exist. Both ship and crew had reached sailing nirvana.

By mid-March we had escaped the calm's clutches and picked up air from traveling weather systems to make some respectable daily runs. On March 23 we estimated our previous day's progress at 142 nautical miles, the equivalent of 163 land miles! The next day green water and a sustained greeting from a pod of friendly pilot whales signaled our approach to shallow, life-filled, continental-shelf waters. Africa couldn't elude us much longer. After three full months on the Atlantic, we would get a respite from the long, powerful, southwesterly swells, which for days had made a 40-degree angle with our centerline, given us direction in cloudy weather and rhythmically

dumped air from our sails; a respite from peering into the night sky and asking ourselves, "Are we under that star?"; a respite from the worry over adequate fresh water; and a respite from our consciences, troubled by the anguish that we might have caused our friends and families.

Even with a full complement of instruments, landfalls are safest when made during daylight hours. We had no desire to try our luck at beating the odds. However, we had been led to believe that a parade of tankers paralleling the southern coast of Africa would forewarn us of our approach. Our plan was to keep our eyes open for their silhouettes by day and their lights by night. It was a fool's paradise. At about 1:00 a.m. on March 30, George, on watch, spotted a flashing light on the port bow. He spent about an hour checking and double checking to make sure the flash was not being made by wave interruptions of a ship's light. Tentatively, we identified it as the light at Cape Agulhas, the southernmost tip of Africa, but waited about four hours until daylight so we could make positive identification before starting the 100-mile trip to Cape Town.

The profusion of sea and bird life feeding in the rich coastal waters was in sharp contrast to the paucity of life in the deeper subtropical Atlantic Ocean. The soaring and diving birds, the penguins, and the porpoises provided good theater for the entertainment-starved crew as we ticked off the passing landmarks. The mellow atmosphere vanished with the setting sun. It was a long, arduous night paralleling the steep, rocky, reef-strewn coast in near gales without the benefit of either boat or hand-bearing compass, depth-sounder, radar, or radio direction finder. It was without doubt the most dangerous night of the 100-day voyage. We doubled the watch and exercised extreme caution. We had our objective in sight and were not going to let it slip from our grasp!

Winds lightened as we turned to starboard to enter the harbor just after daybreak. Jeff and I relaxed as the sheets eased. George, cautious to the end, clung to his faithful flashlight, even as the sky brightened before the cloudless sunrise. He aimed it in the direction of the Royal Cape Yacht Club, where we hoped to ready *Globe Star* for the downwind run to Australia.

Chapter 8

Cape Town

Creamer and Crew Land in Cape Town

More than one month after losing contact with their trackers, scientist-explorer Marvin Creamer and the crew of the *Globe Star* put into the harbor of Cape Town on the southern tip of Africa early Thursday morning.

“He and the crew were in good shape, both physically and mentally,” said Creamer’s elated wife Blanche...

First word of Creamer’s landing came in the early hours of Thursday morning when Mrs. Creamer groggily answered the telephone in their Pitman home. At first

there was no response. Then the overseas operator asked if she was willing to accept a collect call from Cape Town.

Mrs. Creamer knew that meant only one thing—the tense weeks of waiting were over and her husband was all right...

Mrs. Creamer said her seafaring husband sounded “excited and pleased” about making his first landfall since leaving National Park on December 16. “He’s not the type to brag,” she explained.

—Kevin Gonzalez, *Gloucester County Times*,
4/1/83

You get a visceral reaction when you are about to step on solid land. It isn’t something you think about ahead of time. In fact you have been looking forward to arrival and then, suddenly, you get a feeling of being suffocated and hemmed in. The pitching, rolling, and yawing creature that has carried you safely in its bosom for months is about to be tethered and you are going to have to deal with fenders, dock lines, dockmasters, documents, immigration, health, and customs officials, and other impedimenta associated with making a landfall. Your Edenic world of floating fantasy fades while the real world of solid land, banks and buses, shops and sail-

makers, telephones and technology takes center stage. A hint of nausea vanishes in the bustle of docking and your body helps you to adjust to the unyielding firmness of terra firma by rolling it under you a few times until you recover your “land” legs.

We got off to a bad start with the Royal Cape Yacht Club docking supervisor. Numbed by lack of sleep and the stress of keeping *Globe Star* off dangerous rocks in nighttime gales, my mind couldn’t believe he wanted us to plow our way between yachts that were lying gunwale to gunwale in front of us. The stainless steel camera-mounting bracket secured to our port rail would certainly have gored the beautiful white yacht lying ahead on our left. This was

a foreign country and I was without any kind of boat insurance. I declined the invitation to risk damage by wedging two boats apart and was banished to the "Wall." The Wall formed the corner of a major ship repair yard, was solid concrete, and rose an imposing fifteen feet above the water. *Globe Star* was in the third row of boats from the pier, which required scrambling over two yachts and up a rickety ladder to reach ground level. The Wall was about a five-minute walk from the RCYC clubhouse. It was to be our home for seven of the eight weeks we spent in Cape Town.

Reaction to our voyage was divided. Even though it was still very early fall, the official atmosphere was quite cool. It was something of a mystery that I would give considerable thought to—something to mull over and occupy periods of time spent waiting for buses, officials, optometrists, friends, or sleep. I put it on the back burner, guessing that sooner or later there would be a resolution.

The only verbal exchange with an officer came three days before the end of our eight-week stay when the club commodore brushed by on his way to a committee meeting and turned to say, "I guess you'll be leaving soon." It struck me as being a rather odd thing to say. I tossed it into the puzzle pot along with other clues.

The less-than-warm reception may have stemmed from the fact that the club had taken responsibility for testing would-be skippers of small craft and issuing licenses, called "tickets" and required by law, to those who meet preset standards. How to use a compass is a vital part of the club's educational and testing program and here we were, iconoclastically, suggesting by deed, if not by word, that the magic magnetic direction finder was not altogether essential for the safe operation of a yacht. Too, Cape Town, because of its location, has become a watering place for yachts from all over the world so club officials have heard, I'm sure, a plethora of proposals that have died aborning. We didn't mind the "ho-hum" stance; we were able to concentrate on readying *Globe*

Star for the 7000-mile jaunt to Australia.

As temporary members of the club we had access to the showers but regrettably there were no laundry facilities at the club or nearby. Normally, it was easier to wash clothes by hand than to lug them to a distant laundromat. Our mail was posted as it arrived and we were welcomed at the club lounge, where we could enjoy refreshment and conversation with club members, and at the bar where in addition to the beverages there was always a good supply of biltong—jerked wild game—a favorite South African snack.

Disbelief was a common reaction. George Meeks, RCYC member whose daughter-in-law wrote an article about our trip that appeared with a color photograph on the front page of **The Cape Times**, led the doubting Thomases. After the article appeared, he and Mrs. Meeks invited us to dinner with his daughter-in-law and son in attendance. The questions were sometimes blunt and sometimes oblique, which made for a most interesting and enjoyable evening. In the end, George, himself a long-distance sailor, was convinced that we were for real and subsequently became a staunch friend and supporter.

Three United States yachtsmen successfully completed the first leg of a circumnavigation without using any navigational equipment when they arrived aboard their 11 metre yacht, *Globe Star*, in Table Bay at the weekend.

It is believed to be the first circumnavigation of its kind ever attempted.

For "emergencies only", the crew took along a compass, sextant, clock and radio -- stored safely in a waterproof sail-bag—but 67-year-old skipper Marvin Creamer says: "God help the person who opens that bag".

—Staff Reporter, *The Cape Times*, 4/6/83

A vocal minority openly questioned our sanity when we announced that we planned to span the Indian Ocean in the winter

months. There were horror stories of frequent gales, capricious squalls, and wild storms often accompanied by snow and sleet. Bob Deacon, self-proclaimed professional seaman, compass adjuster, and RCYC member asserted, "You fellows haven't done your homework." He was certain that we had a death wish, shook his head every time we met and went on to give us a lecture on our foolhardy decision. When we protested that a summer crossing would expose us to tropical cyclones, equivalent to Caribbean hurricanes, we were told that they were a small risk compared to what we would face in the winter.

The consensus was that nothing in the 30,000 miles of sailing that I had done in crossing the Atlantic nine times prior to our arrival in Cape Town could have prepared me for a winter passage on the world's Southern Oceans. It was as though the six hurricanes, a neutercane, and countless North Atlantic storms were mild April showers compared to what I had resolved to plunge into. I wondered to myself if there wasn't a bit of territorial imperative involved. Was I trespassing on the locals' turf without paying proper respect to "their ocean?" Admittedly, I had not seen it in all its moods but I had arrived via the southern Atlantic. There was no doubt that most of the local sailors were unfamiliar with the north Atlantic, but how familiar were they with the ocean they were counseling me about? When I investigated, I found two who had crossed the southern Indian Ocean. One had skippered a yacht over it in the warm season and the only one who had seen it in winter got his view of it from the deck of an oceangoing freighter.

The informal advice freely offered in the clubhouse did prompt me to have another look at the **Pilot Charts**. Perhaps I had missed something poring over them from a distance of 8000 miles. A second examination revealed nothing to suggest that we should abandon our plan to make a winter crossing. The charts showed that on average we could expect less severe conditions on the Indian

Ocean leg than those we would encounter in the extreme southern Pacific and Drake Passage in the southern summer. If eventually we would have to endure the gales and high seas around Cape Horn, then the seas of the Indian Ocean would provide us with a challenging practice arena.

The problem that concerned me most about the next leg was the Australian landfall. At least one stop for water, repairs, and provisions was essential. Prudence dictated that our departure point for the Horn be as close to the Pacific as possible so that we could start out in good repair and fully provisioned. It was logical to choose a port in eastern Australia, either Hobart in Tasmania or Sidney on the mainland. However, I had a strong desire to see Perth and the surrounding areas. I studied the sky charts to make sure we would have reasonably bright zenith stars available for that latitude and navigation charts to see what our land-approach problems would be and decided that we could manage the lee-shore landfall provided we could leave Cape Town early and make good time across the Indian Ocean so as to arrive before the advent of seasonal gales. A landfall at Perth would have to be followed by a stop at Hobart or Sydney, so in making a tentative schedule we had to consider the length of our stay in western Australia and the conditions that would prevail in eastern Australia at the time of our arrival there. It didn't appear to be in the wood. However, a final decision could wait until we had a fair portion of the Indian Ocean behind us.

Another aspect of the Australian landfall problem was how to get around Tasmania. The shorter route lay north of the island through Bass Strait. But the 250-mile stretch of water is shallow and strewn with many small islands and rocky shoals. Accurate position information would be needed for safe navigation. Moreover, our passage would be in the long-night period of the year and at a time when gales are frequent. It had the potential for disaster. The alternative, going south around the

island, was hardly more palatable. To ensure making a landfall at the southern end of the island we could not afford to risk missing it by sailing too far south. That would have meant facing the wild west coast of New Zealand in a latitude famous for its winter storms. Our aim, then, would have to be somewhat north of Southwest Cape so as not to miss the island. Therefore we would be sailing toward a rocky, uninhabited coast stretching for 180 miles with only three navigation lights and only two inlets, both requiring local knowledge for safe entry. The decision was one that could wait and one that would be easier when we had a better idea of when we might arrive off the Tasmanian coast. That would depend to a large extent on the date of our Cape Town departure and that hinged on the time required to find crew and get *Globe Star* ready for the long passage. We needed someone who knew the “nuts and bolts” of sailing and who was familiar with the services available in Cape Town.

Our miracle man was Stanley Gordge, port co-captain for The Slocum Society, and member of the Royal Cape Town Yacht Club. The Society is named for Joshua Slocum, whose circumnavigation at the end of the nineteenth century was the first to be accomplished solo in a small (37-foot) boat. The Society appoints officers in various world ports to give aid to small-boat sailors in transit. The Cape Town captain, Konrad Eriksen, was hospitalized when *Globe Star* arrived, so it was his co-captain who intercepted me one morning shortly after our arrival while I was walking between the Wall and the clubhouse. He introduced himself and volunteered his services. Stan, a sailor, was thoroughly familiar with the Cape Town sailing scene and immediately became our adviser, companion, tour guide, and minister of transportation. He piled our bags of sails in his automobile and drove us to the sailmaker, to marine stores, machine shops, the post-office, supermarkets, the embassy, downtown, and dozens of other places dictated by our replacement, repair, and provisioning

schedule. He also found time to take us sightseeing and insisted that we see the Cape of Good Hope from the land side and the baboon colony nearby. I conjured up a vision of an apelike animal hanging from a tree limb with one arm and scratching its rib cage with the other. I was flabbergasted when Stan stopped and a nursing mother jumped to the hood of his car and peered at us through the windshield!

Preparations for the voyage to Australia included hauling, scraping and painting the bottom, repairs to the tiller and vane steerer, finding a way to secure two headstays so as to prevent damage to toggles, having a dodger made that would fit over the hatch without interfering with movement between cockpit and foredeck, sail repairs, and of course, stocking up on fuel, water, and provisions. The lack of nearby telephone and bus service kept our progress at a snail's pace.

Getting the vane steerer repaired took some doing. I was determined to replace the worn-through bushing cup with one made of stainless steel. It was frustrating trying to find someone to do what by industry standards was a job of minuscule size. Then there was the headstay-toggle problem. The toggles that ruptured one at a time on our “shakedown” cruise failed because the tangs they were attached to had been welded to the hull at an incorrect angle. Because the plane of the tangs did not intersect with the masthead where the opposite end of the headstay was secured, an unusual side load caused the toggle to fracture. The problem was not a fault of the original design which called for a single headstay but of my insistence that *Globe Star* be fitted with twin headstays. To accommodate two stays, a tang was welded on each side of the forward bow. One way of correcting the problem would have been to remove the original tangs and re-weld them in the correct attitude. I considered this but knowing how vital their strength was to the integrity of the mast and how difficult it was to find a

first-class workman to do a small job, I opted for a different solution.

The original design called for a single stay attached to a three-eighths-inch thick by four-inch wide piece of steel welded edgewise to the foredeck at the bow. My plan was to bolt a half-inch thick by six-inch wide piece of stainless steel to the original three-eighths-inch thick plate, leaving the new piece to stand two inches above the old so that the two stays could be attached to the stainless plate in a fore-and-aft arrangement. Not having the tools to shape the half-inch-thick steel, I made a mockup out of half-inch plywood and turned it over to a machine shop for duplication in stainless steel. Fortunately, I had on board enough half-inch, stainless-steel bolts to fasten the two plates together. The fore-and-aft positioning of the headstays was not as satisfactory as the side-by-side arrangement but any inconvenience was more than offset by the protection provided in the event of headstay failure and the capacity to fly twin headsails.

Another mechanical problem had to be solved. Two half-inch-diameter cap screws fastened the tiller to the fitting that capped the rudder post. These threaded bolts, one on each side, moved each time the tiller moved up and down. Although the bolt heads were secured with spring-type lock washers, the bolts worked loose to make play in the tiller-to-rudder connection. Frequent tightening was required and it wasn't difficult to imagine that somehow and under the worst conditions the joint might fall apart. Fortunately, James Gallagher, shop foreman for a large automobile agency, stopped by to say hello and offer the services of the agency's machine shop. We unshipped the tiller and its companion rudder-post fitting and hauled them off to the shop. The solution seemed fairly straightforward. We would through-bore the threaded spacer that held the tiller retaining bolts and insert a single bolt through the "U" at the end of the tiller, the rudder-post fitting, and the spacer. We planned to cap the five-eighths inch by five-inch stainless steel bolt with a special lock nut

to hold the assembly together. There was a slight hitch, however. Our measurements were in the English system and the Republic of South Africa had gone metric—a fact that we bumped into at almost every turn. Vendors were forbidden to sell gauges, rules, wrenches, bolts, or nuts made for English measure. We became very cautious handling fasteners from vital pieces of equipment for fear that a bolt or nut dropped overboard would render an item useless. In the case of the tiller bolt, we were lucky. A sixteen-millimeter bolt is only five-thousandths of an inch larger in diameter than a five-eighths inch one. We found one of the right length in a marine supply house and the necessary drill at the automobile agency.

An errant hatch was another item that demanded attention. I doubt that the most talented of practicing diviners could have foreseen that its repair would eventually provide us with direction in complete overcast on two separate occasions and save us perhaps as much as three days of sailing time. The stop on the forward end of the hatch was made of teak, a wood that splits rather easily. Constant closing weakened the stop and one day when the hatch was pulled aft, the stop split and the hatch flew into the rear of the cockpit. Because repair required removal of the sea-hood that enclosed the forward end of the hatch, I made a makeshift stop by inserting a right-angle piece of metal under the rear end of one of the hatch runners and delayed the stop replacement until we made port.

Plywood because of its resistance to splitting was the logical choice to replace the easily split teak. The only piece that I could find anywhere near suitable was a piece that had a very coarse-grained filler between the two veneer layers. It wasn't pretty but then it wasn't going to show. To prevent recurrence of the problem, I removed the wood screws that attached the old stop to the hatch's crossmember and secured the new one with through-bolts, washers, lock washers, and nuts. The split-proof stop came with a built-in, minor annoyance. When the coarse end grain of the

plywood sandwich ran along the stainless steel runners, it sometimes made a horrible screech not unlike fingernails raking down a blackboard. After we sailed with it for a while, it became apparent that the intermittent squeak occurred only when the air was dry. Humidity in the air dampened the runners, which provided enough lubrication at the sliding joint to stop the noise.

The first time the squeak provided direction was on the Pacific leg. We sailed into cloudy weather with good air, good direction, and a well-marked surface. Gradually the wind disappeared, as did the discernible wave and swell pattern on the water. We were not at all concerned because without wind there was no need for direction. Later, however, the wind picked up to a steady eighteen knots—ideal for sailing. Now there was frustration. We had been windless for half a day and had a strong desire to get moving. I sat, legs crossed, on my bunk searching my brain for a way to find direction when Nick Gill slid the hatch forward to come below. The screech all but exploded in my head. We had the direction we wanted. I called out to Bob Rout to set sails on the starboard tack and let her go. When the sky cleared a day and a half later we were right on course. We had gotten in some good sailing and had been spared the agony of watching good air go to waste. The explanation is fairly simple. Any air with a northerly component would have contained enough humidity to keep the sliding joint lubricated. When it squeaked I knew immediately that the air was dry and could have come only from a southerly direction. The south wind was ideal for sailing east.

Both Jeff and I felt that a dodger to cover the hatch was an absolute must for the downwind trip to Australia. I had asked Bob Patterson to outfit *Globe Star* with one before delivery but he protested that the aft end of the cabin top was too “busy” for a dodger. After many telephone calls and trips to machine shops, I found a manufacturer who agreed to have a look at the “busy” cabin top. It ap-

peared hopeless but the craftsman sent by the Albert Moore company saw how a frame could be fashioned to hold a canvas hood that Jeff and I described. The frame required several fittings, as did the canvas work done by the Mel Stephens company. No wonder Bob Patterson didn’t want to be bothered. In the end it was the dodger’s delivery that determined the date of our Cape Town departure.

Life along the Wall was anything but dull. On the land side there was the ship repair yard that always had a project going, usually involving large work gangs and heavy machinery. On the water side most of the Wall residents were long distance sailors who found the isolation and lower dockage fee (\$3 compared to \$10 per day) more to their liking. There was an assortment of personalities, a mix of languages, and a diversity of craft—among them a catamaran that had sailed in from Durban and a monohull that had come from Australia. When I was pinned down waiting for service representatives, I never lacked for someone to talk to. Immediately to our stern was a large sailboat being refitted by a man who had fled Southern Rhodesia. When his deck-mounted table saw was quiet, we would pass the time of day. When Jeff casually mentioned to him one day that we had found our way from Cape May to Cape Town without using navigation instruments, he asked, “Why doesn’t one of you learn how to use a sextant?”

The hauling and bottom painting process turned out to be a real production. There was only one yacht-size marine railway to serve the entire area and it had to be booked weeks in advance. We were informed unequivocally that time on the ways was limited to twenty-four hours. The best advice that I could get from paint companies was to wash, scrape, and sand the underwater body, wait until it dried, then apply a barrier coat of aluminum-base paint, wait for six to eight hours, and then apply a coat of anti-fouling, bottom paint. What sounded like a week’s work had to be done in a day’s time. Even if each operation could have been accomplished in an instant it

seemed an impossible task. But we had to make a stab at it. *Globe Star* was carrying quite a speed-inhibiting load of marine growth and anything we did would be better than doing nothing.

The sky was threatening as *Globe Star* rose slowly out of the water but rain held off while we washed, scraped, and sanded. The hull was barely dry when Jeff and I started the barrier coat. We were about half finished when the rain came. We were done for the day. I hated to think of trying to sail without a barrier coat and without anti-fouling paint. I appealed for special dispensation and was grudgingly granted an extra day. Fortunately there were only a few sprinkles the next day and Jeff and I managed to finish the job. When *Globe Star* slid back into the water I wished we could hoist sails and just keep going, but there was more to be done. I wished again. This time it was for the generous volunteers who had prepped *Globe Star* for an 8000-mile voyage in just three weeks.

About seven years before our arrival in Cape Town, I had begun a correspondence with John Hartmann of Welkom, a city 650 miles northeast of Cape Town. We were introduced by Ed Behm, a colleague of mine at Glassboro State College, who had met John while touring South Africa on a Rotary Club fellowship. When John expressed an interest in buying an American-made yacht, Ed suggested that we correspond with each other. By the time I sailed, the dollar had appreciated against the rand and John had looked elsewhere for a sailboat. Even though he lived somewhat distant from Cape Town, our only planned port of call in South Africa, I thought I would write to let him know that we were scheduling a stop in his country. I never got a letter off so it came as a real surprise when we returned from a sightseeing trip with Stanley Gordge to the Cape of Good Hope and a baboon reserve to find a note from Mr. and Mrs. John Hartmann. Just by coincidence they had been staying in a Cape Town hotel when our picture appeared in **The Cape Times**.

I have yet to meet John although I talked to him at length both from South Africa and Australia. He was excited about our experimental voyage and expressed a desire to join us in Australia for the passage around Cape Horn. When I called him from Hobart, the timing was wrong. He had business obligations that he couldn't leave. I did, however, meet Mrs. Hartmann and their son Mark. They invited me to lunch at a luxurious hotel restaurant where the style and variety were in sharp contrast to shipboard dining. As she dropped me off at the Wall, Mrs. Hartmann said her cousin would be getting in touch with me and she did.

A few days later Chris Neethling, a Cape Town insurance consultant, appeared at the wall and invited Jeff and me to a Sunday "braaivleis" after explaining that his wife Leo (Leonora), who at the time was the only woman judge on the Supreme Court of South Africa, was a cousin of Faith Hartmann. The Neethling's Sunday barbecues were held on their backyard lawn as weather permitted. The hillside setting provided a breath-taking view of Cape Town and its spacious harbor where with effort we could see *Globe Star* as a distant speck. Jeff and I became "regulars" while we were in Cape Town. Leo's mother, Max (Maxine), often present, took a motherly interest in me and let me know when she thought I was going too light on food or sleep. Max and her husband, F. P. ("Toon") van den Heever were pioneers of African aviation. In 1938 they bought a Hornet Moth in England and day-hopped it to South Africa. At 82 she was full of life and a delightful conversationalist. Other guests at the Sunday "socials" included other Neethling family members, artists, writers, and dignitaries who were always primed for vigorous discussions of many interesting topics. Each weekly event had the atmosphere of a turn-of-the-century chautauqua and provided Jeff and me with a stimulating contrast to our daily hands-on existence along the Wall.

We were guests of the Neethlings on other

occasions. Because it was filmed in Australia they thought we would enjoy seeing the film "The Man from Great Snowy River" and we did. Jeff, who had played rugby at Washington and Lee, was delighted when Chris invited us to a league game. It was my first and probably my last.

A concert by the Cape Town Symphony was more to my liking. We sat in steeply tiered rows immediately behind and above the orchestra and thus got an up-front view of the conductor's facial expressions while he directed vigorously with his hands, arms, and baton. It was a new experience peering over the shoulders of the musicians. I was especially fascinated by the playing of a French horn player whom I later ran into in the city library. He was looking at a map of the United States and when I asked him if he was planning a trip he told me that he was one of many Americans scattered among orchestras around the world. He explained that American universities turn out many more highly qualified musicians than can find jobs in the United States so rather than turn to another vocation they seek employment outside the country.

Thinking that we might reciprocate in a limited way, Jeff and I invited the Neethlings and their friends Jan and Emma Smit for a Saturday sail in Cape Town harbor and an American-style picnic lunch. The weather was far from ideal. The day was cold, damp, and overcast. There was not enough wind to keep the sails full as *Globe Star* bounced over swells generated by some distant storm. Lest the motion diminish our guests' appetites, we cranked up the engine, made a shortened tour of the harbor, and returned to the Wall. We served rolls, cold cuts, cheese, Campbell's baked beans, deviled eggs, potato salad, hot tea and coffee, and sodas. The potato salad, one of my specialties, was made with mayonnaise, diced boiled potatoes, chopped olives, sliced sweet and dill pickles, and sprinkled liberally with small chunks of freshly boiled ham. The meal was no match for the Sunday

feasts but our guests were gracious. Mrs. Neethling remarked as she finished eating, "Marvin, you could win a bake-off with your potato salad."

One day a note appeared in the mail that we picked up at the clubhouse asking me to get in touch with Mike Dooling, a graduate of Glassboro State College. When I called I discovered that he worked for an American firm building an electrical generating plant in the Cape Town area and lived relatively close to the RCTYC. Before we left Cape Town, Jeff and I spent two very pleasant evenings getting acquainted with the Dooling family and feasting on Rita Dooling's gourmet cooking. Both of the Doolings had grown up in southern New Jersey and spoke with a very familiar accent. When Mrs. Dooling and I discussed grocery shopping compared to home, she said the one thing she missed most was Bisquick, especially for pancakes. I just happened to have some on board and so later invited them and their two children for a Sunday pancake breakfast.

We were befriended also by Tony and Eileen Walsh. He was a retired army officer and Eileen worked for the Canadian embassy. Tony not only provided us with much-needed local information but also much-needed and much-appreciated transportation. A leisurely Sunday dinner at their apartment provided one more slant on life in Cape Town. From time to time there were other extensions of hospitality that made us feel welcome during our temporary stay in South Africa. One embassy worker invited us to dinner and another shared a huge supply of fast-acting Swiss yeast that was real dynamite for getting bread dough to rise.

The day we arrived in Cape Town immigration officers told us that they would notify customs of our arrival but customs officials did not show, so after a week we took our yellow flag down. A month later when I saw two customs officials checking in a French yacht that had arrived from Antarc-

tica that morning, I asked why we had been ignored and they almost had a stroke. I was curtly informed that I had been lax in my responsibility and that I was liable to a severe fine even though it was the South African authorities who had goofed. I wasted some shoe leather and half of the next day being interviewed, filling out forms, signing statements, and cooling my heels getting it taken care of. Theoretically, at least, I could have been fined \$370. It was my good fortune to be let go with a warning. The admonition came from the chief customs officer, whose sense of humor was in sharp contrast to that of his subordinates. He strongly advised me never again to walk around Cape Town alone on a Saturday or Sunday afternoon!

Lee Houchins, our Washington coordinator, arranged for us to exchange our dead transmitter for another furnished by the United States Coast Guard. He also arranged for their transportation via diplomatic pouch which called for numerous trips to the embassy and dealing with a volume of paperwork, but it did give a small boost to an all-but-depleted exchequer. I regret to say that we could have saved our energy. The problem with the original transmitter was battery failure and apparently the batteries in the exchange one were not checked before shipment. They lasted only four days out of Cape Town, leaving our track across the Indian Ocean unmarked and our supporters at home wondering about our whereabouts and our safety for the ten weeks that it took us to make the voyage.

Getting crew for an ocean crossing is akin to getting volunteers for a charity fund drive. If it's next year refusals are rare but if it's next month or next week the nays prevail. George Baldwin had signed on for the first leg only and both Jeff and I felt strongly that a third man was an absolute must for the tough passage ahead. Blanche got in touch with everyone whose names I had collected. Some had expressed a preference for the

Indian Ocean leg, others for the Pacific leg or the final leg in the Atlantic. She even made up a list of her own but could find no one willing to give it a try. Meanwhile, I was scouring Cape Province for a warm body. One choice was a mercenary who had been employed by an upcountry farmer to rout poachers. He had not sailed but looked rugged enough and expressed a willingness to learn. I was tempted to sign him on but had nagging reservations about a man who made his living hunting other human beings. I guess I wondered whether at some future date I might become the quarry. Stan Gordge would have made an excellent choice but as he wrote to Blanche, "I did contemplate going along but 'no-instruments' is not up my alley!"

The most promising prospect was a young man who planned to enter South Africa's Merchant Navy Academy in a few

...sea-dog Creamer has no qualms. He said: "We left New Jersey, my hometown, on December 21 with the temperature below freezing and the decks were thick with snow.

"We didn't have time for a shake-down cruise and had to get away before the water in the tank froze.

"We traveled without instruments to South Africa and now intend going to Australia, back to Cape Town and then back to New Jersey.

"This will mean a journey from New Jersey and back of about 30,000 miles—all without navigational aid."

The weather-tanned old man of the sea grinned as he said: "I've crossed the Atlantic six times without instruments and feel I can get around a bit now in spite of my age."

He looks 15 years younger, scrambles aboard the vessel at speed, and is proud of his ship's company of two.

—Staff reporter, *The Argus*, 5/24/83

months. We both agreed that the open sea experience would provide a valuable background for his candidacy, but in the end he declined. He expressed concern about getting back to Cape Town in time to begin classes at the Academy, but my thought was that he had been influenced by the doomsayers. However, the time we spent with him was not in vain. At a party he told nineteen-year-old Canadian adventurer Rick Kuzyk about our voyage and need for a crew. Rick showed up the next day to get details. He said later that he chose to sail with us rather than crew on a multi-hull headed for Brazil because we had a better sense of humor.

That Rick had grown up on the Great Plains at Lloydminster, Alberta, and had never been on the water in anything bigger than a canoe didn't bother me at all. He was short, stocky, and mentally tough. He had worked a forty-hour week in a supermarket during his four years of high school and when he graduated at eighteen he traded a large chunk of his savings for travelers checks, bought a round trip air ticket to London, and set out to see Europe via his thumb. When he arrived at the RCTYC dock, where we had moved to load up for the Indian Ocean assault, it was obvious that he was healthy, strong, keen, and had a real zest for life. Not only had he kept his perspective while hitchhiking the width of Europe and, except for a short distance, the length of Africa, he had retained most of his travelers checks. My only question about him was whether he might be a "seasicker." After watching three different crew add a daily measure of "jet propulsion" to our progress across the Atlantic, I was leery of signing up anyone without documentation of his ear-to-stomach relationship. The dodger had taken far longer than we expected and southern winter was at hand. We couldn't afford the time to conduct "sea trials." Rick was willing to chance it and so was I. I could-

n't believe that Rick, who seemed to personify self-determination, would not find a way to slough off any incipient *mal de mer*.

On May 26, 1983, I wrote to Blanche: *In spite of showers, we will probably leave today. I have just finished clearing formalities. You will get several Visa slips (Jiggly because I am riding in Stan Gordge's car). (Later) Gave up trying to write in the car and leaving too. Drizzly rain showers cut visibility to zero at times.*

The dodger was delivered yesterday and I wrote a check for \$200 to pay for it. Quite a hassle getting the exchange worked out. The company would not take Visa. Jeff says it would have cost two times \$200 at home. It should be a real blessing [sailing] downwind in the rain. All bills are now paid except I have to give Stan Gordge a sizable amount for all the ferrying he's done for us. This place has been awful for moving around with packages. It's about a two-mile walk from town and stuff gets awfully heavy.

I'm a bit weary from tramping around in the rain getting some last-minute items, dealing with red tape, etc. Life should be a little easier when we get out to sea. Loaded up with nearly \$500 worth of food, \$90 worth of fuel, and some miscellaneous items that we need. All our cocoa mix was gone so I made up two gallons of stock this morning. By volume I used 1 part cocoa, 2 1/2 parts sugar and 6 parts powdered milk. I served it at lunch today and got compliments so I guess it was O.K. Sure missed you making up lists and buying.

Rick moved in today and is sleeping while I write this so I can't use the only decent light we have left—it's over his bunk. The chart table light is too dim and our two galley fluorescents were killed by salt water.

Then the next day: *In spite of clouds we're going to leave today. The Doolings [and Stan Gordge] are here to see us off.*

Chapter 9

Winter on the Indian Ocean

Shortly after positioning *Globe Star* for goodbye pictures snapped by Mike and Rita Dooling on one seawall and Stan Gordge and Dick Young on the one opposite, we motored out of the harbor past Robben Island and began rolling under a downwind rig on our way to Cape Agulhas at the extreme southern tip of Africa. Rick's face took on the color of the pale green coastal waters and Jeff was nursing a severe head cold. Moreover, the calendar read Friday, May 27. It was not an auspicious beginning.

It was the second time I had started a major ocean voyage on a Friday and thus twice flown in the face of a longstanding sailors' taboo. I remembered leaving Horta in the Azores and wondering why all the sailboats came alive with horns and waving arms as we left the harbor. At the time I thought it was a tribute to two over-the-hill college professors setting out to double-hand their way across the Atlantic but later realized it was probably because we had defied tradition. I was puzzled why Jeff, who had really been pushing hard to get going, was all of a sudden finding all kinds of reasons for not leaving until Saturday. It didn't dawn on me what the real reason might have been until we were well out to sea.

Although it may seem hard to get excited

about a trip that begins at five miles per hour, there is a certain exhilaration that comes at the start of a lengthy voyage. In this instance seven thousand miles of ocean lay ahead—twice the width of the North Atlantic and according to the locals we were starting at the worst possible time. We needed the shot of adrenalin our glands produced on cue to keep us alert while we paralleled a rocky and dangerous coast before making a sharp turn to the east. Standing free of the land brings a deep satisfaction. You are finally doing what you have spent weeks, perhaps months or years, preparing for. But by nature sailors are a restless lot. On land they have a single-minded urge to get back to sea and when they get offshore think constantly of returning to land. The most enjoyable parts of any long voyage are, therefore, the beginning when you are flushed with the glow that comes with finally getting off and the end when you are pumped up by the impending landfall.

When a new crewman comes aboard there are always two big questions: "Can he stomach the boat's motion?" and "Can he stomach the food?" My journal for Saturday indicates that, *Rick slept well and got over what little queasiness he had yesterday...* And on Monday I wrote, *Rick is definitely not a seasick! He survived a wild night of building*

seas rolling downwind in good shape.” As to the second question I soon found that Rick did not have to be coaxed to express an opinion. Our second dinner at sea comprised grilled cheese sandwiches, boiled cabbage and potatoes, apple salad, and pumpkin bread. The next day Rick, without prompting, allowed as how he was not thrilled with the cabbage. There had been a drought in South Africa and there was a dearth of suitable vegetables when we did our provisioning. Cabbage was one of the few available in the markets. I had tried it out on Jeff in port and he agreed we ought to put a quantity of it on board. It was without doubt the best cabbage I had ever found. The heads were not too large, the cores were small, and the leaves were mild-flavored and sweet. What to do. The following night I added a sprinkle of chopped apples and nuts to finely cut cabbage leaves mixed with salad dressing. When I asked Rick later how he liked the cabbage, he protested, “We didn’t have cabbage.” My concern about a finicky appetite was premature. His aversion was to boiled cabbage not cabbage per se. In fact he ate the dressed up raw cabbage with “relish” and nearly everything else with tomato ketchup or the spices that he had brought along. He was not a fussy eater. He had no difficulty managing his share of the Neethling’s rusk, Rita Dooling’s pumpkin bread, and Peggie Meek’s fruit cake nor anything else served on the entire leg. What appeared to be his sole dislike was uncovered at the very outset.

At first Rick sat with Jeff or me on our watches but it wasn’t long before he had learned to interpret ships’ lights and how to handle Globe Star in heavy, following seas. He soon got the hang of watch duties and could judge accurately when he was ready to take on a new responsibility.

Just before sunrise on June 1, I saw the so-called “*green flash*” and was reminded of a discussion, both spirited and ongoing, recorded in one of the yachting magazines about the phenomenon occasionally seen at sea. It

occurs when the sky is free of clouds and haze and appears as a flash of green just as the upper limb of the sun disappears at sunset or just before the upper limb comes into view at sunrise. One of the writers was absolutely certain that the green flash existed only in the eye of the beholder as a negative color after-image. If I had had time to pursue the matter I would have written in asking how he could explain the occurrence of the green flash before the red rim of the sun showed on the horizon in the morning. Would the explanation be that this is a negative color before-image? So far as I know there is no agreement on the cause of the green flash, but there is no doubt that it is worth watching for. The beautiful green blip is a real gem.

As we worked our way across the shallow and notoriously turbulent waters of the Agulhas Bank and eastward into the Indian Ocean, we were alternately battered by gales or beset by calms. On June 3, I wrote, *Gales about 45 knots, seas 25 to 30 feet. Downwind under bare poles is most uncomfortable... One wave sent me, opened eggs, loose tea, oil and coffee jars, etc. sprawling into the chart table and my bunk (quarter berth). What a mess!* And again on June 5: *Very warm day. Am writing this one hour before sunset in my T-shirt. Moderating north wind is making a*

Marvin Creamer is missing at sea—again...

A transmitter on board the Globe Star... failed on June 1, just six days after he left Cape Town, South Africa, for Australia...

“It’s too bad,” (Blanche Creamer) said from her home in Pitman. “I can live with it, but I just think of the way Marvin and his crew are going to feel. It’s so depressing for them to think their loved ones back home don’t know where they are.”

—Joseph Tanfani, *The Press*, Atlantic City, NJ 6/25/83

somewhat lumpy sea. Beam reach has been relatively dry and comfortable in spite of thirty-knot winds and fifteen-foot seas. Jeff made lemonade today from lemons brought to us at Cape Town by Jan and Emma Smit. June 6: Almost a dead calm today in a heaving sea. Rolling does not seem too bad, however. Only a few scattered clouds all day—a real shirt-sleever. Rick and I performed ablutions in the cockpit. Hardly a goose pimple in the warm afternoon sunshine. June 7: Jeff repaired the storm jib in pm... Light air conditions prevailed until c.midnight. June 8: Winds light in the afternoon and dead by early morning hours... Looked in the refrigerator this morning and discovered why there was a foul (fowl?) smell coming from it. A smashing wave on June 3 had dislodged an egg and broke it in the cube tray of the fridge. The whole box had to be emptied and cleansed, then all items washed, dried, and returned. It took three of us three hours to get the job done. Fortunately the weather was fairly calm so that nothing went flying.

As we worked our way southward, dealing with heavy air and high seas became a way of life. On June 9, I wrote, *Globe Star is bouncy this morning. A 20-knot wind on the port beam is making for a quick motion down below. After warning Rick to be careful, I lost my footing and banged my head (and glasses) on the molding above the chart table. Ouch!* And on June 10: *Seas at noon are c.20'... Heavy rain squalls during the night... Sailing downwind in heavy air again. No matter how well things are secured, something manages to get loose to slide back and forth [as we roll from side to side] or play a tattoo against a locker.* June 11: *Winds increased during the [previous] afternoon and evening hours. Down to bare poles c.1800. Some damage to the working jib as a result of gybing in heavy seas and heavy air. Hand steering necessary during the 24-hr period... Max. winds (sustained) c.45k, seas 40'... Down wind under bare poles made sleeping tough. On watch green water came aboard occasionally with hydraulic force*

driving into a closed hatch and tightly buttoned rain gear. One wave drove salt water up my nostrils! Spent the day trying to get dried out. Oriental King [Japanese tanker] surprised Jeff on watch this morning getting alongside and blowing before he noticed it. It was really wallowing in what we judged to be 40-foot seas.

Getting adequate rest is difficult in good weather and in heavy weather next to impossible. There was a real trick to falling asleep as *Globe Star* rolled incessantly from side to side going downwind. Your thirty-inch-wide bunk seemed as wide as a double bed even though you were constrained by the cedar strips on one side and canvas lee cloths on the other. Even with the narrow width, it was necessary to bend at the waist and thrust your back against the cedar lining and your knees into the canvas to wedge your body into a position that would resist the lateral “G” forces. The best approach was to become aware of how close you were to dropping off and rehearse tensing and relaxing in rhythm with the boat’s rolling motion. With practice you learned to slip quickly into the arms of Morpheus when the boat was level between its port and starboard motions. After that the tensing and relaxing became automatic as you slept.

I spent a lot of my time preparing and serving meals. Food not only sustains life at sea but is a vital factor in maintaining morale and a sense of well-being. It is an effective antidote for the wet and chilling conditions of winter sailing. My appetite was good and Jeff’s and Rick’s even better. Jan and Emma Smit had brought us a good supply of lemons just before we left Cape Town. These added an extra dimension to our diet. Jeff used them to make lemonade and I used them to make lemon butter to top off a sponge cake and as an ingredient in salad dressing. My first sponge cake was close to disaster. My journal for June 6 shows that I *tried [making a] sponge cake from memory. Unfortunately, neither was too good.* The bread that I baked the next day turned out much better. It was the

first made with South African flours—white and whole wheat—and the special Swiss yeast (Fermi) sent to me at Cape Town by Sheila Dumas of the American Embassy. The yeast was a fast-acting variety that brought the dough to baking size in no time flat. On June 7 I wrote, *Made a special salad for dinner—cabbage, apples, almonds, carrots, and lemon juice. Main course: chicken and dumplings.*

Some cooks like to use a body restraint when working in the galley but I never felt comfortable with one. I did find it necessary, however, to use my left leg as a brace against the companionway steps to prevent being thrown around the cabin. The practice led to what I referred to as one, two, or three-step meals. In moderate conditions I put my left foot on the bottom step of the ladder and as conditions deteriorated my foot went alternately to the second or third step. Breakfast prepared in the forty-foot seas of June 11 was a three-stepper. I wrote in my journal, *Some acrobatics were needed [this morning] to make pancakes and fry eggs in the heavy seas.*

By June 13 the butternut squash we bought in Cape Town were in danger of spoiling. I expected to serve them as a cooked vegetable but ran into heavy consumer resistance. Why not use them to make a pumpkin pie? I had vanilla and cinnamon but no nutmeg. How would it taste without nutmeg? And without a cookbook could I come up with a recipe for the filling? And what about the crust? The first and last pie I had ever made was on a camping trip to Florida in 1938. I used an army mess kit for a baking pan and baked it in a sheet metal, collapsible oven over a two-burner gasoline stove. The raisin filling was fine and although the crust looked picture-perfect it was almost as tough as the proverbial shoe leather. Back in New Jersey, I held a postmortem with my mother who told me that I had "fooled" with the crust too much. On June 13 I entered in my journal: *Used eggs, milk, and sugar [plus cinnamon and vanilla] in the filling and tried 1/4 cup*

oleo, 1 cup flour, & 2 tablespoons salt water [from the ocean] plus a little extra salt for the dough. I combined the oleo and flour by cross cutting them with two knives and instead of rolling the dough, I just patted it into place on the bottom and sides of the pie tin (bought in Cape Town)... Jeff wasn't thrilled to hear I was baking a pumpkin pie but said later it was because so few people know how to make them and remarked, 'Why, that would be a good pie even on land!' We ate half of it for dinner and the remainder was gone by sunrise next day. My mother, I'm sure, would have been proud of me.

On June 20 I recorded, *Made spaghetti for dinner. Jeff said, 'This is tops,' and Rick said it was the best he ever ate and would like to take his mother the recipe. And on June 25: Fell back to an all-white flour recipe this morning so that the bread would not be too crumbly for the grilled cheese sandwiches planned for dinner. Served the sandwiches with Campbell's Chunky Vegetable Beef soup which made a good hot meal on a miserable night.*

On June 26 we decided to head directly for Hobart in Tasmania at the southeastern tip of Australia rather than put in at Perth in western Australia. Our rate of advance showed that going to Perth before making for Hobart would require sailing down on the rocky coast of Tasmania in a much stormier season. **Pilot Charts** showed that on average both the frequency and intensity of storms increased as the southern winter deepened. We knew the west coast of Tasmania was treacherous and felt that without knowing at what moment it might appear we had best approach this lee shore as soon as possible. Six days later I wrote, *Fairly heavy rain yesterday—the largest amount since we left home in December. Cool air from the north (usually cool air came from the south in the southern hemisphere), prions, seaweed, and a particularly choppy sea made us wonder if we are near western Australia. We are altering course to move fairly quickly into the latitude of Tasmania so as not to enter Bass Strait if we are farther east than our daily log*

indicates. Got a good look at epsilon and mu in Scorpius last night. Fifteen-foot seas didn't seem to present much of a problem. Am beginning to keep an eye on theta Scorpii and Ankaa for latitude-finding near Tasmania.

As we worked our way southeastward into higher latitudes the weather worsened. On July 3, I recorded *Drifter and easy sailing yesterday; staysail only in gales today. C'est la vie!* July 4: *Heavy gale during the night. We had a minor flood in the cabin which soaked my bunk mattress.* July 5: *Heavy gales today. They got underway about 0300 and at times reached sixty knots. In mid-afternoon we are rolling from side to side going downwind under bare poles at about five knots. We are rapidly approaching the latitude of Tasmania and are hoping the July **Pilot Charts** are right in showing an area of diminished gales along its western side.* On July 6 I wrote: *Period marked by successive squalls and an occasional combination of rain, hail and sleet... We are seeing more prions and fewer albatrosses and wonder if this could be an indication that we are nearing Tasmania. In order to keep a better lookout at night, we have started a two-man watch system. We had quite a hail—sleet storm this morning. There was enough slush on the bridge deck to make two good-sized snowballs. We put the storm jib up at noon after going more than a day with bare poles. We are not terribly uncomfortable in spite of 40k winds and 40-foot seas. The wind makes watch bitter, especially for the hands with wet gloves. There is no inclination to light the cabin heater, however, as that would make us sweat up our heavy clothes before we could get outside. At times we can see our breath in the cabin but we keep warm with our layered Helly-Hansen.* And on July 7: *[Used] Working jib on the starboard tack in gales for the period. Rigged inside steering this morning because of the cold and wet in the cockpit... We are trying to work our way south to avoid a lee shore on Tasmania but are barely able to maintain our latitude. Started using our inside steering station. It makes the galley a bit*

crowded but beats getting drenched in the bitter gales in the cockpit. Jeff felt a little queasy this morning and was spelled for extra rest.

By July 8 the weather had eased: *Triple-reefed main added to storm jib after dark. c.0300 changed to double-reefed main and added staysail. After daylight replaced storm jib with working jib... We are drying out and resting up today after three strenuous days of gales. It has taken us a while to adjust to the two-man watch at night and to the somewhat shorter daylight period as we move farther south. Jeff and Rick are steering from the cockpit today under subsident, cloudy skies but considerably warmer temperatures from the past several days. I told Jeff this morning he looked funny without his ski mask. Cabin is pleasant today with the hatch open. Oven is going. I baked a loaf of bread earlier and am now baking supper—baked potatoes and Spam.*

The next day I wrote, *First time for writing up log and journal after dark. Caught up on sleep this afternoon. Have been falling a little behind because of the two-man watch system and the extra work involved in gales and low temperature.*

During this period, wrestling with the helm became a way of life. We planted our feet solidly on the opposing cockpit bench and hauled against the tiller until our arms felt as though they would fall off. For relief we tried using vang tackles which required constant adjustment of the line running through the cam cleat. Sometimes we would secure a line to the tiller and then take a few turns around the jib winch so that we could pull with the ratchet to bring the tiller to windward and then loosen the coil to allow the tiller to return to leeward. Jeff and I found that by sitting on the leeward side of the cockpit, we could steer by pushing against the tiller with our feet, thus resting our arms. The method worked best in the heaviest weather but that was when the most dollops came flying into the cockpit. At times it meant facing a continual barrage of cold salt water but at least it afforded a respite from the relentless tugging required to hold Globe Star from head-

ing up into the wind. When I crawled into my bunk after a five-hour stint, the fingers of both hands were so numb that I could not feel the fingers of one hand by grabbing them with fingers of the other. Every night I'd poke them against my abdomen to make sure they hadn't fallen off.

As time passed steering became increasingly difficult. We were moving southward into the "roaring forties" and day by day approaching the depths of winter. Consequently, gales, squalls, and high seas struck with greater frequency. For the most part the seas and winds were dead aft or on the quarter which called for a lot of tiller action to hold *Globe Star* on a downwind course in seas sometimes as high as forty feet. The physical strain of pushing and pulling to prevent backwinding sails and what could be a disastrous broach was matched by the mental stress of deciding which way to push or pull. Not only did the helmsman have to anticipate from the feel of the helm as a pooping wave slid under the keel whether the boat was about to lurch to port or starboard, he had to be engaged in a continuous second-by-second process of deciding which way to steer. In the daytime integrating and responding to directional clues picked up from the sun, the sails, the telltales streaming from the shrouds, the vane of the self-steerer, the waves, and distant clouds became second nature and now and then allowed the helmsman to lapse into relaxing reverie. However, the threat of gybing during stormy weather or at night, especially in storms, called for a constantly alert helmsman ready to react to a constantly changing set of conditions. On overcast nights directional clues were meager indeed, often limited to those provided by the vane or cheeks of the face or *glutei maximi*. In warmer waters some sense of direction could, on occasion, be garnered from the bioluminescence that outlines wave crests at night, but for the most part steering under cloud cover at night gave full body to the expression "seat of the pants navigation." A five-hour stint in a gale left you in a

state of physical and mental exhaustion.

Sails had to be selected and set in accord with the wind conditions (direction, speed, and gustiness), the surface conditions, and the desired heading. Often after a wind shift, the sails set for the new wind direction and speed would respond accordingly but the hull would still be reacting to a sea state generated by the previous wind conditions. While the sails and rigging were driving the hull in one direction, the water would make a stab at propelling it in another. Every once in a while the helmsman could not react fast enough and the head sails set for downwind sailing or broad reaching would gybe. Most of the time the problem was easily corrected but sometimes the excessive strain put on a sail brought damage that had to be repaired before it could be used again without danger of destruction.

Jeff, without being asked, took full responsibility for sail maintenance. It was a real joy to watch him go to work with sail cloth, sailor's palm, needle, and thread. When he was finished the neat patches and reinforced areas became the sail's merit badges for a job well done. However, much to Jeff's consternation the sailmaker in making up the sail repair kit had overlooked one important item—replacement grommets for the luffs of the headsails. A finished grommet provides a metal-reinforced eyelet for attaching hooks that fasten headsails such as jib and genoa to the forestays. Grommets come in two pieces and are mated through the leading edge of the sail with a swaging tool that curls the tubular metal of one piece against the washer-like ring of the other. Reversing the process is a seemingly impossible task but sails vital to efficient sailing were going to lie idle if a way were not found to salvage grommets that had been torn out by a violent gybe and insert them into patches sewed into the sails' luffs. Metal-working assignments were mine so I fell to with utility knife, screw driver, pliers, hammer, and tapered driftpin. The curled brass lip had to be lifted slowly and carefully so the thin metal would not be torn and ren-

dered useless. As it was being lifted, it had to be reshaped gradually toward its original tubular form. It was not only difficult but nerve wracking. One false step could knock out a sail for the rest of the leg. It took about a half day to do the first one and I could not have been more pleased.



A sailmaker on board: Jeff Herdelin makes much-needed sail repairs south of the Great Australian Bight.

I often thought of Benjamin Franklin's observation: "A little neglect may breed mischief; for want of a nail a shoe was lost..." It was especially apropos when the second bilge pump packed up. Bilge pumps prevent flooding that could damage the batteries, alternator, and even the engine. The automatic pump, operated by the boat's batteries, was written off early because of its unreliability. We carried spare parts for the manual pump but I couldn't believe any part in the ruggedly built device had failed. When I tore it down, I found that a toothpick stuck in one of the valves had completely disabled the pump. "For want of a nail..."

Maintenance tasks came in a considerable variety as shown by entries in my log and journal. June 6: *Main halyard winch drive shaft broke. Shaft replaced in late afternoon.* June 14: *Am trying, today, to make a bearing (from epoxy) for the eggbeater that Pat Zee gave us. Rigged up a super-strong trolling line*

after losing the 4th lure two days ago. June 23: (Made) temporary repairs to heater locker door. Rick fell against it last night when the boat lurched. June 27: Repaired the aft galley stove burner this morning. The pricker had broken off in the jet... Made a drying rack (for gloves, etc.) this morning by clamping a mesh bag under the bubble.

July 10: ...this morning we got after the vane, which has not worked since Cape Town, found a loose screw and got the vane going again. Jeff bolted down the table—it had worked loose. I repaired the damaged whisker pole, and planed down the head and fo'c'sle doors so they would close without binding. July 19: Repaired on a temporary basis the clutch in the self-steering vane... July 22: Big to-do yesterday when we got water in the galley stove tank by filling from a 15-gallon drum we have carried on the deck since Greenwich. Got the water out by pressurizing the tank and letting it flow out of a dismantled burner. It put one burner out of commission, however. I had spaghetti sauce made (with buffalo meat) and the water nearly hot enough to cook the spaghetti. When it looked as though we wouldn't get the burner repaired, we tried cooking the spaghetti in the hot water but to our surprise it just melted away to nothing in a milky mess! Finally after saturating the cabin with alcohol and kerosene fumes (I think I relighted the burner 100 times!) we got the burner to work and made chile con carne out of the sauce. Rick was disappointed but the chili was good. And on July 26: ...repaired the stove burner knocked out by water in the kerosene, and took apart a grommet to reuse on the working jib...

The continuing problems with the stove burners created by the inadvertent introduction of salt-water-contaminated kerosene into the stove's reserve tank reminded me of Franklin Roosevelt's story of the man who bought a boomerang and spent the rest of his life trying to throw it away.

On August 3, I wrote: *Got after the galley stove burners this morning. They were still plugged with salt water, rust, etc. After a 2 1/2*

hour stint, they seem to be O.K. But they were not. Malfunctioning burners plagued us for at least another 9000 miles. It's hard to believe that the salt water that did the burners in entered the fifteen-gallon jug via a tightly screwed down and gasketed lid. Such is the hydraulic power of crashing waves.

*It is rare in the westerly wind belt to experience two comparable sailing days back to back. The wind changes speed and direction, the surface responds to local and distant atmospheric turbulence, and the sky varies from clear to cloudy to completely overcast. An occasional day of good sailing is bound to stand out. On July 10 I observed, *This afternoon we are running downwind smartly—about six knots—and quietly with the vane doing an excellent job of holding us almost dead downwind but an overcast sky prevents us from knowing with certainty what direction we are sailing. We presume about a little north of east.**

*Drizzle began to accompany the gales in mid-July. On Bastille day I wrote, *The temperature has risen somewhat so that we no longer see our breath... but there is dampness everywhere. My clothes, mattress, sleeping bag, and pillow are sodden. Two days later: ...drizzle and very poor visibility since yesterday afternoon. Stove burners are not working right... Put extra pressure in the tank and got enough heat to make a loaf of bread. Great for morale on a dismal day. And on July 17: We're having a succession of drizzlers! Everything is damp or just plain wet. Not from leaks, however. For the most part the cabin and fo'c'sle don't leak. What a pleasant change from previous boats! We bring the water in on our boots and foul weather gear.* It was about this time that we formulated a bit of advice to would-be sailors by paraphrasing Harry Truman's caution regarding staying out of the kitchen, "If you can't stand dampness, stay out of the ocean."*

Tension mounted as we continued eastward and our dead-reckoned longitude, deduced from estimates of speed based on observation of our wake, approached that of

*western Tasmania. My journal for July 22 reads, *Big excitement in mid-afternoon when Rick spotted a plane flying back and forth over the water north of us. It flew back and forth (east and west) for about 20 minutes and then zoomed into the sky headed east and disappeared into the clouds. We presumed [mistakenly] it was headed for a Tasmanian airport and was killing time waiting for a storm to clear. July 24: We have been in gales all day yesterday and so far today (c.1300). It is dark, it is raining, and the visibility is poor. And we are as gloomy as the weather. Ouch, about a gallon of water just came through the closed hatch as a wave washed over us. The cabin and fo'c'sle are relatively dry but it is impossible to stop the hydraulic force of a breaking wave from coming in. Our gloom is a result of not finding Tasmania by now. Our log which we cannot afford to put too much stock in shows that we are somewhat south and well east of the southern tip. With the barometer standing at 1007 [a very low reading for our uncorrected instrument] and a high probability of the onset of heavy southwest gales, we may be lucky if we have passed it. Within the next few days we will change direction to see if we can determine whether we are in fact east or west of it.**



Rick makes repairs to boom fittings south of Australia on the Indian Ocean leg.

A change in cloud patterns, wind direction, and air and ocean temperatures led us to believe that our D.R. longitude was fairly accurate and that somehow, perhaps in the period of drizzle and poor visibility, we had managed to slip past the southern tip of Tasmania without sighting it, so on July 25 we began to work our way northward toward what we thought would be the east coast of Australia. On July 27 I wrote with a measure of confidence: *Sea and sky evidence continue to support our hypothesis that we are moving toward Sydney, e.g., no SW gales, moderate south winds as shown on the **Pilot Charts**, fairly warm nights in spite of south wind...* Convinced that we were in the warm East Australian Current and approaching southeastern Australia we were excited but not surprised when Jeff sighted land on the port bow midmorning on July 28. My journal reads *...about 1530 we are not entirely sure of our location. We seem to have passed two islands that don't seem to jibe with the small-scale chart that we have. Indeed, we were extremely lucky to have the chart. In our excitement of finding land and passing the chart back and forth in an attempt to locate our position on it, we let a gust of wind sweep it overboard. The retrieved chart wasn't much help.* The journal continues, *Too bad we were not able to obtain Sydney and eastern Australia charts before leaving Cape Town.*

What began with a feeling of relief at having found land turned into a desperate attempt to avoid disaster. As we neared the land that appeared in the distance we discovered it was, in fact, a small island surrounded by tiny islands, and rocky, upright prongs, scattered in a sea of spouting, geyser-like plumes of water. It didn't take long to figure out that these shooting fountains, which we learned later are called bomboras, were the result of energy-laden southwesterly swells striking underwater obstructions. And very little longer to realize that these obstructions could deal Globe Star a fatal blow. Reversing direction was out of the question. Sailing into

the wind in the heavy swells would have been difficult and wouldn't have solved the puzzle of where we were. We had to push forward to find mainland Australia. What looked like a peninsular finger stretching toward us turned out to be a long narrow island resembling a manmade, beach-saving groin.

When, by late afternoon, it became obvious that we were not going to sail our way out of the devilish maze before dark, we had to face spending the night in an extremely dangerous situation. The steep face of the islets with their borders of coarse rocky scree made me loathe to even consider anchoring. Here were outcrops of rock rising from deep water, which meant we would have to be very close to shore to find water shallow enough to anchor in and besides, the anchor, in all probability, would have to be set in a most unsatisfactory holding ground. Riding out more than twelve hours of darkness hoping that you had chosen the lee side of the island in the eventuality of a sudden wind-storm was not an attractive option. My personal bias against anchoring certainly played a part in making the decision. I believe that a sailboat is designed to be sailed and therefore is most likely to survive danger when underway and is far more vulnerable when tethered to the bottom with a steel hook.

Two other choices were possible. The one, to continue sailing through the rock-strewn labyrinth, seemed suicidal. It made sense to pick a clear patch of water next to an islet with an identifiable silhouette and hold the position during the long night. We chose to furl the sails and let Globe Star lie ahull. We tested the engine to make sure it would start in an emergency, had a selection of sails at the ready, and rehearsed plans to work our way into the islet's lee should we be hit with a squall. There wasn't a single hint of nasty weather in the night's tense atmosphere. The weather gods were smiling.

Next day we continued our broken field running among breakers, bomboras, some surging up to fifty feet in the air, projecting rocks, and scattered islands. That night the

sun appeared to set over solid land. Was it a mirage or had we found the Australian mainland? Believing that we had finally escaped the treacherous islands we sailed all night keeping the dimly lit coast on our port beam. Daylight revealed a vertical rock wall about 100 feet high. There was no beach whatsoever and very little churning when the southwesterly swells spent themselves against the rock face. There was no doubt in our minds that the water was exceptionally deep right up to the rocky scarp—more than deep enough to swallow Globe Star without a trace should onshore-gales strike.

The hope that we were looking at the southeast coast of Australia had faded but we wanted to make absolutely certain of our location. We spent the entire day sailing toward the north and east paralleling the forbidding coastline without seeing a single navigation aid, building, telephone pole, tower, or fence post. We kept hoping that when we got to the next offset in the “wall” we would find a cove where we could spend the night. There were many offsets but no coves. After approximately 80 miles of coastal inspection without a hint of human habitation, we had to conclude that we had sailed through part of the Recherche Archipelago and had stumbled onto the western edge of the Great Australian Bight—a long way from southeastern Australia. Dejectedly, in the late afternoon of July 30 we turned southeastward into a brisk onshore wind. By dark the wind had cranked up to gale force. We had survived two harrowing days and nights and were in open water rapidly putting distance between us and the “wall,” but the encounter with the fragmented continental debris and the unbroken line of 100-foot high, vertical cliffs had left us physically and mentally drained.

We were disappointed not only because we were not where we hoped to be but because we had lost nearly two weeks of sailing time during our northward jaunt to check out our location. And if **Pilot Charts** accurately reflected weather conditions along the Tasmanian west

coast, our chances of running into severe storms were decidedly greater. On the positive side we had gotten good latitude from epsilon in Scorpius and had established a sound working longitude from the northeastward trending coast on the western edge of the Great Australian Bight. The gales were short-lived and on August 2 I wrote, *Took a long nap this morning and am feeling fine. We were all a bit tired after our encounter with the islands and the ‘wall.’ It was not the kind of atmosphere conducive to relaxation and sleep. According to our noon position we have about 1050 miles to round Cape Bruny in southwestern Tasmania.*

The time had come to face the problem of making a landfall on one of the worst lee shores in the world—the west coast of Tasmania. According to the charts for the area, the northwest—southeast-trending, 180-mile-long coast is steep, rocky, uninhabited, protected by only three short-range navigation lights, and broken by only two inlets that require local knowledge for entrance. Prudence required a plan that excluded trying to navigate either of the two inlets. Ideally, the landfall should be made at Southwest Cape, lying on Tasmania’s extreme southwestern corner, so as to avoid the forbidding west side of the island, but without instruments, to aim for the southern tip of the island involved the risk of missing it altogether. Because sailing directly on to the west coast of New Zealand was not an acceptable option and because after sailing 6000 miles we had to put in for fuel, water, provisions, and repairs, we were in the dubious position of simultaneously finding and avoiding the western Tasmanian coast. In a way it was a more difficult problem than rounding the Horn. There it would be necessary only to avoid it. Finding it would be nice but not required for our safety. In Tasmania our safety demanded both finding and avoiding at the same time. Now the problem had been compounded by the worsening winter weather.

The reason the problem had not been solved earlier was not because I was unaware of it. I knew when we left Cape May and again Cape Town that this was an item of unfinished

business and sooner or later would have to be addressed. Even though the elements had been in my head for a long time, no mind-popping integration had occurred. Some mental discipline was in order so whenever there was a block of time available I sat Buddha-like in my bunk and mulled over all related factors. It was this kind of approach that had led to the idea of using the nonoccurrence of darkness as a way of finding latitude at the Horn and I hoped that if I became steeped in the elements of the problem I might get lucky again.

One possibility, of course, was to heave to at nightfall to preclude sailing onto the rocky shore during the fifteen-hour night. This would have meant using only three-eighths of the twenty-four hour period to advance eastward. What with storms increasing in frequency and severity, this was not a very attractive choice. Another was to proceed at night under reduced sail with the hope that we could detect a change in the boat's motion as it entered shoaling waters or hear the sound of breaking surf downwind. This would have been far too risky. By the time the determination was made in storm conditions, it would have been far too late to turn to windward and claw off. After a few meditation sessions it became clear that we had to find a way to maximize eastward movement during the twenty-four-hour period while minimizing the risk of running aground at night. It was at this point that the northwest to southeast trend of the coast came into focus. Why not make the final approach near the southern end of the island and sail northeastward straight toward the unseen coast in the daylight so as to close the coast as rapidly as possible by day, and sail southeastward parallel to the coast at night so as to minimize the possibility of contact in the dark hours? The zigzag course would not advance us as speedily as a straight, eastward heading but would be greatly superior to heaving to at night. Assuming the angles involved to be 45 degrees, the daily eastward advance would be comparable to running two legs of a right triangle as opposed to running the hypotenuse. The daily

eastward achievement would be equivalent to that accomplished in seventeen hours of straight eastward sailing—a figure almost double that resulting from heaving to. Under the plan some fine tuning was possible. The southeastward course could be altered toward the east if visibility was good at the time of sunset and no land was in sight toward the east at that time. The plan did not eliminate all the risk of making the difficult landfall, but it did reduce it to something we could live with.

On August 6 I recorded the following: *Heavy seas sending water crashing into the cockpit brought sail reduction during the dark hours. The wind has been from the north and a little west of north so it hasn't been bitter but the coolness of 40° or so south in the dead of winter is definitely here. Our thoughts are constantly on finding Tasmania and making the delicate maneuver around the southern tip into Hobart. It will probably be the toughest bit of navigation on the whole voyage. And on the following day: Observation of Gacrux at lower meridian transit confirmed latitude... Late yesterday the wind shifted to SW which brought a succession of squalls. The accompanying gales lasted about 12 hours... We are now reducing sail at night as a precautionary measure. Our log indicates land is about 380 miles away but we do not want to incur undue risks. The atmosphere is tense as we make our way toward Tasmania.*

The temptation to dwell on the dire aspects of our situation was strong but our safety demanded that it be contained. Job, whom the Bible quotes as saying, "That which I feared the most has come upon me," is one of my antiheroes. I felt that what we were facing was a very temporary condition and that it would be a mistake to allow ourselves to be mesmerized by it. We had to be sharp to pick up action-indicating clues; standing in constant fear could only blunt our receptors. Nonetheless, we had to acknowledge the fact that we could be dashed on the rocks and drowned. Whether it is a theme from literature or an original thought I am not sure, but in my adult life I have believed that death is

not so bad for the person who dies doing what he loves to do. Whereas I did not picture myself as having a death wish, I was only three years short of my three-score and ten, had accomplished most of my life's goals, had gone full cycle with children and grandchildren, and philosophically, at least, could not complain if my number came up. But Jeff at twenty-four and Rick at nineteen were entitled to a longer stay on planet earth. I would have died a "thousand deaths" if, like the Pied Piper of Hamelin, I became responsible for their untimely demise. But when an occasional crashing wave reminded us all of our mortality my philosophical stance weakened and I would find myself shouting above the roar of the storm, "I don't know about you guys, but I'm too young to die."

As we moved into higher latitudes low temperatures brought new problems. I noted on August 7 that *Rick has had frostbite on the backs of his fingers. His right-hand index finger has a nasty open sore on it. Jeff had chilblains on his face from the cold. They are now clearing up (under the protection of a ski mask).*

Our tactic of paralleling the coast at night by sailing southeastward exposed Globe Star to the heavy seas generated by southwesterly gales. A few hours after dark on August 9, Jeff, on watch, shouted in the hatch that he was going to add the staysail to the storm jib which was aiming us toward the southeast but not maintaining enough steerage-way to prevent our being edged closer and closer to the coast by the huge waves on our starboard beam. He had just positioned himself on the foredeck when a towering wave crashed into Globe Star, rolled her on her port beam, and sent her scudding to lee. Crippling cramps seized both my thighs and locked me, head aft, in the quarter berth so I yelled to Rick to check on Jeff. Rick jumped to the hatch, peered forward, and shouted above the roar of the wind, "I don't see him." I gasped.

It seemed like an eternity before Jeff raised his head above the cabin top. He had flattened himself between the dorade vents

and hung on as best he could. He was soaked but otherwise all right. I was certain the best we could hope for was to find him overboard, dangling by the tether of his safety harness. In the knockdown a winch handle had flown across the cabin and broken one of the galley stove grates. Water poured in through the sliding hatch and charts, records, tape recorder, gun, and many other items were drenched. In the fo'c'sle glass jars containing spare parts were shattered and parts strewn over the vee berths.

I suggested to Jeff that instead of raising the staysail we run the engine at low speed to give us the direction we wanted without the lateral pressure produced by the wind on the staysail. We had hardly started the engine when we were knocked down again. This time a flying object, we guessed the freon horn, somehow managed to strike and turn off the master switch while the engine was running and that put the alternator out of commission. The double dose bred anxiety. We wondered whether a third knockdown was in store and maybe a fourth.

We wondered, too, whether the steep, breaking seas resulted from shoaling as the heavy southwesterly swells and waves neared Tasmania but no land came into view on August 10. At noon we estimated our latitude at 43° 37' based on an observation of theta Scorpii during the dark hours. We continued on the port tack until nightfall when with a west wind blowing we changed over to the starboard tack to sail southeastward during the night. I was on watch as the first blush of dawn appeared in the northeast. Almost without thinking I changed the yankee over to the port tack and within an hour had Southwest Cape, Tasmania, in view. Its latitude: 43° 34'. We were spot on! It was apparent that we had sailed almost within sight of the coast during the night and in all probability would have made an unwanted nighttime landfall if we had not been following our plan by sailing parallel to the coast at night. Although we were certain of our location, we had a strong desire

to find positive confirmation. The lighthouse on Maatsuyker Island provided a measure of verification but we still wanted to see something that said Tasmania or Australia. We were sure we had what we wanted when a helicopter hove into view and circled us at medium altitude. The lettering on the side "Hookway Rescue Service" gave no hint of its origin. We immediately shouted a suggestion skyward: "Paint your blinkety blank address on your chopper." To our amazement two days later and a hundred miles away, the pilot, Colin Hardiman, accompanied by his wife and son, stopped by to greet us at Constitution Dock in Hobart. By that time our lettering recommendation had been translated into the king's if not the queen's English.

There was one small but important step ahead of us before we could "break out the champagne." We had to secure our beachhead by threading our way through groups of projecting rocks and into the shelter of the D'Entrecasteaux channel 50 miles to the east. It was a memorable day not just because we were aglow with our accomplishment but because we had a delightful downwind roller-coaster ride on 40-foot swells. The sun was about two diameters from the horizon when we identified the entrance to the D'Entrecasteaux Channel and turned sharply northward toward Hobart.

Frank Cole and his fifteen-year-old son Andrew were laying out crayfish (spiny lobster) pots in D'Entrecasteaux Channel as we sought its shelter during the gathering shadows of August 11. We tried to get their attention by waving an orange life preserver but what really caught their eye was what they deemed too close an approach to Denmark Reef. Frank suggested we stand by while he finished laying out his pots when he would guide us to a safe anchorage in Recherche Bay. It was pitch dark by the time we got to the anchorage. We were delighted to accept Bill Wignall's invitation to raft up on one side of his "cray" boat. Several cray boats were pinned down at the anchorage by the heavy ocean swells left over from the

southwester that had bruised us two days earlier. In minutes their skippers and crews joined us in an impromptu party in Bill's fo'c'sle. They brought crayfish (lobster) hors d'oeuvres, delicious hot broiled fish, and french fries. We contributed a "tinfoil goatskin" of wine that Jan Smit had handed us as we left Cape Town and three good-sized appetites. The instant camaraderie soon dissolved memories of the long, cold, wet, and solitary hours of night watch. The low-ceilinged, well-lighted, and overheated quarters provided an ideal place for swapping of "sea stories." During a lull in the conversations, Jeff and I went to the bridge with Bill to call home on his "red" phone.

Our calls were routed via radio to an operator on the Australian mainland. The connection to Jeff's parents in Haddonfield, New Jersey, was poor and they misunderstood him when he told them that we were tied up to a larger boat. When I got through to Blanche she had heard that we were safe but wondered why we were being towed by a ship. After all the hassle of exchanging transmitters in Cape Town, the one delivered to us there failed four days out so our families and friends had not known of our whereabouts for ten full weeks. Blanche had not wavered in her belief that we would make it so she was pleased but not surprised to learn of our arrival in Australia.

Next morning Dave Nichols in his crayboat Rhona-H led us through narrows in the D'Entrecasteaux Channel, and then came alongside to provide a raft-type tow to Hobart. The fifty-mile ride zipped by with Dave's running commentary on the countryside, crayfishing, Hobart, Tasmania, and Australia. It was about 1630 when we passed under the tiny drawbridge that guards the entrance to Constitution Dock, a spacious docking basin maintained by the city close to downtown Hobart.

When quarantine officer Roger Norton learned that we had spent the previous night in the lower part of the D'Entrecasteaux Channel, he demanded, "You didn't raft up

with any Australian boats, did you?" I'm sure he knew that we had and I'm equally sure he knew that my answer was going to be "No." It was. I would have preferred a jail sentence to having my new-found buddies isolated by quarantine. Because we had come from South Africa, Australian Customs officers gave us a thorough going over. When I complained to Officer Norton that the lengthy interrogation

had kept me from changing money before the weekend, he reached for his wallet and handed me a twenty-dollar bill in Australian currency to tide me over until banks opened on Monday. This rounded out a sampling of Australian hospitality; we looked forward to an enjoyable six weeks in Tasmania.

Chapter 10

Tasmania

The fabled Horn still lay ahead but we had reached the halfway mark, had the Indian Ocean and winter sailing behind us, and according to our Tasmanian friends, by making a wintertime landfall on Tasmania's west coast had weathered conditions at least equal to, if not worse than, those that would confront us at the Horn.

The first item of business at Hobart was to get Rick's fingers attended to. He had raw-looking, open sores on both sides of the middle knuckles of both hands. The sores had begun with frostbite but had been kept open by constant immersion in salt water. I went with him to the emergency treatment room of the Hobart hospital where I asked the doctor, a young woman, if she had ever treated saltwater sores. When she replied in the negative, I told her of some tiny scratches that opened into deep slits in my finger tips during a three-week ocean voyage. My hint fell on deaf ears. Her prescription: Soak the fingers in a saltwater solution daily until they heal. To Rick's credit he followed the doctor's advice for a day or two but when he saw no improvement he rinsed them in fresh water and watched them mend.

There was plenty to be done at Hobart. I was determined to acquire a new vane steerer, which would be a major project. I wanted also to shorten the long and heavy boom which would require some trimming of the

mainsail. The genoa and the drifter had to be altered to eliminate chafing on the bow pulpit and the luffs of the yankee and working jib had to be reinforced and re-grommeted. Globe Star had to be hauled for inspection below the waterline, for barnacle removal, replacement of zinc anodes, and reapplication of anti-fouling bottom paint. And before

Creamer Journey Reaches Tasmania

Marvin Creamer's around-the-world sailing voyage has reached the island of Tasmania off the Australian coast...

Mrs. Creamer said she spoke to her husband for the first time in more than two months on Thursday morning. After a static-filled, brief conversation with him on a ship-to-shore radio, Mrs. Creamer reported the Globe Star was anchored at a bay on the southern coast of the island...

"I'm just glad he's safe and the crew's safe," Mrs. Creamer said, noting it is winter in the Indian Ocean through which the Globe Star sailed. "It's probably the most dangerous crossing he'll have made through the winter."

—Elliot Goldberg, *Gloucester County Times*,
8/12/83

A 67-year-old retired college professor sailed his small yacht into Hobart at the weekend to complete a 13,000 mile leg of what is probably the most extraordinary small boat ocean passage of modern times.

The voyage—made in secrecy to avoid the attention of the world press—involves circumnavigation of the globe without any navigation aids...

Top local yachtsmen—themselves regarded as among the hardest in the world—claim Professor Creamer's feat matches that of any past, known ocean voyager, including the legendary Joshua Slocum.

—Barry Dargaville, *The Mercury*, (Tasmania's Newspaper) 8/15/83

we put foot on deck I wanted it coated with some kind of skid-proof material to prevent spills in heavy weather. When Jesse Edwards arrived from Maryland, I found the latter job was right up his alley. He put an end to slipping by sprinkling ground cork into a film of clear epoxy paint.

The vane steerer had a high priority. It would take time to select one that would perform well, get it delivered to Hobart, get it installed, and try it out. Francis Stokes, who had just finished the BOC around-the-world-single-handed race recommended the Fleming self-steerer made in Australia. When I tracked down the manufacturer via telephone call to the Australian mainland, he told me that he had sold the business and that his vanes were no longer available. Blanche had corresponded with Nick Franklin of Cowes, England, about shipping an Aries vane to Australia but the pound/dollar exchange rate at the time made its cost prohibitive. Too bad! I had used two different styles of Aries and had liked them both.

There was a silver lining to the vane cloud, however. I discovered in talking to local sailors that Muir Engineering located just outside Hobart had bought rights to the Fleming gear and had two models in production. The company's Hobart branch was prepared to remove the original vane and fit a new one to Globe Star's transom when she was hauled for bottom work. Moreover, the branch included a sail loft that took care of the boom and sail alterations and repairs. When

inspection revealed the need for a new cutlass bearing for the propeller shaft, they provided a man to remove the propeller that had failed to yield to a well-built wheel puller. The problem that caused the sweat, grunts, hammer blows, skinned knuckles, and a torrent of expletives, had originated in the manufacturing plant. Someone had coated the mating parts with a "locking" compound.

The Royal Yacht Club of Tasmania provided facilities for hauling. The marine railway that led from the water interconnected with a lateral line which had perpendicular fingers onto which yachts could be shunted while being worked on. This system made it possible to have working space for a week or more unlike the one day allotted at Cape Town. Jeff and Rick pitched in to help scrape, sand, and paint even though neither planned to go farther. Jeff was ready to return to his friends and Rick had the urge to hitchhike the length and breadth of Australia.

While Globe Star was out of the water, Nick Gill, a maintenance man for the University of Tasmania, stopped around to have a look at the steel hull and chat about long distance sailing. He offered to do any kind of maintenance job, no matter how dirty or unpalatable, in return for information and advice about long distance sailing. It was a genuine offer and he was soon at work with steel wool, sandpaper, and an oily rag restoring and preserving tools that were badly rusted because of months of exposure to salt

water. He worked quietly and with a thoroughness that suggested an inner toughness. During our conversations Nick mentioned that he was building his own steel boat and had attended a local technical college to learn welding. When the cleanup was finished, Nick volunteered to crew on the next leg, which at that time I was certain would be to Chile in southwestern South America.

Jesse Edwards from Rock Hall, Maryland, was the only one “signed up” to crew across the Pacific but I had promised to contact John Hartmann of Welkom in South Africa and had Blanche looking for prospective crew at home. I explained to Nick that I couldn’t promise at that time but that I would keep him in mind. When I telephoned John, I found he was involved in a business deal that he could not leave. And when Blanche arrived for a three-week visit, I learned that she had no prospects and had made no commitments.

A dinner invitation from Nick’s wife, Kay, gave us the opportunity to see the steel hull propped up under a temporary shed in their backyard. Its lines were fair and the welding was superior. Nick was a serious craftsman. And we were to discover that he and Kay were serious about nutrition. Guessing that Blanche and I would not be satisfied with a vegetarian meal, they served up a large platter of stewed chicken. As part of the table conversation, they related how the *pièce de résistance*, their pet rooster, was more flustered than flattered by the invitation to grace the table and led them on quite a chase before being run down. This was no time for my esophagus to act up as it does sometimes when I down white meat of chicken too hastily but it did. I could feel the spasm render a perfect imitation of a heart attack. In desperation I steered the conversation to bread-making—a topic less irritating to my digestive tract—and chose dark meat next time around.

Except for the brief period on the ways at the Royal Yacht Club of Tasma-

nia, Globe Star was berthed at Constitution Dock, an enclosed basin about a hundred yards square within two or three blocks of downtown Hobart, and a favorite place for lunchtime strollers to visit. One of the yachts docked nearby was owned by Barry Dargaville, a reporter for **The Mercury**, Hobart and Tasmania’s leading newspaper. When Barry heard about our voyage, he interviewed us and had John Hamilton, local photographer, take some pictures. **The Mercury** ran an article and picture of the three crew on the front page which brought a flood of well-wishers to Constitution Dock. It also brought literally dozens of invitations to dinner. In the forty-two nights that we spent in Hobart, we accepted thirty-six dinner invitations.

Desmond Cooper, commodore of the Royal Tasmanian Yacht Club, asked Blanche and me to be his guests at a dinner meeting of the Club where I gave a talk on the non-instrument circumnavigation. Some of the questions afterward showed some healthy skepticism but the whole tone of the affair was friendly and positive. I found the stance of yacht club officials in Hobart to be decidedly different from what I had encountered in Cape Town and what I was to experience



Globe Star on arrival at Hobart, Tasmania: Jeff Herdelin, Rick Kuzyk and Marv Creamer.

later in Sydney. As in Cape Town, individual members were cordial. One of the members, Bill McWhirter and his wife had us as dinner and overnight guests while I worked on *Globe Star*.

Blanche and I were also dinner and overnight guests of Snowy and Iris Corbett. They lived at some distance from Hobart so Snowy picked us up at Constitution Dock for the picturesque ride to Lewisham. We dropped Blanche off to visit with Iris and then spent some time with Snowy's mate who asked about our fishing success. When he heard my hard-luck story, he made suggestions on the kind of tackle to carry and then gave me a whopper of a lure which he said was bound to catch tuna. When we returned to Iris and Blanche, Iris was waiting with a superb dinner. The "natives" were, indeed, friendly.

When Blanche and I had dinner with John and Margaret Clougher, John told of his cousin, also named John Clougher, who had sailed across the Pacific with a "seven-man" all-woman crew. I had read about the voyage before leaving Cape May and wondered if the skipper might have been a publicity seeker. According to John his namesake normally sailed with his wife and daughter, but for the Pacific trip in his fifty-foot ketch *Cloah Sark*, which he designed and built himself, he wanted a larger crew. He chose women because "Amongst other things women take more pride in tidiness and cleanliness than men, and they have the right temperament for long spells at sea."

John Hamilton, who took our picture for the **Mercury**, was also a free-lance reporter. A few days after the picture-taking session, he stopped by to get a story for the **Australian Bulletin**, the Australian news magazine. When Jesse Edwards arrived to crew, he brought along a copy of John's article that had appeared in **The London Times**. Apparently the Times had picked up the story from the **Australian Bulletin**. An Englishman who had read the story in the **Times** was in casu-

al conversation with librarian Doris Jensen at the Library of Congress in Washington when he heard her say that her daughter's friend, Jesse Edwards, was flying to Hobart to sail aboard *Globe Star* as part of a non-instrument circumnavigation. He replied that he had read about the trip in the **Times** so Mrs. Jensen photocopied the article and sent it along with Jesse. Later when I stopped in to visit John Hamilton's Australian animal farm, he seemed surprised to hear that the item had completed a round trip to London.

While the eyes of the yachting world are all on the America's Cup extravaganza, a remarkable sea voyage is underway on the other side of the world.

A retired college professor from New Jersey docked in the quiet port of Hobart last week at the halfway point of the first circumnavigation of the globe without navigational instruments.

—*The London Times*, 8/27/83

When the Hardiman family stopped by to say hello, Mrs. Hardiman was particularly interested in the kinds of food we ate and how we prepared it. When I told her of my desire to make pizza and my regret for not including a cookbook, she said that she would bring me a recipe. Three weeks later she returned not only with a recipe but with a baking pan and a finished pizza included. It was delicious and became the first of a large number served aboard *Globe Star*.

Then there was the troop of Boy Scouts. The scoutmaster had asked if I would explain how I managed the navigation. I was happy to talk to the group but in the end I got as much as, if not more than, they did out of our meeting. One of the questions they asked was how I arrived at a polar point in the southern hemisphere. I explained how I extended a line from Gacrux (c.57° S.) through Acrux (c.63° S.)

and ended it at a point four and a half times the distance between those two stars of the Southern Cross. They had a better idea—one that increased our direction-finding ability immeasurably and cut hours if not days from our passages in the southern hemisphere. The problem that we were having was in laying off the proper distance from Acrux. Their solution involves pure geometry. They use two bright stars positioned close to the Southern

It is a feat which may well surpass the efforts of the great modern seafarers such as Sir Francis Chichester and Chay Blythe, for while they were alone — Creamer has two crew—they were able, through sponsorship, to use the best navigational equipment available.

Creamer has no lucrative contracts and the venture has been financed mostly by his life savings.

—J. C. Hamilton, *The Bulletin*, (incorporating the *Australian Financial Times*) 9/6/83

He's a relatively unobtrusive, bespectacled, retired professor of 67, and he's sailing around the world without any form of navigational instruments whatsoever. This remarkable man slipped into Hobart in September in his steel Goderich 35 *Globe Star*, having already completed half his circumnavigation. His main techniques are parallel sailing—locating his latitude by the stars and then sailing due east—swell patterns, differences in the colour of the water, and guesstimating longitude by watching the bubbles in his wake. It's a remarkable achievement, and when *Globe Star* rounds Cape Horn and sails back into her home waters of New Jersey, he will have achieved something hitherto considered impossible.

—Andrew Bray, *The Cruising Skipper*, Summer, 1984

Cross. These stars, Hadar and Rigil Kentaurus, are of almost identical declination. Using earthly terms, they lie on about the same parallel of latitude. The scouts erect a perpendicular at the midpoint on a line between these two stars and extend it so that it crosses the line extended from Gacrux through Acrux and beyond. The latter line represents a meridian, and the line perpendicular to a parallel represents another meridian set at an angle to the first. The crossing point represents the polar point in the southern hemisphere. Because all of the stars involved are bright and their patterns easily identified, the method was usable in partial overcast and made direction finding possible when only some stars in the cluster were visible. My hat is off to the Boy Scouts of Hobart!

Gerd Hennieke left Germany after World War II to avoid being drafted in the German army. He emigrated to the Australian mainland but later moved to Tasmania. By the time I arrived Gerd owned three service stations, three automobiles, and a steel sailboat only slightly smaller than *Globe Star*. His wife, Irene, was a detective on the Hobart police force. Gerd was interested in hearing about our experience with the steel hull and sailing the southern oceans without instruments. He welcomed us to his home and with Irene took us on a delightful, two-day tour of the island. There were verdant, rolling hills, quaint settlements, salty fishing villages, and denuded mining and smelting areas. But what interested us most was the forbidding, rocky, and uninhabited west coast that we had sailed toward in dark and fog only days before. We thanked our lucky stars that our close-up view of this “stern and rock-bound coast” was from the land side.

Ian Milne and John O'Brien, who worked for the Australian Department of Communications, read about our transmitter failure and stopped by to offer their help. The problem had been battery failure. They suggested connecting the transmitter directly to our onboard batteries and with my approval made the

switch. United States Coast Guard technicians had avoided this for fear that the boat's batteries would fail. It was ironic that transmitter battery failure plagued us for a large part of the voyage but we never had a minute's trouble with our alternator and solar-panel-charged batteries. There was another transmitter problem Ian and John solved. The antenna that we used was clamped to the bow pulpit where it was subjected to constant dousing with saltwater. They suggested using the coaxial cable already in place inside the mast to feed the signal to a special mast-top antenna. This would require removing the VHF antenna that we would need if we had to break out our radio in an emergency. Then they came up with a novel idea: Leave the VHF antenna in place and connected, but clamp a small transmitter antenna to the VHF antenna at a forty-five degree angle. Now should we have to break out the VHF-FM radio to call for help in an emergency, we would have only to switch the coaxial cable over from the ARGOS transmitter to the VHF-FM set.

Carl Nilsson, a scientist who worked for an Australian research organization, invited me and Blanche to share his suburban home during the latter part of her stay in Hobart. We were pleased to accept because it provided more space for household chores—preparing food and caring for clothing needed for the trip across the Pacific. It also gave us access to Australian television broadcasts, which at the time were largely concerned with the America's Cup competition.

Because the live broadcasts began about 2:00 a.m., I didn't ordinarily stay up for the results but there wasn't a lack of information. As soon as I got to the bus stop in the morning, usually around eight o'clock, all I had to say to get news was, "How did it go last night?" There was never any question about what I meant or hesitation in reply no matter whether the respondent was school child, teenager, housewife, businessman, or nun. There was no doubt that national attention was focused on the Cup races and beating the

Yanks. When I left Hobart, presumably for Chile, the Aussies were down three to one. The odds seemed insurmountable.

Monica Donnelly, who had spent eight months cooking on a yacht that encircled Australia, was one of our visitors aboard *Globe Star*. She was genuinely interested in our galley, storage capacity, provisions, and menus. As she was leaving, she said shyly, "I don't suppose you chaps would like a home-cooked meal, would you?" It was an invitation to dinner and we accepted. Monica's friend, whose husband was hospitalized, gave Monica a hand and the pair went all-out preparing a gourmet-style, "home-cooked meal" for the Yanks. They must have spent a whole day putting it together. Jeff, Rick, and I enjoyed it immensely but the dinner conversation which had been lively stopped abruptly when Monica, who had read about Rick's frostbite in the newspaper, asked to look at his fingers. The fingers which seconds before had been taking second helpings were thrust under the table and nothing that either Monica or I said was convincing enough to coax them from their hiding place. Whereas Jeff said later that he understood perfectly how Rick felt, nothing in my experience has helped me to understand Rick's strong reaction.

The warm welcome given by Hobart citizens to our American craft did not extend to another American craft, the nuclear submarine *Boston*. Protesters paraded along the docks with colorful placards denouncing both the presence of the nuclear submarine in the harbor and American foreign policy in Central America. They did not interfere, however, with our visit to the *Boston* where we got VIP treatment and some "surplus" goodies for our larder.

When Jesse Edwards arrived from Rock Hall, Maryland, I tried to persuade him to round "the Horn" with us. Had we known that we were going to be able to find our way into the Falklands he might have agreed but our "twilight method" of getting through Drake Passage did not guarantee the sighting of landmarks that would permit us to make a Falk-

land Islands landfall. The alternative was to continue to South Africa and return home from there. Because of the limited time available to him, Jesse wanted to be dropped off in South America and that presented something of a problem.

If he were to be assured of transportation away from the point of our landfall, we would have to aim for the populated section of Chile, i.e., the central part of the country. I consulted the Chilean naval attachés in both Washington and Canberra and each said there was only one place for a yacht to approach the Chilean coast—at Viña del Mar near Santiago. What with the politics in Chile being what they were I was not keen on making a landfall other than where the military recommended even though I felt that a landfall farther south would have made our approach to Cape Horn a lot easier.

There were serious drawbacks to the Cape Horn route via Viña del Mar. It was twenty-

four hundred nautical miles farther than the direct route and it led through the light winds of the southern Pacific subtropical high pressure belt. Moreover, the final leg would have to be made against an adverse current and into initially weak and then, at times, strong southwesterly gales. I reckoned it would be necessary to make about a thousand-mile tack to the southwest to get into a position from which it would be safe to head for the Horn. This meant adding perhaps as much as 1000 miles and two weeks to the length of the voyage. Even if the restocking of fuel, water, and provisions could be accomplished in a week's time at Viña del Mar, the three months between the time of departure and the occurrence of the December solstice was scarcely enough time to make the trip under ideal conditions. Expecting them to occur would have been foolhardy. But when it came time to sail, the die had been cast; we would make a stab at it.

Chapter 11

Hobart to Sydney

When Jesse Edwards, Nick Gill, and I eased *Globe Star* out of the idyllic shelter of Hobart's Constitution Dock on the first day of the southern hemisphere's spring, 1983, we intended to sail northeastward across the Tasman Sea, graze the northern tip of New Zealand's north Island, and then make a beeline across the Pacific to Viña del Mar in Chile. Within twenty-four hours *Globe Star's* mast had been turned forty-five degrees under the Tasman's spume-covered surface, my upper left arm had been wrenched out of its socket, Jesse had decided to withdraw, and our target port had been switched from Viña del Mar to Sydney only 621 miles away compared to 6677.

We did not know as we hummed downwind at seven knots in the Derwent River that the twenty-knot breeze driving us through Storm Bay toward the Tasman Sea fifty miles to the south was just a prelude to a "Storm Bay Howler" that produced 55-knot gales in Hobart and 75-knot winds across the Tasman in Wellington, New Zealand. Local cray-boat skippers had alerted us to the equinoctial gales that plague the area at that time of year, but the urgency of being in Drake Passage during the last two weeks of December pushed us into leaving Hobart as soon as we could get underway and into the worst storm we were to encounter on the entire voyage.

I felt comfortable with my crew. Jesse was a highly respected yard man at a Chesapeake

Bay marina and had skippered yachts between the Chesapeake and the Caribbean. Nick with his maintenance background and boat-building know-how was eager to get in some sea time. Within an hour the downwind, rolling motion had sent Nick and Jesse to the rail. By the time we reached the open sea Nick was ghostly and Jesse had a serious problem. The gastritis that he thought was history and not worth mentioning was reactivated by the gales and building seas.

At dusk we reefed the main to its smallest size and bent on the storm jib. When I looked at the condition of the crew there was no doubt who was going to stand the eleven hours of night watch. I hoped the adrenalin stimulated by our departure would sustain me in the 60-knot winds and rising seas. When Nick appeared next morning about 8:00, I immediately went forward to strike the storm jib that was in danger of flogging itself to shreds in the hurricane-force winds. As I hauled downward on the leech with my left hand a blast hit the loose sail and carried my hand and arm past my left ear to a separation at the shoulder. It was a weird feeling. Here I was, standing on a wildly gyrating deck wondering how I could get the storm jib down with an arm that refused to obey any directional commands. I flexed my hand and discovered that I had near normal grip with my fingers and that by giving my body a quick twist I could fling my arm so

that my fingers slapped against the sail. By gripping at the instant of contact, I managed to get hold of the leech again with my left hand. By pulling down with my right hand and grasping with my left I was able to get the canvas to the deck where I secured it with my feet. Nick came forward and at my suggestion gave my arm a stiff yank. The arm hung straight down. I called for a solid jolt and Nick obliged. I felt it snap into place. It was usable immediately but it was twenty-four hours before I could sleep and three days before I could raise my arm without wincing. Even after a year I could readily predict the onset of a storm.

Globe Star is Halfway Through Trip

The wind, at least figuratively, is at Marvin Creamer's back...

"He's moving smartly along, said Mrs Creamer, who flew down to the Pacific Island to meet her husband August 30...

Mrs. Creamer described the final lap of the journey as "an arduous passage." Gales were tremendous in the Indian Ocean, with winds reaching 50 to 60 knots, she said...

Mrs. Creamer said the Australians "pampered us like pets" during the three weeks she was with her husband there.

—Alison Carper, *Gloucester County Times*, 9/26/83

Two hours later Nick sat in the cockpit watching our newly installed vane gear working to keep Globe Star on a broad reach with the top corner of our "bulletproof" main held out to starboard by a four-part, vang-preventer. Below, Jesse lay, miserably sick, face up in the starboard settee berth, and I was casting about in the quarter berth trying to brace myself into a position that would relieve my pain-ridden shoulder. The crash on the port quarter sounded like a locomotive had slammed into a truck. There was no squish of

water—just a solid metal to metal bang. Nick's body jerked to a stop against his safety harness and tether which, fortunately, prevented him from being washed overboard. He came up sputtering and muttering: "When I signed on I expected worse than this." Nick had done his homework. It is common knowledge among small-boat sailors that they can expect complete rollovers in the heavy seas of the southern oceans.

In the cabin cartons of apples and oranges, catapulted to starboard by the breaker, smashed into the lee cloth suspension lines yanking the supporting handrail screws from their hidden backup blocks, and dumped their contents forthwith into Jesse's bunk. Only his face was visible above the fruity deluge. In the quarter berth I was intent on dragging my bunk cushion aft to clear the salty Niagara Falls that poured through the open hatch. I don't remember any pain from my freshly dislocated shoulder but I do remember being pleased with the decision to have all bunk cushions made of sealed-cell foam. The extra firmness took some getting used to but it was easy to dry with paper towels after I stripped off the waterlogged cover. We had no difficulty in calculating the degree of roll-down when we found, two days later, a patch of broken glass cemented to the headliner by milk that was in the jar that flew from the galley sink and broke against the stainless steel handrail over the wet locker. The angle showed a roll of 135°. Globe Star's mast had dipped 45° below the water's surface.

Below, the cabin and fo'c'sle were a shambles. On deck a solar panel had been torn loose and a section of the 'H' track fastened to the underside of the boom had been snatched away by the attached vang-preventer but Globe Star's rig had passed the acid test; the "stick" came up undamaged. Because of the perennial leakage problem around a keel-stepped mast, I had stubbornly resisted expert advice to keel-step Globe Star's mast and had it mounted instead on the cabin top as shown in the original drawings. I felt that

crew morale would suffer in a wet cabin and that morale represented a significant factor in the successful completion of our experimental voyage. To offset whatever disadvantage the cabin-stepped mast might have had, I increased the diameter of all stays and shrouds from 1/4" to 5/16", mounted double headstays and double backstays, selected what I considered the best wire available—Universal Wire Company's super nitronic stainless, used STA-LOK fittings on all wire ends, lowered the mast ten and a half inches to accommodate to a one-piece aluminum extrusion, and had builder Bob Patterson weld a strong compression post between the keel and cabin top and cap it with a heavy, welded, internal plug for the mast step.

[Four days out of Hobart after a mauling by sixty-knot winds, we placed ourselves at 39°58'S; 151°29'E which was 63 miles southeast of the ARGOS or true position.]

The near-capsize convinced Jesse that he could not afford to gamble with his stomach problem. He asked to be dropped off in New Zealand but because I did not want to risk sailing down on a lee shore to ensure a certain landfall we settled on Sydney instead. We veered northward and closed the coast of the southeastern Australian mainland at Gabo Island where Sir Francis Chichester's Gypsy Moth V, borrowed for the 1982 BOC Single-handed Around the World Race, had foundered on the rocks.

Jesse's decision to leave meant that we were no longer bound to a Chilean landfall and forced Nick and me to come to grips with the matter of what to do about a third crew member. Recognizing that it would take time and effort to find someone suited mentally and physically to the undertaking, we decided that unless a replacement "fell in our lap" we would double-hand from Sydney to Cape Horn. On September 27 I wrote in my journal, *I think Nick would like a third hand on board and I guess I would, too, but we are both reluctant to settle for someone who doesn't fit in.*

We had a more immediate problem—that

of piloting our way northward to Sydney, a distance of 230 miles, without the benefit of compass and distance log. Late in the afternoon of September 27, we passed Gabo Island and Cape Howe on the mainland; after dark we were able to identify Green Cape Light and the town of Eden. Later when clouds obscured the sky and coastal lights disappeared, we elected to lie ahull until daylight. On the morning of the 28th we set sails in northerly air to make a heading of west-northwest. After making visual contact with the coast again, we continued northward, passing Montagu Island and Burrewarra Point at night to arrive off Brash Island under power after sunrise. Clear skies prevailed as we alternately sailed and motored northward during the day but in late afternoon the sky clouded over when we were still sixty miles or so from Sydney. With dusk came the realization that we were in a sticky situation.

Sea traffic was increasing, we were heading an adverse current of perhaps as much as two knots, and our piloting, therefore our safety, depended on being close enough to shore to identify landmarks but that left us with no sea room in the event the afternoon arrival of cloud cover foretold of an impending storm that could reduce visibility and spawn dangerous, onshore winds.

Globe Star's 300-foot anchor rope was too short to hold an anchor in the 150-foot deep water so that option was out. An offshore navigation light could have provided a fixed point for maintaining a position during the night but there was a real dearth of navigation aids along this stretch of the Australian coastline. Unlighted Bass Point, a two-mile seaward projection, lay five miles ahead, and eight miles beyond that, just to the east of Port Kembla, lay a scattering of small, rocky, unlighted islands.

Our chart showed a tiny harbor with a navigation light at Kiama about 50 miles south of Sydney. It appeared to be an ideal place to make a landfall provided we could find our way into the shelter in gathering darkness. We got lucky. While we were try-

ing to decide which was less risky, avoiding the rocks in the narrow harbor entrance channel or facing up to a night of uncertainty offshore, a local fishing boat swept past us headed toward the inlet. It was “an offer we couldn’t refuse.” We fell in behind under full throttle and with sails furled. Under the cover of darkness the trawler captain had become an unwitting accomplice in our second violation of Australian law.

Kiama harbor was Lilliputian in its dimensions but after dark it seemed even smaller. The trawler’s skipper directed us to a space that he thought would be vacant for the night. The space between two boats, required stern-to mooring and was barely wide enough to fit *Globe Star* between them. The maneuver called for setting a bow anchor in the middle of a narrow channel at a spot that was in line with the middle of the docking space and then turning the boat ninety degrees clockwise and backing down between the two boats. What we needed was a shoe-horn or perhaps a small tug but we managed to get lined up and backed in on the second try. A line on each quarter secured the stern to the quay while the bow was held more or less in place by the bow anchor. Fenders placed on the beams were an absolute must. Tension adjustment in the three lines was a delicate matter because of the frequent surges from Tasman Sea swells that were funneled, bore-like, into the minuscule harbor and which sent masts swinging discordantly from side to side each in accord with the draft and keel dimensions of its own supporting craft. It wasn’t Eden, the garden of, that is, but we were safe for the night.

The first order of business was to get to a telephone. I checked in with Blanche so she would know why we had made an Australian mainland landfall and to let her know that Jesse Edwards would be flying home. I also called Murray Wilson, whom I had met at the University of Wisconsin in Madison twenty-five years earlier. Oddly, he was flying to the U.S.A. the very next afternoon but agreed to

drive the twenty miles or so to Kiama the next morning for a reunion.

The next item on the agenda was to get the result of the America’s Cup encounter. I wondered if I had heard correctly when a woman behind the counter at a fast food place told me that the Aussies had won. It must have been the disbelief on my face that prompted her to reach under the counter for a copy of the September 29, 1983, Souvenir Edition of the *Sun* published in Sydney. There it was in bold green and red on the front page, “SAILING INTO HISTORY” and “Thrill of Australia II.” The newspaper detailed in page after page every aspect of the victory including the celebrations held on the national holiday declared in honor of the Australian triumph. As a sailing representative of the defeated country, I felt obligated to shake her hand and extend my personal congratulations.

Murray drove down from Wollongong the next morning for a brief visit. I doubled the time spent with him by riding back as far as Port Kembla, where he dropped me off at the Customs Office. I was promptly informed that Kiama was not an official port of entry and therefore I had, once more, broken Australian law. Two officials drove me back to Kiama for a review of the circumstances. The customs agents agreed that I would not be cited since I had entered under duress. The duress, however, was not the seeking of shelter under what could have been a dangerous situation for all of us, but the putting ashore of a distressed crewman—Jesse Edwards. I suppose the reasoning was appropriate in that we would have been well away from the Australian mainland headed for Chile if Jesse had not gotten so desperately sick. It was ironic, nevertheless, that Jesse was on board the next morning headed for Sydney after having served as our excuse for the breach of regulations by being put ashore.

The bright warm spring afternoon was ideal for getting to work on problems created by the near-capsize several days earlier. Nick and Jesse spread sodden clothes,

books, sleeping bags, and mattress covers in the warm sunshine while I went to work restoring the starboard overhead cabin handrail, essential for maintaining balance below, to its rightful location. We needed the handrail in heavy weather to keep from being thrown into the pilot berth, galley stove, sink, or chart table. It took some probing to find out that the screws which held it to the headliner had been sunk into wooden backup blocks. The original wood screw threads had stripped the mating threads in the wood blocks when the handrail was torn loose in the near-capsize a few days earlier. It was hard enough to conjure up a repair that would provide the holding power of the original installation but what I really wanted was strength beyond the original. When I searched through the items that got left on board by mistake in our hasty getaway, I found some large stainless-steel wood screws that were perfect for “locking” the handrail to the cabin ceiling. It was immensely satisfying to have the handrail restored; not only did it provide a hand hold when you were standing but it provided the only place where the lee cloth supports could be attached to keep you from flying about when you were lying down.

We took a step toward another security measure that afternoon. The eight porthlights in *Globe Star*’s cabin opened inward, which created the possibility that heavy seas taken abeam could force water through the sealing gaskets. I wanted covers installed on the outside of the portholes so that any pressure against them would tighten the seal rather than weaken it. Water, that great medium of buoyancy which makes sailing adventures possible, is wonderful spraying and splashing on the outside, but when it begins to drip and slosh on the inside it kills morale and makes life miserable. Rills of water on the glasses, trickles down the neck, occasional gushes up the sleeves, and soggy gloves can all be tolerated, if, when watch is over you can go below to reasonably dry belongings

and a dry sleeping bag. I felt it imperative, therefore, to fit covers to the opening ports. Yes, they would prevent any passage of air but in the kinds of temperatures we anticipated in the coming months, fresh air was not a priority. I found a small shop that specialized in plexiglass products and the owner agreed to make up the eight needed covers out of the Australian brand of plastic called Perspex. I delivered a brown paper tracing that afternoon and found the “storm ports” ready the following morning. When the proprietor heard that I needed a custom-sized shaving mirror, he made it up and threw it in as a bonus.

October 1, 1983, was a beautifully clear day in eastern Australia. We spent it motor-ing and sailing the fifty miles to Port Jackson, Sydney’s harbor. The entrance to the harbor between the Heads—South Head and Inner North Head—is spectacular. The Heads, colorful rocky ledges that rise about 300 feet almost vertically, stand as sentinels guarding the mile-wide approach to the harbor entrance. I snapped a picture or two but it was mostly down to business wending our way among ships, ferries, and sightseeing craft, through Western Channel, past Bradleys Head and Clarke Island, and into Rushcutters Bay where we tied up at the fuel dock of the Cruising Yacht Club of Sydney.

Whether *Globe Star* would be permitted to use space at the yacht club was in doubt. Single-handed sailors in the BOC race of 1983 had been turned away. The reason given: Single-handers violate international regulations because they cannot maintain the required twenty-four-hour-a-day watch. If, with our system of navigation, we were not breaking the rules, we were bending them close to the breaking point. After two days at the fuel dock we were assigned a temporary space with the proviso that our stay would be brief. The coolness of club officials matched what we had experienced in Cape Town. However, the editor of the club’s magazine, *Offshore*, Robin Copeland, was keenly interested in our instrument-

less voyage and interviewed me for an article that he planned to write.

The day following the interview Robin invited me to join him at a meeting of the Australian Institute of Navigation to hear an illustrated lecture by Ron Ware who was scheduled to tell of his reenactment of a small-boat voyage made by his famous ancestor, Captain William Bligh. Bligh's 3600-mile voyage was accomplished in an open twenty-three-foot boat with an initial crew of eighteen and only seven inches of freeboard. The original voyage began when mutineers on the *Bounty* cut Bligh and his supporters adrift in the Pacific on April 28, 1787. Captain Ware told an interesting story. The twenty-three-foot replica was specially built for the occasion but the starting crew of nine was not. It dwindled to three as tempers flared under enforced togetherness and rigorous conditions. Irreconcilable differences opened a gulf between the volunteers and their leader, not unlike the circumstances Ware's ancestor found himself in, as captain of the *Bounty*. Captain Ware found that bickering by disgruntled crew had changed little in the two-century span between the two voyages. There was an interesting sidelight to the reenactment. Captain Ware discovered that John Norton, who was left for dead after an encounter with natives at the beginning of Bligh's voyage, lived for a very long time after the hasty departure of his comrades. A woman from a neighboring island found him "dead in the water," revived him, nursed him back to health, and then, invoking maritime law, claimed "salvage rights." According to Ware many descendants and a well-marked grave on a nearby island testify to John Norton's complete recovery.

When I was in Hobart I received word from Blanche that she had gotten

a message from the Australian Naval Attaché in Washington issuing me an invitation to address navigation officers at the Watson's Bay Royal Naval Base in Sydney. I called Commander Oxenbauld as directed only to find out that I would have to appear sometime during the first three weeks of October, when fleet navigators were assembled for a special short course. The timing was wrong. The need to reach Cape Horn by way of Viña del Mar at the end of December precluded any stop in Sydney. As it turned out I was now in Sydney early in the three-week period. When I told Commander Oxenbauld, via telephone, that a twist of fate had gotten me to Sydney, he put me in touch with Commander John Lord, who was in charge of navigation instruction and who arranged for me to tell the assembled navigators of the Royal Australian Fleet how I managed to get to Australia without navigation instruments and how I proposed getting from there to New Zealand, around Cape Horn, and back to Cape May.

It was deeply satisfying to share what I had learned about non-instrument navigation with professionals who knew not only what problems we had to face but who understood the solutions we applied. During the hour-long presentation I couldn't keep from smiling inwardly at the incongruity of the situation. Here was an audience made up of officers who, no doubt, had been exposed to the ultimate in navigation instruction listening to a speaker who had never had a navigation lesson in his life! Apparently I was not the first circumnavigator to make an appearance at the navigation school. When I finished Commander Lord remarked, "It's nice to hear from one of you guys who is not a kook."

Sheila Cohen, mainspring of the Australian Institute of Navigation,

whom I had met at the Institute's meeting two days earlier, emerged from the audience to offer congratulations. When I "complained" to her about the titters that followed my introduction before Ron Ware's lecture, she immediately volunteered to set the record straight at the next meeting and invited me to submit a 3000-word article for inclusion in their next publication. As I turned to go I received another invitation. I would be guest of honor at a luncheon party of twelve naval officers hosted by Commander Lord. Among those present was officer Hammell, whose father Bernie was Secretary of the Cruising Yacht Club of Sydney.

Ron Copeland had pointed out the club's navigation officer, Gordon Marshall, when he interviewed me shortly after I arrived. He was sure that Mr. Marshall would be interested in my undertaking and would seek me out. I was not so sure. When I glanced at him I sensed the embodiment of the attitude that I had run into at the Royal Cape Town Yacht Club. I had a devilish urge to test the validity of my impression. The opportunity came the day after my talk at the Naval Base. As I was making my way to the club's office we came face to face in a narrow doorway. We exchanged greetings and then as we parted I turned and asked, "By the way, Mr. Marshall, do you have any scheme for finding the polar point in the southern hemisphere?" Without hesitation he shot back, "With our method of navigation, we don't use the polar point." My hunch was confirmed.

When Bernie Hammell said, "I guess you'll be leaving soon" the day before we left, pieces of a puzzle began to fall into place. His were the exact words spoken by the Cape Town Commodore just before I left Cape Town. I resorted to introspection to find out why I had evoked matching responses in situations separated by five months of time and six thousand miles of space. Factoring in the official attitude of the CYCS toward, and the rejection of, the BOC single-handers, my conclusion was that I was an irritation to the

bureaucratic frame of mind. In Cape Town the RCTYC officials perform a quasi-governmental function. They have taken the responsibility for giving instruction in seamanship to applicants for a license, called a ticket, to operate a boat in the Cape Town waters, and for examining applicants and issuing licenses. Tickets are required of any skipper regardless of his age or the size of his craft. Part of the instruction and exam covers use of the compass, e.g., variation, deviation, and compass error. By arriving safely after an eight-thousand-mile voyage without the use of the compass or any other navigation instrument, I had not only shown a contemptuous disregard for the rules but had set a very bad example for would-be practitioners of the sailing art. I deserved to be a pariah.

There were other items of business in Sydney: Some of the sails needed a few stitches here and there so they had to be hauled to and from the sailmaker; fresh fruits and vegetables, universally called "veggies" down under, had to be bought; Nick wanted more oatmeal aboard; water and fuel tanks had to be topped off; and some broad-brimmed, Australian-style hats had to be picked up at a manufacturing plant. Rom Bramley very graciously ferried me from place to place in his automobile while I attended to preparations for crossing the Tasman Sea. When I called Ron Ware the day after his talk, he allowed as how we were kindred spirits and among other things, urged me to use the heavy canvas hats that he had used on his voyage. The hat brims were underlined with a pale green material that reduced the burn-producing reflections that came from the undersides of the normal all-white hats. Fortunately, the Albion Hat Company had three left from the Ware voyage. These were handed to us gratis by Marcus Karpin, company manager.

I was shocked when I returned to the dock. While I was gone Nick had removed nearly all provisions and supplies and was in the midst of restowing them when I arrived. The items that in Greenwich had been stowed according to weight, bulk, fre-

quency of use, accessibility in an emergency, et cetera, were now being put where, according to Nick, "they belonged." I wondered if he were possessed of a Socrates-like "divine sign" or, perhaps, had a direct pipeline to Saint Elmo. I curbed my impulse to sound off but did say that it wasn't a good idea to store paints and thinners in the lazaret. When he demanded to know why, I explained that the containers were made of only lightly tinned steel which would rust through very rapidly under the saltwater bath they would surely get even though the lazaret had a tight-fitting cover. I had seen cabin-stored evaporated milk cans rust through and send a white stream onto the cabin sole in less than six weeks on the trip to Africa three years earlier. Because our galley stove required lighting with matches and burned with an open flame, volatile paint thinners in the bilge could have given us a real blast! Grudgingly, Nick restored the inflammables to their previous location and in view of the dearth of crew volunteers, I did not request the return of other items to their original storage places. It was obvious since Jesse's withdrawal that Nick had become more assertive so I backed away from a showdown that might have jeopardized Globe Star's date with Cape Horn.

On October 6, the day before Nick and I left for New Zealand, a Telex arrived from Lee Houchins, our Washington coordinator. He complained bitterly about the garbled weather information broadcast by our transmitter en route from Hobart to Sydney.

Our positions got through all right but the other half of the once-a-minute transmission was pure pi. He was convinced that the problem lay with the changeover to the boat's batteries and demanded that we use the transmitter Blanche had carried to Hobart in her luggage. Nick punched in some weather data on the replacement and a subsequent conversation with Blanche confirmed that both location and weather information were being sent out properly.

In mid-afternoon Nick and I cranked up Globe Star's engine and started for D'Albora's Marina about 200 yards away to fill the fuel tank. Before we had cleared surrounding boats Nick yelled that diesel oil was spraying out of the fuel line onto the engine. It was, pure and simple, headache time. We were in a tight spot. Anchoring was out of the question and sails would have been totally useless. Nick and I agreed that we might as well follow through. Luckily, the engine got enough fuel to push us out into the channel and back into the fuel dock that lay next door to the yacht club. The villain was an aluminum "banjo" washer damaged by salt-spray-induced corrosion. We found a new washer in our spare-parts kit and Nick replaced the old one while I set about buying oil, changing money, and paying bills. The last item on our checkout list was a call to Blanche. She told me that a radio ham, Bill Rahn, from Glassboro had reached Nick's father in Adelaide, and that Lee Houchins was still fearful lest we not transmit weather data. Our business in Sydney was finished.

Chapter 12

Across the Tasman

Even though a third crew had not “fallen into our lap” Nick and I were optimistic about our chances when we left the CYCS dock at 9:30 a.m. on October 7. Neither of us brought up the subject but I am sure we secretly wished that somehow it had happened. A half hour later we pulled alongside the Customs boat in Watson’s Bay to allow two agents to come aboard and complete exit formalities. By 11:00 we sailed past the Sydney “heads” and set a course a little south of east in a northeast breeze with full main, yankee, and staysail. Heaving swells rolled Globe Star’s deck under our feet as we got our second taste of the Tasman. Nick announced straightaway that he was feeling “crook.” Our vane gear took over the steering and I immediately hung up a large wash happy that the weather was beautiful and that there was no salt spray to doom the drying process. I had hoped to get to a coin laundry but because finding transportation was difficult elected to do the washing by hand at dockside. It would have been easier to hang the clothes prior to departure but somehow it didn’t seem cricket to demean the eminent yacht club’s premises with a laundry-laden boat.

With Jesse’s departure we had put the Chilean landfall out of our minds. Now we faced the 1200-mile-wide Tasman Sea, the northern tip of New Zealand, and then 5000

miles of the Pacific’s Roaring Forties and Furious Fifties before rounding the major pylon of our voyage—Cape Horn. Seeing the northern capes of New Zealand’s North Island was not essential in navigation terms but still desirable for our peace of mind. We aimed for a point a little south of Cape Reinga so we could use the land mass of North Island as a guide to avoid the three Kings Islands which lie about twelve miles to the north. I can’t say that I had any urge to do handsprings but I felt strongly that, given anything but a bad break in the weather at critical points, our chances of carrying out our self-assigned mission were good. Nick recovered sufficiently to eat a hearty dinner and, despite four hours of calm the next morning, by noon of the ninth I estimated that we had achieved 75 miles toward New Zealand. We had also installed the port-hole covers that we picked up in Kiama. Both the searoom and the “storm windows” gave us some protection against adverse gales. We felt ready for whatever weather lay ahead.

In the next twenty-four-hour period we galloped along on the port tack to make 115 miles but the following day in overcast and rain we were lucky to coax Globe Star twenty miles. The rain gave me a chance to soak the salt out of a very heavy Helly-Hansen polypropylene pullover. I was overjoyed with the way it dried. I hung it over the lifelines at nightfall and by midnight when I went on watch, it was ready to wear. The steering

oar of our vane gear struck an unknown object sometime before midnight on the eleventh. In the morning we replaced the shear pin with our only spare. We were not overly concerned because floating debris is more abundant near land and we would probably be able to find a substitute pin if we needed one.

Easterlies dominated the wind pattern as we struggled to put Australia behind us. Our point of aim on the New Zealand coast lay only slightly south of due east which meant Globe Star was close-hauled on long tacks. More often than not the tacks lasted half a day or more. Every day for the week following October 11 log entries recorded our beat to windward. Progress was slow. On October 17 I wrote: *Winds persist from the east even though **Pilot Charts** show only a tiny percentage from that direction. Am wondering if this is related to the El Niño phenomenon and what significance it might have for the rest of the trip across the Pacific.*

There was a positive side to the constant wind direction. Very few sail changes had to be made, which freed us for other jobs. Our solar panels were connected to the batteries below the cabin sole via a plug and receptacle at the base of the mast. Inspection revealed that corrosion had eaten away the three positive leads from the terminal. We cleaned the plug terminal, cut the wires back, reattached them to the terminal, applied a liberal amount of waterproof grease, and wondered how long it would be before we had to repeat the operation. Salt water has a tremendous capacity for corrosion. Ironically, it was a comparable corrosion of compass light bulbs, sockets, wires, splices, and connectors in the Atlantic nine years earlier that had precipitated steering by the stars which ultimately led me to the Tasman Sea where I was doing more wiring repairs.

October 18 brought a gradual veering of the wind, making it possible to sail due east. To correct for an unwanted increase in latitude we needed to sail farther to the north,

but that could wait. The change in heading turned Globe Star's bow directly into dying waves generated by the previous winds, giving us a lumpy ride that made Nick feel "crook" and me a bit off. It was Nick's second bout with *mal de mer* and my second time to feel under the weather. Lomotil had promptly shut down the diarrhea that had laid me low the first time. I had another minor problem. The polypropylene, long-style, underpants that were so desirable for maintaining body heat, even when wet, had to come off. My legs had broken out in almost solid hives and itched unbearably. The relief was immediate and wonderful but I couldn't help thinking about the difficulty of keeping warm in the high southern latitudes around Cape Horn.

Food preparation took up part of our time as we sailed eastward. My journal notes that on October 12 we enjoyed a mackerel salad made from canned mackerel bought in Cape Town and that on October 15 I made three quarts of applesauce from Granny Smith apples taken aboard in Hobart. The first "home-baked" bread of the leg came out of the oven on October 18. Nick had stocked us up on "ethnic" breads—Lebanese flat bread and a heavy, dark rye in Sydney.

[On October 18, ten days and 646 miles from Sydney, our estimated position at noon was in variance with our true position by only 5.3 miles—Our EP was two miles north and five miles east of the ARGOS position.]

Sometime before midnight on October 18 the air which had rarely moved more than twenty knots picked up to a strong thirty-five knots. From my journal entry of October 19: *It rained off and on all night and made night watch a bit dreary. New Zealand can't be too far away now and is becoming a concern in our present stormy weather. We finally got a shield [plastic curtain] made for the quarter berth so it will be protected from water that finds its way over the sliding hatch when we are hit by a "slammer."* Strong winds continued the following day,

increasing our concern about working our way around the northern tip of New Zealand. I wrote: *Would prefer lower wind speeds and quieter water as we draw near. If we are lucky nighttime sky will be reasonably clear so that we can see land approaching in the moonlight.* Windspeed cranked up to fifty knots around nine o'clock on the morning of the twentieth forcing us to furl our last remaining sail, the triple-reefed main, for fear of the consequences of a submerged sail in a knockdown. The Tasman was living up to its reputation. At noon on the twenty-first I noted: *...we are lying ahull in 45k winds, rain, and 20-foot seas. Occasionally we are broadsided by a breaking wave that hits us with the force of a freight train. It has rained off and on during the last twenty-four hours even though now and then we have seen the moon and the sun through momentarily thinning clouds. Nick and I would both feel better if New Zealand were not lurking out there in the rain and mist. Fortunately winds are from the north so it isn't likely that N.Z. will pay us a surprise visit.* The sky cleared late in the afternoon and we were able to hoist sails—triple-reefed main, staysail, and in succession the storm jib and working jib. We set a course that we judged to be twenty degrees north of east in winds of about twenty knots and managed to make four-miles-per-hour headway against very lumpy seas. Before sunset we were delighted to see the water color change from blue to green.

Because New Zealand's coastal shelf is not very wide, we knew the water color change meant that land could be close. However, we took little time making up our minds to sail toward it during the nighttime hours. We had just been hit with two storms in succession and did not want to be close to land and therefore vulnerable in case of the onset of a third. I wrote in my journal: *We believed we would be able to see any coast in beautifully moonlit skies. I took over night watch at midnight and about 0200 spotted*

Tauroa Point light. The gloom of yesterday was instantly transformed into euphoria. New Zealand was in our grasp. Our navigation, in spite of being able to see only one star, Phact, for latitude gauging, only twice during the 1100-mile crossing, was extremely accurate. Our latitude was spot on and our longitude only nine miles off.

Prudence called for getting around North Island, forty miles to the north, as quickly as possible. We started the engine and motored northward under a clear and moonlit sky. After daylight we groped our way in heavy cloud cover, rain, and mist, using swells and wind direction to maintain headings during periods of heavy rain and almost zero visibility. There appeared to be no immediate threat of gales, but nevertheless we were anxious to get in the lee of the rocky headlands that appeared now and then through breaks in the weather. There were no humans to extend a hand but porpoises gave us a tremendous welcome as did the gannets, diving petrels, shearwaters, prions, and an occasional albatross. What a joy it was to watch these vibrant creatures wheel and dive in pursuit of their livelihood. Landward the green rolling terrain invited us to stop for a closer look. Why not? Nick was all for it; I sensed the need of a dentist; and we had the time. It was agreed. We would pull in somewhere on the eastern side of North Island.

By noon on October 21 we had rounded Cape Maria Diemen and Cape Reinga and had halved the distance between Reinga and North Cape. Blue sky and a fair breeze made piloting around North Cape and the narrow northern stretch of North Island easy. We began searching the chart and the coastline for a sheltered harbor. We looked long and hard at Parengarenga but couldn't locate the range lights shown on the chart. What we saw was an entrance blocked by sand bars and filled with breaking surf. The weather was not threatening and there was no need to chance it. From the log: *Darkness had fallen before we got to the entrance of*

Houhora Harbor north of Perpendicular Point so we sailed slowly south and east in very light winds keeping the light at Cape Kari Kari in view in moonlit skies. The successful maneuvering around the rocky headlands to what was now the lee side of North Island, the mild temperatures, and light air combined to give me a deep feeling of well-being. In the early morning hours I wrote in my journal: Nick is asleep and I am 'minding the store' with the genoa and double-reefed main in light air and a gently heaving sea. A full moon and a crystal clear sky make night watch easy and extremely pleasant.

Toward morning the sky became overcast and a steady drizzle set in. It was not the weather of choice for finding an obscure inlet. We had narrowed the choices to two: Whangaroa and Russell in the Bay of Islands. Nick preferred Russell, the harbor used by most small-boat sailors. I knew of Whangaroa from reading **Beyond the West Horizon** by Eric Hiscock. His description made it sound like paradise. As the day unfolded we had to decide whether tying up at

Russell was worth spending another night at sea. Nick agreed that it wasn't. After day-break visibility plummeted to under a mile and at times to no more than a hundred yards. We passed Doubtless Bay, and were able to identify Sugar Loaf, and Cone Rock. We learned later that Cone Rock recently had claimed several lives when a yacht rammed it in what were described as ideal weather conditions. We might have missed the opening in the rock wall that led into Whangaroa Harbor if we had not spotted a sailboat that seemed to be sailing right out of the rocks. It was headed for Whangarei to the south. The crew pointed to the entrance and assured us that it was deep and safe. I noted in my journal: ...*Whangaroa Harbor, incredibly beautiful, and the most scenic spot I have ever seen.* After making the entrance we just idled along, drinking in the beauty of luxuriant vegetation on the steep hillsides. It was about 11:00 Sunday morning when Tony Henson of the fishing boat Receiver gave us a hand tying up at Fishermen's Pier.

Chapter 13

Whangaroa

David Frear, proprietor of Totara North Store, and his wife, Norrie, Postmistress of Totara North Post-office, gave us our second welcome to New Zealand. We immediately telephoned authorities of our arrival and found that the agents would have to drive eighty miles to check us in. I winced when they sealed our refrigerator and warned us against opening it. It was a warning we were more inclined to heed with each passing day as an occasional hint of the foul odors within could be detected in the cabin. I doubted that the agents had any intention of returning to unseal the mess before we left but I was reluctant to take a chance for the short time we planned on staying.

Whangaroa was not a bustling harbor. It was used by a few fishing boats and as a meeting place for locals. Among those stopping by to say hello were Bob Rout, an irrigation engineer in his mid-twenties, and Val Robertson, a teacher in a nearby school. Nick filled them in on what we were doing there while I was providing necessary information to Customs agents. About an hour after they left Bob returned to invite us to their home about thirty miles distant for tea (dinner) and showers. We accepted unreservedly but when we arrived decided, in deference to our hosts, to reverse the order of the invitation.

Nick and I thought we had died and

gone to heaven. We sprawled on thick carpets, soaked up warmth and stereo music, and took second helpings of roast chicken with all the fixings. As we relaxed in this atmosphere of good food, good music, and good company, Bob and Val told us about themselves and listened intently while we related our story and plans. Nothing was said about a third hand then or during the forty-five-minute ride back to the harbor, but early next morning, New Zealand's Labour Day, Bob showed up at the dock and politely offered to join us if we wanted a third crew member. I looked at him and said, "Bob, you know we are sailing completely without instruments, don't you?" His response was immediate: "You got this far, didn't you?" Nick and I exchanged glances and shook Bob's hand. Without advertising or formal interview we had recruited the outstanding sailor of the entire seventeen-month odyssey. Jesse's replacement had "fallen into our lap." It took Bob a week to get a leave from his job with Fruitfed and get his affairs in order. When I looked in on a farewell party given by his fellow office workers I couldn't help noticing moist eyes as his friends said their goodbyes.

When I was at the University of Wisconsin for the academic year 1957-58, I made friends with two fellow students from "down under." One was Murray Wilson who came to visit during my brief stop in Kiama. The

other was Ian Sage from Auckland, N.Z. To my astonishment the only directory I found in a telephone booth near the dock was for Auckland, 175 miles away. Incredibly only one Sage was listed. It was I. V. Sage. Because there was a problem making a call from the coin telephone, I asked Bob Rout to call the listed number. Ian's son Michael, 19, had never heard of a Marvin Creamer but asked his father about me when he returned from work in the evening. Ian was flabbergasted. He told me he was a secondary school principal married to Sonia, an art teacher, and that Michael had a sister Nina, 15, who was an aspiring ballerina. He said he would try to see me before I left.

When I was returning to Globe Star after the call, I saw crayfisherman Sanderson unloading crates of "crays" onto the pier. He asked if I had ever tried them and when I answered, "No," insisted that I take two for our evening meal. He recommended "drowning" them in freshwater before boiling them for twenty minutes. Apparently the freshwater immersion is a humane way of killing the crayfish before they are placed in boiling water. The crayfish or lobsters lack the claws of Maine lobsters but taste essentially the same. Fresh-caught and fresh-cooked, they were delicious. Nick and I were in heaven again. The next day I dug out a six-liter pack of Moselle wine that we had picked up in Australia and delivered it to Mr. Sanderson. A day later he brought over two more rock lobsters and we feasted again.

On Thursday, October 27, I tried hitchhiking the twenty miles to Keri Keri to keep an appointment with dentist Doctor Thomson. I was somewhat hesitant but it was the only means of transportation available. The plus side was that it gave me the vehicle in which to get acquainted with grass-roots Kiwis. A farm couple took me the entire distance in a green sedan that bore all the marks of a hard rural life. They were headed into town with their teenage daughter for a week's worth of groceries and seemed

pleased to be able to do a favor for a "Yank." The momentary jolt that I had felt in my tooth five days earlier was not a product of my imagination. Dr. Thomson found a cavity that was in urgent need of filling. While in town I splurged on a haircut, found a pair of undyed synthetic long johns, and bought oil of cloves in case of another toothache, a plastic reel for a fishing line, stainless steel bolts, a tea strainer, a large screw driver, and some groceries.

The latter did not include any addition to the ten gallons or so of oatmeal that we had on board. Nick took care of the omission on Friday when he went to Whangarei with Bob. It was my turn to loosen and tighten Globe Star's tethering lines in response to the twelve-foot tidal rise and fall. While I was tending the lines Sara Cavanaugh, from the American yacht Speculation, stopped by in the yacht's dinghy to invite me to dinner that evening. She and her boyfriend were crewing for her father, Paul, in a leisurely sail around the world. They were from Newburyport, Massachusetts, and were familiar with my no-instruments voyages. Sara picked me up in the early evening and left me to discuss world and sailing matters with her father while she prepared the meal. Speculation was quite comfortable and the food delicious. It was a nice respite from cooking and Globe Star's cramped quarters. Paul confided that normally he was in charge of the galley and we agreed wholeheartedly that relations aboard were much better when the skipper did the menu-planning and cooking and thereby managed the provisions inventory in an even-handed manner. It was a most enjoyable evening shared with "neighbors" from home. I felt a touch of nostalgia when Sara rowed me back to my home away from home.

The day before we left Whangaroa I abandoned the quarter berth that I had occupied since leaving Cape May. When Nick saw me moving my personal items, he told me that Bob should be assigned the pilot berth which was above and offset out-

ward from the portside settee berth where Nick slept. He was afraid that the quarter berth would be too wet. I had endured a few drenchings of salt water in it but felt that the plastic curtain, similar to a shower curtain, which we had installed on our way across the Tasman would shield the bunk in all but the most severe conditions. I felt we needed the pilot berth as a staging area because it was at eye level and well lighted. Moreover, almost all of our provisions, packed in heavy plastic five-gallon containers, were stored directly below. If someone were asleep in the pilot berth, he would have to be disturbed whenever we wanted to get at the provisions. To me it made much better sense to put Bob in the quarter berth and move him temporarily on occasion if conditions there became intolerable. Nick got hot under the collar. Not realizing that his strong bargaining position had collapsed with Bob's arrival, he continued to argue vehemently. I would have preferred logical persuasion but it was of no use. Finally, I said, "Nick, Is this your way of telling me that you don't want to go any farther?" He

stared at me and said simply, "No, It isn't." Five thousand miles away and six weeks later he reminded me that I had "bludgeoned" him that day.

I reported the incident to Blanche when I made my "We're-leaving-tomorrow call." She wished me well.

Ian Sage arrived about ten Sunday morning, October 30. He knew our time together was limited but made the trip anyway. We sandwiched in twenty-five years of catching up in the three hours before sailing time. He brought brochures of Auckland and New Zealand and pictures of his family. Nina was striking in what Ian said was a borrowed tutu. He volunteered to process films and send the finished pictures to Blanche. Others in the "dock committee" gathered to see us off were Bob's parents, Ted and Isabel Rout, Val Robertson and her son Luke, age nine, Graham Rodwell, and Robert, Maggie, and infant Rosie Reynolds. Bob's friends showered us with bushels of citrus—oranges, grapefruit, and lemons. **There would be no scurvy on this leg!**

Chapter 14

Around the Horn

It was about one in the afternoon when we raised the yankee, cast off our lines, and slowly glided toward the inlet six miles away. A few days earlier we had met a native New Zealander at a sawmill where we went looking for a long plank to fend off widely spaced dock piling. The man, a middle-aged Maori, wanted to hear all about our voyage and said he would give us a going away present when it was time to leave. At that time we did not know when that would be, but somehow he found out and approached in his outboard, the "Happy Huka," just as we pulled away from the dock. He, too, headed for the inlet and disappeared in front of us. By the time we arrived, he and a young friend were waiting for us with a freshly dredged bucket of huge scallops. We were hardly out of the inlet when Bob, an old hand at preparing scallops, had them cooked and on the table. They were a real treat! We passed south of Stephenson Island and in a choppy sea set a course to the southeast in order to clear Taheke Rock.

It was time for inventory and prospect. There was little doubt that *Globe Star* was a survivor. She had weathered North Atlantic storms, ghosted through Saharan dust, kept her equilibrium in steep seas crossing Agulhas Bank and in the pooping waves of the wintry, gale-ridden Indian Ocean, and had held onto her spars in three Tasmanian knockdowns. I had a good feeling about our

chances of getting through Drake Passage safely. The sun was speeding into the southern hemisphere bringing warmer days but, more importantly, a shortening of the night period. Barring a major catastrophe, it seemed likely that we would be able to sail the 5000 miles to Cape Horn while the sun was taking 53 days to reach Capricorn. True, we would be spending a lot of time in the roaring forties, had yet to sample the furious fifties, and expected mountainous seas where the current runs strong over the sill between Antarctica and South America, but we would sail it one day at a time and handle problems as they came up just as we had for the past ten months. In our favor was an able and motivated crew. Having grown up close to the Pacific, Bob and Nick both had fantasized about crossing it someday to round the fabled Horn. That someday had arrived.

In a way our problem at the Horn was less acute than the one we faced approaching Tasmania. There we had to close the land to re-provision but at the same time had to avoid being blown on as our vulnerability increased with decreasing sea room. Clearing the Horn was a necessity, but although seeing it was highly desirable, were we to pass it unseen we could continue downwind long enough to ensure clearing and then work our way back to South Africa, a landfall we had made previously. Shag Rocks, east of South Georgia Island, might

present a problem, but in late December and early January we would have long hours of daylight to scan the horizon. Although our main aim was to clear the southern tip of South America, we hoped that we could pick up some kind of longitudinal clue—steepening waves, bird or sea life, or water color—that would enable us to find the Falklands or make our way safely around Shag Rocks.

Our “float plan” as we worked our way around Stephenson Island into the open sea was to sail east until we had passed Cape Runaway and East Cape and then angle southeastward into the roaring forties to pick up steady winds for the Pacific crossing. We would ease up on our southward dip if we ran into severe weather. As we sensed ourselves nearing the South American coast we would move smartly southward and then level off to straight east for the run through Drake Passage past Cape Horn. At the turning point we planned to find the required latitude by noting the intensity of twilight at the time of the December solstice. If we were far enough south to clear the Cape, the sun would set, twilight would occur, and the sun would rise with no intervening period of complete darkness. My “homework” for the leg was to be accomplished during the dark-to-daylight watch each morning. It consisted of developing a set of mental keys for judging the quality of twilight by observing the filling in of shadows in wave and wavelet troughs as the sun approached the horizon from below the surface. The keys were aimed at judging twilight under deeply overcast, lightly overcast, and clear sky conditions.

In spite of a broken tiller and a badly damaged self-steering oar, the ensuing sail became a “jolly romp” on the ocean. Life on board became a blending of rhythms paced by the rolling motion of downwind sailing. Light air and gales passed over us with predictable regularity and routines of cooking, eating, sleeping, watch keeping, and sail handling patterned our daily lives. We felt sorry for all the people on earth who would never know

the sheer joy of a small-boat ocean crossing.

Bob seemed happy to be aboard. In the quarter berth close to the hatch he was near the sea that he loved. Early in the morning of our first full day at sea he put out a lure and soon brought in a fifteen-pound, blackfin tuna. I processed seven pints in the pressure cooker, fried all we could eat, and had a small piece left for tuna salad. I spread salad dressing over the tuna steaks and sprinkled them with bread crumbs before putting them in the pan. We all agreed that the catch was delicious. I noted in my journal that it tasted a lot like halibut. We had a minor crisis later in the day. A wad of toilet paper got stuck in the marine head and when it finally moved along it jammed in the seacock so that it would not completely close. There was no immediate danger but it had the potential for flooding the bilge and perhaps more.

My two “down under” companions enjoyed food and were fun to cook for. I made pancakes for breakfast on November 1 from an olio of baking mix, buckwheat flour, white flour, baking powder, baking soda, an egg, sour milk (salvaged from the sealed fridge), and water. Nick really went for them. He ate at least a dozen and kept saying “These are bloody good.” There was enough batter to make all he could eat, which he said made him feel guilty. They were the first pancakes ever for Bob. He quit at six.

There was a commotion in the cockpit the next morning, November 2, and when I looked out Bob and Nick had landed two small tuna. While they skinned out the fillets I scrounged up seven pint jars and although the sea was quite lumpy the pressure cooker stayed in place on the gimballed, two-burner stove and all seven jars sealed as had the seven two days before. For the evening meal, or “tea” as it was universally called in Australia and New Zealand, I fried the tuna steaks dipped in egg and bread crumbs and served them with fresh-squeezed lemon juice. The next morning was a repeat. It was November 2 for the second morning in a row and again there was a commotion in the cockpit.

The fuss was over the first of two fifteen-pounders for the morning. Skinned out the two accounted for about eighteen pounds of meat. What on earth would we do with all of it? Of course, we could keep some in the fridge for a few days to eat fresh, but the rest of it? Ron Ware, William Bligh's descendant, provided the answer. When I attended his lecture in Sydney, he reported that tuna were easily caught in the Pacific and recommended cutting the tuna into strips and drying them in the rigging. Bob and Nick cut the meat into narrow strips, strung lines back and forth between the two backstays, and hung the catch up to dry.

Now back to the two November seconds. It was during the night of the first November 2 that we reckoned we had crossed the International Date Line so we labeled the two identical dates November 2A, and November 2B. We had run eastern longitude up to the maximum of 180° and had begun a traverse of western longitude that decreased daily from a maximum of 180° as we sailed eastward. When Charlie Layton, Blanche's brother, queried the government computer in Washington from his desk at Westinghouse outside Baltimore, he was astonished to see our longitude decreasing. He called Blanche and said, "Marv has run into trouble and is headed back to New Zealand." Blanche immediately called Lee Houchins, our Washington coordinator, who promptly gave her a refresher course on the earth's grid system.

About four o'clock on the morning of November 2B I got a good look at Phact during its meridian transit and at noon judged our latitude to be 35° 14'S. The daylight hours brought light winds and relatively smooth seas.

It was time to get the wad of paper out of the seacock. Bob, the irrigation engineer, had given the problem some thought and proposed that we connect the intake line of our heavy-duty, hand-operated bilge pump to the line leading to the seacock, then pump to clear the line by reversing the flow. It took a

little doing to unbolt the pump from the boat frames and rebolt it to a temporary plywood mounting within reach of the clogged line. Because we had been using a bucket since the stoppage had occurred, it was only our breath that we held when Bob gave the bilge pump a few strong strokes. In seconds the wad broke free, the head was restored to service, and we were relieved.

Bob and Nick shared some strong opinions about food that at times I found puzzling. Potato skins, for example, were *de rigueur* but apple skins were taboo. The only fresh potatoes we could get in Australia were pockmarked, and dirt-grimed. These had to be served with skins in spite of ingrained soil. After being badgered about the potatoes I was sure apple skins would be a must. Not so. Nick nearly threw a fit when I served skin-embellished applesauce. In Tasmania Jesse told me that he did not care for oatmeal, long a staple on my boats and one that Nick ordered up in considerable quantities in Hobart, Sydney, and Keri Keri. When Nick in his restowing effort ran across the Weet Bix that I had bought for Jesse, he asked bluntly, "What's this shit?" When I explained that Jesse didn't care for oatmeal, Nick told me in no uncertain terms that Weet Bix was junk and that I was never to feed it to him. A week out of New Zealand he began eating his words. He announced summarily one morning when I asked him if he wanted oatmeal for breakfast, "I don't want any more of that shit!" When I asked him what I was going to do with all the gallons, perhaps as many as fifteen, of oatmeal we had put on board, he looked at me with unblinking, gray eyes and blurted out, "Feed it to your next crew." His standard breakfast from that time on was a bowl of Weet Bix. He did, however, eat some oatmeal daily—in his daily bread. It seemed a shame not to make use of this commodity we possessed in such abundance so I incorporated it into the bread recipe. Mixed in at the ratio of one part in six, it made good-looking, tasty, and nutritious loaves.

Neither Bob nor Nick liked to eat the commercially canned or the home-canned beef we had stowed. They spoke of protein poisoning, a term, I presumed had come from a commonly read, perhaps non-mainstream, magazine. As the cook and menu planner, I would consult with them each day about the entrée for our evening meal. When fish was available they would choose it not only for dinner but lunch and sometimes breakfast as indicated by excerpts from my journal. November 4: *Tried baking tuna last night. Even though I put some of the oily meat in with it, it was dry so after fried tuna two nights in a row and then baked tuna last night, we will have fried tuna again tonight. In the meantime we have had tuna salad for lunch three days in a row, and have sampled the drying strips hung up yesterday. Nick and Bob seem to relish it but I'm not too crazy about it—dried, that is.* November 6: *Even though we've had a lot of it, the fried tuna last night was good. Served it with fresh mashed potatoes, stewed tomatoes laced with sauteed onions and garlic, and boiled onions and carrots. Steamed about two pounds of tuna this morning. Made salad from half of it for lunch and will make fish chowder for 'tea'.* November 7: *Fish chowder went over big last night. We all had a small bowl of the leftovers for breakfast and will have a repeat by popular demand for 'tea' tonight.* And November 8: *Finished the fresh tuna in chowder last night. Still have dried strips and fourteen pints.* November 13: *Tuna again today! It was bluefin this time—somewhat different from the Atlantic bluefin. It must have weighed about 18 pounds—big enough so that we retired the lure for a day or two until we catch up. Although the fridge went on the blink a week or so ago, it is cool enough now for the meat to keep several days. We had tuna salad for lunch but the steamed meat was quite chewy compared to the blackfin. Dipped it in egg and bread crumbs (really glad they got put aboard) and fried it slowly with a lid on. We*

all liked it better than we did the blackfin fried. Served it with tartar sauce (India relish and salad dressing) mashed (fresh) potatoes, and stewed tomatoes (peeled tomatoes with sauteed onions and garlic added). Our dessert was the second half of the apple pie I made yesterday. It looked and tasted great.

November 20: *Made slumgullion again for 'tea'—tuna (ours), peas, mushrooms, elbow macaroni, and a touch of olive oil. It got raves but I find it so-so.*

My journal suggests that we did not live by tuna alone. November 4: *Made a pot of applesauce. Didn't have a strainer so peeled the apples. They are Granny Smiths and are excellent cooking apples. It will be nice to have some fresh applesauce. The oranges we got in Australia and the oranges and grapefruit we got in New Zealand are very good eating. We had lots of them and have three or four a day apiece. I chilled some cokes in the fridge today. They tasted good on a warm day.* November 5: *Baked bread this morning and Bob asked to use the hot oven to make scones (biscuits). Then I tried an apple pie. It looks and smells O.K. More tomorrow. Used some of Bob's scones with freeze-dried strawberries to make strawberry shortcake for lunch.* November 6: *The apple pie went over with a bang. This afternoon Nick offered to do extra night watch for an extra piece of pie (We ate half last night). The filling could have been a little juicier but otherwise it was O.K.* November 7: *There will also be a repeat of apple pie. The guys are 'nuts' about it! Really talk it up. Used a piece of plastic pipe for a rolling pin which worked pretty well. I was able to get the top crust on in one piece—a major accomplishment.* November 8: *Apple pie continues to be a major topic of conversation.* And November 9: *Made another apple pie today when the oven was hot from baking bread. 'Apple Pie' is the main topic of conversation. Because of the fascination with apple pie and the conversation it generated, the Pacific Leg came to be known as the "Apple Pie Leg," a term which, however, could in no way be interpreted figuratively.*



Marv with pie and loaf of bread baked on the "apple pie leg" in the Pacific.

There was another kind of pie—pizza—that became a favorite. What I learned from Mrs. Hardiman's recipe was that the pizza base is essentially bread dough. I had been baking bread at sea for ten years so that part was no problem. It was just a matter of getting started. That happened on November 13 as shown in my journal for that date: *Spent a big morning in the galley making the fourth apple pie within a week and, for the first time ever a pizza. Made topping of stewed tomatoes, canned mackerel, onions, and garlic. The base was white bread dough. The guys went ape over it. Came back for seconds and even a small third!* Another entry, November 15: *Bob wanted to learn bread-making so I worked with him making two loaves, then we made a tuna pizza with fresh tuna and spaghetti sauce with sauteed garlic and onions added. Tried pre-baking the dough a bit before adding the topping and didn't let it rise so much as the last one. It couldn't have been better.* And on November 19: *Too big a day in the galley yesterday to make a write-up. Bob gave a hand and we baked two loaves of bread, an apple pie, and a big tray of pizza. Used some of the blackfin tuna that we had canned a week or so ago in the topping along*

with some tomatoes, spaghetti sauce, onions, garlic, and Parmesan cheese. Again it was good. Topping for the last pizza of the Pacific run made on December 12 included oregano and chili powder.

When Bob asked to be included in the crew he figured it would take nearly a week to get a leave from his job and make necessary preparations. Although Nick and I were itching to get going, we believed that with a third man along we could more than make up the "lost" time by making more frequent sail changes and thereby keeping sail area better adjusted to prevailing conditions. Journal entries bear out our belief: November 7: *Ran downwind this morning with boomed out genoa to starboard and poled out yankee to port. Did about seven knots for a while, then replaced genoa with working jib. We are still running downwind with 18-20 knots of air but are doing only about five knots under reduced sail. We're having much less of a sleigh-ride, however. We have become a team for sail handling, etc. As we planned when Bob signed up, sail area is increased and decreased with timeliness so that the boat is sailing close to maximum safety and efficiency most of the time. We all feel the pressure of keeping our 'date with the Horn.'* November 9: *In mid-afternoon we are doing about four knots with poled out yankee to port and poled out working jib to starboard. Nick and Bob are doing a good job of keeping sail area adjusted to sea and wind conditions.*

[By November 8, ten days out of Whangaroa, we had covered 890 miles. Our estimated latitude was in error by 22 miles and our longitude by 120 miles. We placed ourselves 122 miles WNW of our actual position.]

We got our first taste of the Southern Ocean's southwesterly swells on November 10. These are the ones whose energy, compressed by shoaling water, knocked Globe Star down twice as we neared Tasmania in midwinter gales. In mid-spring and in light air their chief mischief was to dump the air out of the sails

and make them “bed sheet.” This meant that we would sail for a few minutes and then bang for a few. By this time the air had become noticeably cooler. I noted in my journal that I added an extra sweater to keep warm on this partly cloudy but pleasant day.

The taste of swells was not to be joined by the taste of dried tuna. I looked out of the hatch and saw that the dried strips had disappeared. Bob was on watch and out of view so I asked Nick, lounging in the bunk next to mine, “What happened to the tuna?” His answer was short: “Bob threw them overboard.”

“Why did he throw them overboard?”

“I don’t know.”

That ended the conversation. I suspect, however, that Nick knew why. Some of the strips glowed in the dark like the radium dial of a watch. I am sure that is why they were jettisoned. Both Australians and New Zealanders have strong feelings against any kind of radiation. Protesters greeted nuclear-powered ships that entered their waters and ultimately New Zealand banned such ships from their shores. I did not pursue the topic with Bob. The small cabin of a sailboat in the roaring forties of the southern Pacific Ocean did not seem to be the appropriate arena for an argument over the irretrievable strips. Besides, we had other “fish to fry.”

From my journal of November 13: *Bob was putting up the chute when I went on ‘night’ watch at dawn this morning. It pulled us along between four and five knots all day when otherwise we would have been lucky to be doing two knots. He already had the lure out which Snowy Corbett’s ‘mate’ gave me the night we had dinner with him and Iris. We are in the same latitude as southern Tasmania and I had rigged the lure yesterday thinking it might perform well in the colder waters because of the different species found there. The fresh fish is very appealing. Shortly after we landed a fish we got a good look at some whales even though they did not come very close. It was the first sunny day we’ve had for a while so we spent a lot of time on deck...*

There was a lot of joshing, ablutions all around, and picture-taking. I finally got the Nikonos out, read the instructions, put film in and shot some pix of Nick (I’d be embarrassed to show them!) and the chute. I needed the wide angle of the Nikonos to get the chute in. Nick may have put on weight. His cheeks (face) look quite plump. Apparently the tuna-laced diet agrees with him and I’m sure the same could be said for Bob and me.



Bob Rout, left, and Nick Gill hang tuna strips for drying. This technique was suggested by Ron Ware, eighth-generation William Bligh descendant.

Winds were becoming stronger and more consistent. Our estimated position at local apparent noon on November 14 ... was 43° 41' south and 158° 44' west. We were gradually working our way south but were concentrating on reducing our longitude, i.e., moving eastward. I noted in my journal of November 14: *We are aiming for c.47° south where we plan to sail east until we get to c.100° west where we will begin to work our way south to*

c.57° south to clear Cape Horn. And the next day after an estimated run of 136 miles: We are really pounding out the miles! And in the right direction. Log says we are about 45° south and we have decided with good air to head east for a while. If air lightens we will angle off to the south. Right now c.1600 we are doing about 5k east with the yankee and triple-reefed main.

In the same entry I wrote: We have begun to read the instructions on transmitter battery replacement. The indicator light is growing weaker by the day. Our backup transmitter is ready to go on ship's batteries but it garbles weather information in transmission. The next day I observed: Bob and I replaced the batteries in our 'good' transmitter this morning and Nick just punched in weather and position information. When he turned it on the green light indicated a strong signal was going out. We continue to belt out the miles, which makes us optimistic about making our schedule at the Horn. Our position is shaky because of persistent cloud cover. Haven't got a latitude sight for quite some time. It isn't serious, however. We feel certain we are running nearly east and believe we are close to 45° south. The same night Bob got a look at Puppis and estimated that our latitude was between 45° south and 50° south.

As we slid southward into the roaring forties there were perceptible changes both outside and inside the cabin. Winds had shifted from northerly to southerly and strengthened. They brought cold crisp air from the direction of Antarctica that occasionally gave us a patch of blue above. On November 17 I recorded the changes in my journal: Finally got some 'clear' skies. At least we can see the sun between some white and occasionally white-fringed, gray clouds. Wind is from the south and quite chilly. Got into a fuss with Nick last night. Am getting a head cold and wanted at least one of the hatch boards in to stop some of the 'gales' circulating through the cabin. When I woke up with a stopped up sinus, I asked Bob to put the lower hatch

board in and he couldn't find it. After some commotion and an expression of fear that it might have been 'popped' overboard in a semi-knockdown that we had endured, Nick woke up and said he had put it in the cockpit locker. I was dumbstruck for a second but soon recovered and let him have it. What if we were rolled over in the heavy weather? We would surely be engulfed (I said drowned) by the water pouring in and the hatch board totally inaccessible. I've made it clear before that I want at least the bottom board in when it is cold and the sea is rough and I didn't hesitate to let him know that he was countermanding instructions. I don't suppose I should have come down on him quite so hard but I felt that he had compromised our safety and didn't give a damn about my head cold and request for less cabin circulation—I was really burned up! I have [now] cooled off and so has our communication.

By mid-November the winds which earlier had often had an easterly component got behind us to propel us rapidly toward our goal. I noted in my journal on November 19: We calculate that we made 3 1/2° [150 miles] of easting yesterday. The roaring forties are living up to their reputation. In a week we should be half way from New Zealand to the Horn. We pore over charts almost daily checking average wind speeds, direction, and revising tactics on approach, etc. We keep wondering if the El Niño phenomenon will affect us by altering the usual wind patterns in the vicinity of the Horn. I noted the next day: We are grinding out the miles across the Pacific. Bob just replaced the staysail with the working jib—an indication that the heavy winds are abating. Nick went out to give Bob a hand. They work well together. Later they teamed up to give me the night off. Bob fixed 'tea'—veal in sauce over mashed potatoes with carrots and onions. Dessert was apple pie. Nick did the dishes. It was nice to relax. The severe bouncing was beginning to wear me down... It's a day of sunshine and low, puffy, cumulus clouds. The

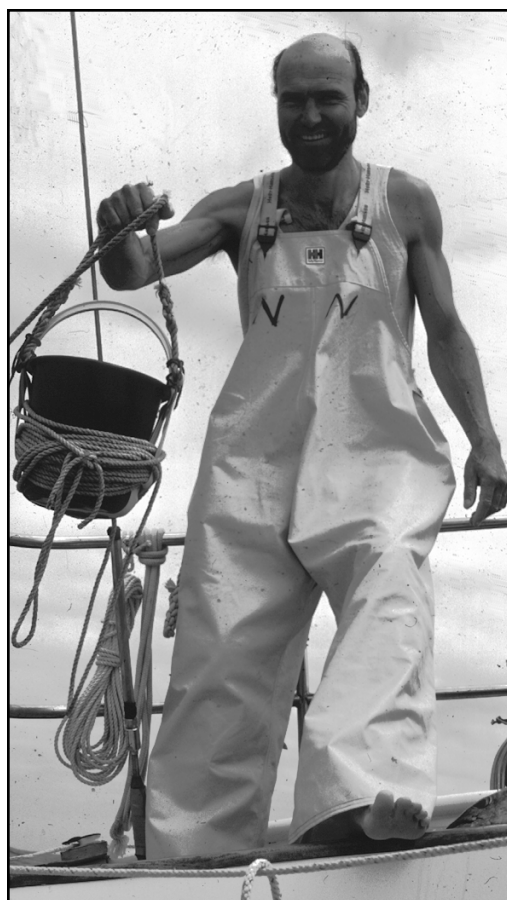
wind has moved from south toward southwest and is less squally. Our morale is good when we see some sunshine!

The rhythms of the traveling weather systems did provide an occasional day of diminished wind speed. The following day was just such a day: We are out of gales for a change and find it very pleasant but miss the mileage. Made yet another apple pie! Tried using sunflower seed oil in the crust. Fifty degree cabin temperatures make oleo somewhat hard to use.—Later—The oil shortened crust turned out fine. I may be able to use a trifle less oil but it made the best crust so far. Served chili con carne for the first time on this leg. It was good and the guys had second helpings. Didn't have stewed tomatoes so sauteed onions and garlic and included them with mashed whole tomatoes.

The lighter winds brought easier sailing and often longer journal entries, as the one of November 22: It has been a dismal, cool, cloudy day with drizzle and only an occasional hint of the sun's location to give us direction. Even so I took a short bath in the cockpit—temp. 56° F—and hung my undies up for airing. Managed to get them sprinkled a bit but they were freshened and will dry in the cabin. Much discussion today about our approach to the Horn, etc. In view of the strong southerlies of the past week that would have precluded any southward movement, we have decided to take advantage of any southwesterlies to easterlies and move southward and eastward whenever we can. This afternoon with the 15k wind nearly west we are moving southeastward at about 5 knots.

Pilot Charts and the British Routeing Charts show fewer gales at the latitude of the Horn than farther north so it seems sensible to work our way down if we can stand the lower temperatures. I find that the zipper in my sleeping bag moves toward my head a little more each night as we get into cooler and cooler latitudes—Bob and Nick have just played an after dinner game of draughts (checkers) in the cockpit. They use Bob's mag-

netic board and pieces. Of course the pieces adhere to the steel boat and it looks 'cute' to see the pieces sticking along the vertical cockpit seat backs. Am going to sack out early tonight—maybe before sunset—to be ready to go on watch at 0200. Didn't get my usual nap today. Was busy finishing the rough draft of the article about the Cape Town leg for **Cruising World**. The water has been so rough it is going to take some effort to copy it legibly and work all the changes into the proper places. Still the hardest work is done and I am glad to have it roughed out.



Nick Gill shows what happened to his neatly wrapped bucket after one dip.

Seas began to build again late on the twenty-second. November 23: We are romping along on a broad reach in what appears to be

the beginning of another gale. At least we are making good time and are headed in the direction we want, c.SE.

My log shows that we sailed at six knots for fifteen hours with the working jib and triple-reefed main, then four knots for nine hours with trysail, working jib, and finally, just the storm jib alone. We estimated the wind speeds at a steady thirty-five to forty knots but with sustained fifteen-minute gusts of forty-five and fifty knots. On Thanksgiving day I noted: *This is not one of our better days. We are thankful that our two close calls—one that broke the Dan Boy [man overboard] pole—did not result in a complete knockdown or roll over. We have been broad reaching—nearly running—on the starboard tack since before dawn and there were some dangerous cross seas until the seas accommodated to the new speed and direction of the wind. I thought of making a pumpkin pie for the ‘holiday’ but wild seas and careening boat have reduced the menu to Scotch Broth, boiled potatoes, and apple pie. Spent a lot of time thinking about past Thanksgivings and wondered how things were going at home this year.*

The “holiday” meal was what I have already defined as a three-step meal. Meals according to my scale were one-step, two-step, or three-step. The numbering bore little relationship to the complexity of the culinary effort. If anything, it was an inverse one. I could never bring myself to use a restraint while working in the galley. I preferred to brace my left foot on one of the companion-way steps. Moderate seas could be accommodated to by using the bottom step, hence the designation one-step meal. As the seas increased my left foot went to the second and ultimately to the third. I probably looked a little odd with my left leg level with my pelvis but the position provided excellent protection from the sudden lurch that could result in bloodied flesh or broken bones. Dr. Ed Gibson got just such a jolt two days before our return from the African voyage in 1980. He suffered

three broken ribs when he was thrown from the galley against Navstar’s chart table.

[On Thanksgiving day, November 24, we were 2695 miles from Whangaroa. We had overestimated our latitude achieved by 127 miles but had underestimated longitude made good by 221 miles. Our estimated position lay 251 miles southwest of the position fixed by satellite.]

The Thanksgiving Day storm ended before midnight and conditions for good sailing and good cooking returned: *Another apple pie! Bob is making a soufflé which he’ll serve with baked potatoes.—We’re surfing down a following sea in a stiff northwester. May be making seven or eight knots but will have to reduce soon because of yawing with our double head rig—yankee and working jib. Water temperature today was 10C (50° F), the lowest so far on this leg. Gales were not far behind. The log for November 26: Sailed downwind with poled out head sails during the period. Began with yankee and working jib, then working jib and staysail, then working jib, and finally staysail and storm jib. Gale conditions after c.1700 and up to noon (and beyond). Heavy seas with cross waves and breaking crests. Waves to 25’ and winds 35k+. Speed 7-8 knots. Heading between 120° and 135°. EP at noon 49° 21’S. 127° 58’W. In the early afternoon I wrote in my journal: Right now, c.1400, the wind is easing and we are yawing and rolling downwind at about 7 knots. Sleeping is a little tough rolling downwind but does provide some respite from the discomfort of being physically assaulted by the interior of the cabin and the strain of wondering when a pop or a bang will usher in a new problem.*

Constant motion is something that takes some getting used to and despite the fact that dead calms occur in the middle of the ocean, the sea always manages to make you aware of its presence by heaving—even when the surface is glassy calm. The latter state can be the most aggravating because you don’t expect to be thrown off balance by a sea that appears flat and because you feel that you

should be rewarded with forward movement for enduring the boat's continual gyrations. The best way to adapt to the churning that lasts weeks and months at a time is to approach it with a degree of physical and mental flexibility. The old-time sailors talked about getting their sea legs. I like the term "rubber knees." Essentially, it is an attitude of tentativeness, a way of knowing that the deck may change position between foot lift and foot fall. One hand for the boat is the rule. It protects against the abrupt shift that could send you sprawling. Swaying with the motion and letting it flow through the body is another way of coping with what at times resembles living in a giant tumble-action washing machine.

Staying asleep is trying under most conditions but especially difficult sailing downwind in gales or in a seaway created by dying winds. As the boat rolls gently or quickly from side to side the body mimics the boat's motion and must be protected from an unceremonious dumping onto the cabin sole by a restraining device. Sometimes these are wooden boards, called bunk boards, but on *Globe Star* we used lee cloths. These were made of heavy, fifteen-inch-wide sail cloth and when needed were snapped along their lower side to the outer edge of the bunk and held upright by light ropes threaded through grommets at the top edge and then secured above to longitudinal hand rails. In heavy rolls you braced yourself the best you could, often by lying on your side with your knees wedged against the canvas. It was interesting to watch a fellow crew member sleep. As the boat pitched and rolled, arms and legs would extend or withdraw as needed to maintain balance and position all the while the sleeper was totally unaware of any physical activity.

Getting to sleep rolling downwind is another matter. In the beginning you have to deal with a water-filled balloon sloshing around in your innards. Your mind suggests that it isn't going to happen but reminds you

at the same time that you're not going to make it if you don't get some "shut-eye." After being at sea a while you develop a strategy to deal with a body that finds being catapulted from one side of the bunk to the other antithetical to "falling" asleep. Timing is all-important. You lie, relax, and think sleep until you feel ready to drop off. You sense the rolling motion, time the rolls to each side, and then let go as the boat stands upright in the middle of a roll. If you're lucky you'll make it the first or second time. If you miss twice, chances are you're due for a throbbing head and a long, miserable, wakeful period.

The period of gales was followed by the inevitable "breather" as recorded on November 27: *Now we're slatting in almost a dead calm and dying sea. Fifteen-foot swells are banging the sails against the shrouds and stays. However, in between it is very peaceful and in sharp contrast to the wild sailing of the past few days. We have been looking forward to the half-way mark in longitude between Whangaroa and the Horn and decided last night that today would be the day. We are having a holiday. It is a calm, pleasant day for our picnic—potato salad, crushed hot corn, deviled eggs, and fresh white cake (from a mix) with chocolate icing. Bob pitched in and we had fun mixing the cake with the electric drill and getting the meal 'organized.' Tonight we'll have baked beans, perhaps scones, and more cake & maybe applesauce. While Bob was combing his hair and beard this morning he lost his combination comb & brush overboard. We doused the genoa, cranked up the engine and in spite of fifteen-foot seas and losing sight of it, we were able to locate it and on the second pass retrieve it. We figured it was good 'man overboard' practice.*

Light air continued the next day: *Sailed all night in cloudy, rainy, cold weather but just after noon sun came out and we spent a very pleasant afternoon battening down the cockpit grating so we will not lose the life raft in the event of a rollover. Barely made steerage way in a heaving sea and a flapping*

chute. On the twenty-eighth the wind picked up toward evening and we flew downwind, first with the chute and then with a double head rig in which from time to time a larger sail was replaced by a smaller one as wind speed rose. When we raised the working jib after dark, the leech was torn when it got caught on the hanks of the staysail. Nick made the necessary repairs after daylight.

Journal notes for November 29: *Our log shows our latitude to be 51° 08'S but we don't believe we are that far south. We've been plagued with weeks of cloudy weather so our estimates of direction have been inaccurate and nighttime latitude sights have been impossible. We should be getting closer to the latitude of Canopus, c.52° S. Just had a big time on the foredeck. Got visited by a pair, possibly more, of porpoises, the liveliest I've ever seen. They were hard to get a good look at because they rarely broke the water. They were very dark (appeared black) except for flanking banners of white fore and aft of a dark middle band. The colors were those of killer whales... There has been some resistance to the Chunky Vegetable Beef and Beef Vegetable [soups] so I try to spruce it up a bit. Last night I used one Vegetable Beef and one Beef Vegetable, one can of mashed peeled tomatoes, one can of mushrooms, plus fresh cooked onions and garlic. It was GOBBLED UP! We had half of Bob's pie for 'tea' and it was good. We're still using a whole lemon to perk up over-the-hill apples.*

We took a beating when we sailed into the "furious fifties." On November 30 I recorded: *We calculated we averaged 6k downwind yesterday and all night we had gales behind us in building seas that sent us surfing and careening into troughs. The banging and swaying inside was horrendous. Even though nights are getting pretty short, last night seemed long because of overcast skies and at times a driving rain. It cleared just before daybreak but not quite in time for the meridian transit of Canopus and tau Puppis—stars we want to use for latitude. Just after midnight a monstrous breaking wave coming from astern crashed down on the cock-*

pit, engulfed Bob, slammed the sliding hatch open, and cascaded into the cabin. It sounded like a mountain river as it roared past my bunk before it splashed to a halt in the V-notch of the fo'c'sle. Fortunately both hatch boards were in place at the time but even so the bilge was filled. Bob was soaked to the skin but otherwise all right. The self-steerer, however, was not. The broken plywood sensing vane was easily replaced but straightening the twenty-five-degree bend in the rotating steering oar was well beyond our capability. Its repair would have to wait until we had access to heavier equipment. In spite of its kink, the steerer was still usable. It had much less power on the port tack but actually had improved performance on the starboard tack.

The "event" was sobering. My journal notes: *We are all a little gun-shy today and relatively quiet. All of us are aware what a serious blow it would be to lose the self-steering gear and possibly the rudder, too. It was a freak wave no doubt, but there is always the possibility that it could happen again. Bob was so excited when he went off watch (still dark) that he made us a breakfast of pancakes and then baked an apple pie! Got a taste of sleet around noon—just a few pellets, the shape of things to come, no doubt. Nick asked for some hot soup at the end of his morning watch so I gave him a hot bowl of Campbell's Vegetable Beef. It has now been upgraded from 'shit' to 'good soup'.*

The next day I observed: *Gales continue unabated and we are barreling downwind with storm jib and staysail—both poled out. In spite of gales the sea... is sailable. I believe the crashing seas that plagued us for several days were caused by the underwater configuration of the mid-Pacific Ridge. If that assumption is correct, then our longitude is 'spot on.' There is another reason to suspect shallower, warmer water—We saw porpoises two days in a row and there was a much greater concentration of sea birds. Got a good look at Canopus and tau Puppis last night—our first look in weeks. We appeared to have*

overestimated our latitude as I suspected and have now made a log correction. If we continue at our present galloping rate we should be in Drake Passage in about two weeks. We intend to try to stay south of the Horn and Diego Ramirez because of deeper water and less danger but hope to pick up some indication—water color change, bird life, bio-luminescence, change in the water surface, presence of icebergs and perhaps pack ice—that we are passing from the Pacific into the Atlantic. Baked two loaves of bread this afternoon and probably used up half as many calories as are in the bread. The galley was wild as we rolled back and forth running straight downwind.

[By December 2, we were 3436 miles from Whangaroa. Our estimated latitude was 64 miles south of actual latitude and our longitude was 164 miles west of actual longitude. Our estimated position lay 174 miles southwest of the ARGOS-fixed position.]

Just before midnight on December 2, Nick poked his head in the hatch and said, “Marv, the tiller just broke off.”

“C’mon Nick, this is no time for fun and games; I’m trying to get some rest.”

“I mean it, Marv, the tiller just broke off.”

I jumped out and stared in disbelief. The stainless steel tiller was hanging by a thin strip of metal that looked like the foil from a chewing gum wrapper. As I took hold of the tiller it fell in my hand. The builder’s words rang in my ears. On one of my trips to Goderich, Bob Patterson had announced, “Marv, I’m going to give you a stainless-steel tiller. It may bend but you will never have to worry about it breaking.” It lay broken and there was less than a three-inch piece of the one-inch inside diameter tube left attached to the rudder post. Suddenly, I felt eviscerated. I had reached the emotional nadir of the entire circumnavigation. We had an inside steering station where we could insert a temporary tiller, but it had neither the throw nor the leverage to keep *Globe Star* from yawing off and broaching in gale conditions. Luckily, the gales that had driven us

downwind during the daytime had abated so there was no immediate threat.

But we had just entered the “furious fifties” and were approaching the notoriously stormy Horn. Of all the options that ran through my head at “fast forward,” the only acceptable one was some kind of jury rig—to begin at once.

The repair problem was compounded by the curve and the shortness of the stub left to work with. We needed but did not have a heavy hammer to jam an internal sleeve into the curved stub. When one after another cinematographer dropped out, we sailed without one. That left us with an unused camera mounting bracket that was made up of several pieces of stainless steel tubing—just what we needed for the internal splice—and a solid cube of stainless steel that would make an improvised sledge hammer. Nick manned the temporary tiller while Bob and I wedged ourselves between the galley and hanging locker and fell to work with hacksaws. Within the span of an hour and a half we had fitted a piece of tubing inside of another and hammered both of them into the stub still welded to the rudder post. Then we drove the remaining section of the tiller onto the double-walled, internal splice. As we hand steered the joint worked a little but held until daylight when we drilled holes each side of the splice, threaded the holes, and then secured the splice by inserting cap screws. The cap screws stopped the rotation at the joint and kept the splice from coming apart. The twelve-volt drill, essential to the repair, was one friend had converted from an automobile wheel lug-nut driver. I noted in my Journal: *If Bill Gould could have seen his carefully designed and built (camera mounting) gear being cut up, he would have had a stroke but I’m sure if he were in the same circumstances—sailing down on Cape Horn—he would have done the same thing.*

Bob put out an artificial feather lure early this morning and hooked an albatross. Actually had to bring it in the cockpit to get it unhooked. It apparently came in peacefully

but got rambunctious when he [Bob] took hold of it to get the hook out. It pecked a chunk of meat out of his index finger, left hand. If the tiller and albatross incident had been reversed it might have precipitated some speculation. It appears that the tiller tube had been cracked for some time... We intend to baby it from now on. It has been bright and sunny today with winds under 12k. We are moving slowly and slatting a bit now and then because of the heavy surface left over from the gales but it is nice to have a respite from the howling wind.

The tiller repair was part of an ongoing process of improvisation at sea—a matter of making do with what was available as indicated by journal and log entries: November 11: We took up some of the slop in the bevel gears of the vane steerer this morning. Moved the horizontal gear closer to the vertical one by moving the thrust washer aft and backing it up with a piece (1/8" long) cut by Bob from a 1" O.D. SS tube. November 12: Made a rolling pin out of two-inch plastic pipe and use a plexiglass sliding door from the galley cabinet for a dough board... Nick worked on the whisker pole cars this morning. They have never seated in the track



The tiller after repairs made by British Navy personnel at Port Stanley in the Falkland Islands. The point of the break necessitated inside sleeves installed and drilled at sea.

properly because the pins were too large for the holes. November 20: After being asked to inspect turnbuckles, etc., Nick discovered a broken toggle on the aft headstay then carrying the staysail. All three joined in making a rapid replacement with the one included with the turnbuckle sent to Cape Town. November 29: Bob and I spent part of the afternoon making a penlight battery charger. We tapped off 4 cells of the No.2 battery to give us 8v to use on the 4 x 1 1/2v AA cells (6v). They got hot but took some charge. Next time we'll try using 3 cells—6v. And on December 17: Got busy on my shaver and got it going again. The hard part was figuring out how to get the case open. The rest was easy. Salt water had corroded a metal strip and the slam to the floor caused the strip to part. Some wire and solder did the trick. The 12v soldering iron has been extremely useful.

My "do-it-yourself" frame of mind may have some genetic basis—two of my three children at a very early age began brushing parents back with the expression, "Do it myself!" My father, who had ordered a Model T Ford, his first car, for delivery in time for a Labor Day trip in 1916, got word from the Ford agency in Elmer, eight miles away, that his touring car was in but mechanics would not have time to assemble it before the holiday weekend. My father, with a friend, went eight miles over dirt roads by horse and wagon to Elmer, put the car together and drove it home in time for his Labor-Day outing.

When I was discharged from the army in December of 1946, I planned to begin work on a master's degree at the University of Pennsylvania the following February. My wife of six months and I had not had any luck at finding a place to live. When we had all but given up hope, she said, "If only we had a little place to call our own." With that prompt I bought a small lot in a small Southern New Jersey town and enlisted the aid of my grandfather and cousin in building what to this day Blanche and I refer to fondly as the "little house." Because lumber was unavailable, we

cut oaks and pines, offered by my father, hauled them to a sawmill and used the lumber to build a tiny house in the dead of winter. We cut the first trees on December 23 and moved in on February 23. I had begun classes two weeks earlier. We expected to live in it for a year but found it so comfortable we stayed for eight. Taxes were minuscule and maintenance practically nonexistent.

The do-it-yourself drive produced a two-sided coin. One aspect was the obvious one of conserving cash—desirable if your income is limited and you want someday to buy an oceangoing boat. The other was the measure of skill and confidence that came from doing almost all of my own house, automobile, and appliance repair over a lifetime. This was something to reflect on during the long hours of night watch. The tendency to solve my own mechanical problems provided savings that I could use to buy the boat I wanted to accomplish my dream—that of sailing around the world. Now the skills I acquired in dealing with those problems were coming in very handy in keeping both the boat and the dream afloat.

The second albatross “incident” came one day after the first while I was in the midst of making the first pumpkin pie of the passage. Bob had the same lure out that had tempted the previous one. It was one of the same species that got too close and got hooked in the leg. We struggled to get it in the cockpit but it was quite docile as we removed the hook. We eased it back into the water and waited. It began the routine of swimming and flapping to get back in the air but couldn’t get up enough “ground” speed to become airborne. It fell back and tried again. It was no go. We were heartsick and helpless. Then the bird dipped its head in the water, splashed it from side to side, sat erect as though to summon courage, and began to swim and flap. After a somewhat lengthy and what must have

been a painful takeoff the bird was back where he belonged—in the air. We cheered. Our hope was that he had enough reserve to keep him aloft until the injury was healed. Nick and I had asked Bob the day before to give up fishing but he couldn’t resist. Now we gave him a stern warning: “No more lures.”

On December 5 I noted in the log that the sky on clear nights retains a glow in the south throughout the night and wrote this in my journal: *Mid-afternoon—We are rhythmically rolling from side to side going downwind in 15-foot seas at about 6k and direction of 110° in clear, cool weather—beautiful sailing. When Bob popped his head out of the hatch last night (just after midnight) before going on watch, he sighted a ship headed east just about 1 1/2 miles to port. He could hardly contain himself. Of course Nick and I got up to take a look. In honor of the occasion we even turned on our masthead running lights and a few blinks of the strobe. There was no indication from the ship that we were seen.*

The next day I noted that the tiller repair was loosening a little and would bear watching and that I *Tried to clean up the fuel lines in the stove today—a real messy job. I think they’re O.K. for a while. [Later]—like new!* The purging of the lines had been going on since we inadvertently got salt water in the



The albatross caught by Bob Rout. Nick Gill on right.

kerosene reserve tank in the middle of the Indian Ocean. The good downwind and broad-reach sailing that I noted the same day continued for several days. On December 7 I wrote: *Had winds on the starboard quarter to 25k during the night but in general the seas are relatively flat and the weather quite stable—high pressure. Our DR latitude is very close to that of Cape Horn—54° 28'S vs 55° 59'S—and we are pleased to have good weather. We expected (and may get) much worse.*

We are in the Pacific on Pearl Harbor day and I have been thinking about WWII and the changes in the world since that time—Russian & U.S. penetration of space, Japanese penetration of world markets, development of third world countries, computer technology, etc.

Our third encounter with the soaring king of the Southern Ocean occurred in mid-afternoon. A playful albatross made a U-turn a few feet in front of us and landed on our starboard side where the air flowing off the genoa was rippling the water. When we got about three boat lengths ahead of him, he rose from the water, circled our bow and again landed alongside. In all we counted six such landings. We provided an amusement park for him and he provided amusement for us. It was a mutual exchange and a sharing of the environment in a way that I could not possibly have imagined. I still get a warm feeling when I think about “our friend the albatross.”

Our long slant to the southeast ended about one in the morning on December 9. At that time we got a look at Canopus which appeared to confirm our latitude, but we could not be sure the observation was made at meridian transit because clouds obscured stars needed to establish a north-south line. They also prevented our seeing alpha Dorado which we would have preferred because its ground position is nearly 150 miles closer to Cape Horn and therefore nearer by about two and half degrees to our imaginary overhead point. Our estimated latitude, 56°

13'S, at noon of that date differed from satellite-determined latitude by less than two miles. We had sailed nearly 4000 miles from Whangaroa, a distance roughly equal to that between New York City and Moscow, and had had only four opportunities to see stars for latitude correction in that time. We did not do as well in measuring longitude, all of which had to be done by estimating the distance run each day and the average angle of the track. The angle of the track, of course, was based on direction information gleaned from the sun, moon, stars, and waves. Even so the error was only 216 miles, an underestimation of five and a half percent. The steering angle error between a line from Whangaroa to our actual position and a line to our on-board estimated position was one and six tenths degrees.

[On December 9 at noon we estimated our latitude to 56° 13'S. ARGOS latitude at the time was 56° 11.6'S—a difference of less than a mile and a half. Our estimated longitude was out by 217 miles.]

Our estimated latitude of 56° 13' South was just fourteen minutes and therefore fourteen miles south of the Horn. In the early morning hours of December 9 we changed our heading to east for a run to the fabled Cape which we believed to be 925 miles distant. We no longer had to face the possibility of fighting our way south in the southwesterly gales and the mountainous seas that dominate the southern oceans in the “furious fifties.” We had accomplished our first objective as required by the method of parallel sailing. We had gotten to the latitude of Drake Passage well ahead of arrival there. Now if we could hold that latitude we should be able to find our way into and through its waters and between the rocks of southern South America to the north and the floe ice that rims the Antarctic continent to the south. According to our predetermined timetable our “window of opportunity” for using the “twilight” method of rounding Cape Horn would open in six days and close

in twenty. Our prospects were looking good.

Journal notes of December 9: *We will move eastward fairly rapidly now even though winds are relatively light. Had the chute up this morning. It jibed when Bob had a pumpkin pie on top of the stove ready to go in the oven. What a yellow mess! Cabin temperature this afternoon with the hatch open is a surprising 53°F—about four degrees cooler than it has been but certainly not unbearable. Nick seems to be quieter than normal. Am wondering if he has a touch of homesickness.*

Gales from the northeast accompanied by rain and poor visibility made for tough going in the next two days. Logged on December 10: *Wind backed from NW to NE during the period. Changed from broad reach to close reach on port tack. Used various combinations of sails under wind speeds from 10 to 30k. Rain and poor visibility most of the time. Only an occasional glimpse of the sun. Heading judged to be 95° at speed of 4k... Water temperature 7° (44.6°F).* Log of December 11: *Sailed c.100 miles on a course of 120° EP at noon 57° 03'S, 89° 35'W. Direction almost impossible to determine with any accuracy because of overcast skies during all but the last part of the period. Visibility very poor at the same time. Very low barometer... And from my journal of the same date: The barometer dropped to a low of 995 [uncorrected and suspected of being too high] but only in gusts or squalls were winds over 30k. Skies cleared this morning but thin clouds returned. At least we can see enough of the sun to get direction. Even though the wind blew steadily for more than two days the seas did not build up as they have in the past suggesting a short fetch—either a small system or land to windward. Birds have appeared in greater numbers—perhaps 50 prions around us at once—and in greater variety—3 kinds of albatross, skua, sooty petrel, Wilson's petrels, one unnamed skua-like large bird, etc. Water does not seem quite as blue and temperature has reached a low of 7°C (44.6°F). We are getting Horn fever!*

About one o'clock the next afternoon a cold rain squall drove us into green water. The cold drenching was no antidote for the temperature and heart rate elevation the green water brought.

In spite of the “fever” I still had the problem of a cold *derrière*, a problem exacerbated not only by the cold and wet but also by poor visibility. Safety in shut-in weather requires more frequent scanning of the surrounding waters because danger can get very close before being seen. Because steering is much easier from a sitting position you normally steer while seated on one of the cockpit benches. At that position your view forward is blocked by the cabin top so to make a 360-degree visual check you must stand to see forward over the cabin. When you stand up the seat cushion becomes cold and often wet so when you sit again body heat is absorbed by the cold cushion. When you jump up and down frequently in periods of murky weather your bottom takes a watch-long chill. Prior to that time I had had a number of chats with the architect of the human body about what I considered to be a design flaw in the heating system of the buttocks. In this cold, wet, and dismal environment I got to thinking about the problem and a possible solution. It was easier than I imagined. Instead of placing the cushion between the waterproof pants and the cockpit seat, why not put it inside the foul weather pants where it would stay reasonably warm and dry when you stood up? I stripped the back out of a Stearns life vest, placed it between my outer pants and rain pants upside down so that the vee of the neck straddled the crotch of the rain pants, and then tied the attached laces around my waist to hold it in place. The difference in warmth was unbelievable. It had the effect of a heating pad. In fact there were times in less severe weather when it provided too much insulation. It worked so well that I felt like kicking myself (guess where) for not getting to the “bottom” of the problem soon-

er. There was nothing wrong with the heating system; just the way it was being used. My apologies to the designer.

Just before midnight on the eleventh, I got a good look at Canopus during its meridian transit and concluded that our dead-reckoned latitude was satisfactory. It was only the fifth night since leaving Whangaroa on October 30 that we had been able to make a meridian transit observation of a star that we wanted to use for latitude finding. We had gotten latitude from Phact on each of the first three nights of November and then waited until the first night of December for observations of both tau Puppis and Canopus. The look at Canopus on December 11 was the last latitude check before reaching Cape Horn which at that time was 425 miles away. It was, in fact, the last meridian observation for the Pacific voyage. In all we saw stars for latitude-finding only five nights in the 5000-mile voyage.

The green color was a sure sign of shallower water and an indication of our approach to land. Bird life, especially prions, remained abundant. On December 13 we returned to blue water and then again to green. In late morning and in heavy mist, Nick sighted what appeared to be a naval vessel headed west. At lunch time we were engulfed by abnormally cold air coming from the north. For the first time we saw the vapor of our breath condense in the cabin. Cold air from north could not have originated over the ocean. Its source had to be from land and in the high sun period of the year it could not have originated over anything but very high land, i.e., mountains, in all probability snow-covered mountains. There was no doubt now that we were in the "ball park." I noted in my journal: *We are still sailing with poor visibility so have sighted no land but believe we have either passed the Horn or are very close to it. It was cold enough in the cabin (48°F) to condense vapor from the breath exhaled from our nostrils. At this point, even though we would like to see the Horn, we are just as happy not to see any*

'real estate' pop up in front of us.

On December 13 we decided prematurely that we had reached Cape Horn. My journal entry of December 14 provides some insight on what life on board was like that day: *We have concluded that the presence of a very cold north wind and changing water color... confirmed our passing of Cape Horn yesterday at approximately noon. We are now bouncing along toward the north and east with a 25-30k wind on the port quarter. Our galley stove quit when the minestrone soup got to luke-warm at lunch today. Found out later it was the connector of the air pump that was at fault. Kerosene from a too-full tank had backed up into it and rotted some of the rubber so that air built up pressure in the pump but was blocked from going on into the galley tank. Bob is cooking some rice to serve with ravioli at the moment and the stove is working fine. Bob spotted a noise-making, orange-billed bird (?) in the water this afternoon. It whined away for quite a while as we passed by. Had a celebration party last night. Nick served fruitcake in the cockpit and we broke out the bottle of wine John Hamilton of Tasmanian Devil Farm had given us. The occasion was great but the wine was awful! It was fun—a lot of wisecracking and laughing. It helped to relieve the tension that has built up since we left New Zealand. Not a lot was said but everyone was aware that the Horn would be our 'acid test.' If, indeed, we are beyond it we have a lot more options in the event of damage or injury, and as we claw our way northward we increase our chances of survival in the event we would have to 'ditch.' Water temperature moved from 7°C yesterday to 8°C today but we seem to feel the cold more. I think it is because we psyched ourselves up for the cold of the Horn latitudes and now that we are headed towards warmer climates we are expecting it to warm faster than it is warming or is going to warm. Even so we have yet to light our cabin heater. It's easier to put on more clothes.*

About seven o'clock on the morning of December 15 while I was hand steering, Nick came on deck to make a sail change

and immediately saw land off to port and a group of very small islands dead ahead. I had been studying the sails and had failed to notice the rust-colored rocks developing out of the mist. I yelled, "Holy shit, there's the whole South American Continent" and immediately cranked up the engine to ensure clearing the islands directly in front of us. We had a choice of leaving them to port or leaving them to starboard. Even though the distance was a little greater, I had a strong desire to leave the continent and all its fragments to port, i.e., to sail south of the islands. I shifted to forward and veered off to starboard in order to get outside the southernmost pile of rocks.

This was the moment I had anticipated two years before when I asked Globe Star's builder, Bob Patterson, to install a three-cylinder engine instead of the standard two and a large, non-folding, three-bladed propeller. It was a good feeling to know that in spite of currents carrying us forward the engine would push us clear in time to avoid disaster. We had kept the batteries charged with our solar panels and started the engine every week to make sure that it would be ready when needed. In the cool temperatures it took a few more turns from the starter to get it to fire but it went off O.K. By force of habit, I looked at the temperature gauge and was floored to see the needle glide right past the green sector into the red. I shut the engine down and called for "all hands." While I steered Nick and Bob quickly changed the sails from a downwind to a pointing rig and we managed to get by the island group with about a mile to spare.

My view of the "landscape" was short-lived. I dug out the engine manual, studied the water pump section, and located the pump on the engine. Of course, it was on the aft side, but by lying on top of the engine and working with a mirror I was able to remove the end cap of the pump for inspection. All six rubber blades of the "paddle wheel" impeller had broken off and jammed in the outflow

port. I found a new one in the spare parts kit which Volvo had supplied with the engine, slid the old impeller out and the new one in, refastened the end cap, started the engine, and watched the temperature gauge. The engine temperature returned to normal immediately. Mine took a little longer.

A plummeting barometer told us it was time to try out our Helly-Hansen survival suits which Blanche had brought to us in Tasmania. The remnants of Islas Idefonso were barely out of sight when the wind cranked to a steady forty knots with sustained bursts of fifty and sixty knots—even higher in gusts. The near-hurricane-force winds were the worst since Globe Star was rolled down in the Tasman Sea three months earlier. We were lucky the gales were blowing in our direction. Any veer more than fifteen degrees from straight downwind resulted in crashes that made you think Globe Star was being rammed by loaded barges. Seas built up and began flooding the cockpit. One breaker caught the rudder and before Nick could get his thigh away from the tiller the force bent the double-walled splice in the repaired section at about a thirty degree angle—enough to make the self-steering inoperable when we tried it later. The same comber hit me in the face with enough hydraulic force to drive water past my survival suit's neck gasket and beyond the "navel" department into the "public utilities" section. Nothing but a pressurized diving suit would have kept that kind of water out. That night we went to a two-man watch system in order to keep a better lookout in the twilight of 56° south—the twilight we were counting on to judge latitude. The two-man system meant two hours on and one off. Because peeling off layers of clothes and putting them back on consumed most of the off-hour, we maximized rest by sleeping in our "space" suits. As a result I got a slam-busting crick in the neck! Luckily the gales relented about daylight and before we set about resting up we

made repairs to the damaged tiller. Nick hand steered at the inside steering station while Bob and I, working in the cockpit and on the cabin sole, got the job done. I noted in my journal: *We will make sure when hand steering that we do not block the tiller with our bodies especially when a breaker could crash into the rudder. Yesterday was the first day since leaving Hobart that I have had my clothes soaked—two sets, one before I put on a survival suit and one after. And to add insult to injury, my second shaver was ruined when it got knocked to the floor (container and all) during a slammer. I'll adjust to a beard better than to wearing and sleeping in wet clothes.*

A study of the ARGOS records shows that we had not passed Cape Horn on December 13 and that the rocky islands we saw two days later were not associated with Staten Island but were the Islas Ildefonso situated 72 miles west of the Cape. The ARGOS track shows that we sailed south-eastward from them to pass within eight miles of the Islas Diego Ramírez. Bob, on watch, got a momentary glimpse of the rocky island group off to starboard as we moved by in misty weather during the afternoon of the fifteenth. We actually crossed the meridian of Cape Horn, thirty miles to the south, about four in the morning on December 16, one day into the two-week period bracketing the December solstice that we had set as a goal more than two years earlier and one that had put us through the rigors of a December departure into the north Atlantic and a winter crossing of the southern Indian Ocean. Globe Star had proved to be a survivor. She had sailed through the world's stormiest oceans, had recovered undamaged from three knockdowns, and had survived forty-foot seas, crashing waves, and hurricane-force winds. We had not reached the home stretch but prospects at the back stretch were looking good.

[On December 16, the day we rounded Cape Horn 4576 miles from Whangaroa, we

placed ourselves at 54° 57'S; 61° 58'W. Our true position at the time was 56° 6.8'S; 64° 46.7'W 118 miles to the southwest.]

During the two-day blow we flew straight downwind slightly north of east. We wondered if we would be able to work our way northward enough to clear Shag Rocks, a group of rocky islands that lay between us and Africa. And then the shrieking winds began to subside. We could hear each other without shouting. I asked Bob, who was poring over charts, what he thought about spending Christmas in the Falklands. He was ecstatic! Nick woke up from his nap smiling at what he had heard so we turned hard to port to try our luck at finding the wind-swept islands.



Robert Rout and Nick Gill in the vicinity of Cape Horn.

There was some risk involved. Gales could be extremely “hazardous to our health” as we neared land especially if we ran into bad visibility. It seemed worth the try. We had seen enough of South America’s southern tip to make sure we had rounded the Horn and were, by this time, well clear of any danger there. If we were going to fetch the Falklands we would have to sail around 200 miles north before gales from the west drove us irretrievably downwind.

My journal tells the story of our ap-

proach. December 18: *Weather is not cooperating with our idea of spending Xmas in the Falklands. First [winds] strengthened and came on the nose, now they are a little better in direction but have turned light. As a consequence we are beating into heavy dead seas with little wind, and with overcast sky and periods of rain. We believe we are southeast of Port Stanley and that it would take a 'miracle' to permit us to sail northwest to fetch it. We might be inclined to burn some diesel fuel if we had some indication of direction other than swells, i.e., sun or stars.* December 19: *We have been becalmed most of the daylight hours under cloudy skies. Burned 3 hrs. of diesel after being buzzed by an RAF, 4-engine plane. We tried to follow him but a completely overcast sky forced us to give up. Oil slicks tell us we are near the Falklands. Some of them contain a white gooey substance that looks like mucus and extends for miles. While we were motoring, we saw a number of penguins, one of which swam and dived in front of us keeping just ahead like a guide. They look like pretty black and white ducks sitting in groups on the water.* December 20: *There was gloom in the cabin this morning. Felt certain we would find land yesterday or last night. No luck. A southwester blew in this morning with great visibility and still no land in sight. Sometime after daylight, thousands of diving petrels crossed our bow from starboard to port as we sailed northwestward. We felt sure they were coming from land but couldn't see any. I chased one set of cumulus clouds to no avail but then Bob came on deck fretting he couldn't sleep for thinking about the petrels and I showed him some very promising cumulus clouds that had to be caused by warm water or wind striking high elevation. They lay in the direction from which the petrels had come. Bob put up a double head rig—yankee & working jib—and within 2 or 3 hours we had the southern coast of West Falkland in view. Exit gloom! What was eating us was that having decided to go into the Falklands for Christ-*

mas we were striking out—a bunch of losers!

To get to Stanley in East Falkland required sailing to the southeast across the thirty-two-mile wide Falkland Sound, then eastward and northeastward to the harbor entrance, a distance of about 90 miles. We kept a safe distance from the coast as we sailed southeastward but were disinclined to start across the Sound knowing that we would run out of daylight, and possibly luck, before reaching the southwestern corner of East Falkland. To insure sea room in the event of a blow we sailed south away from the mouth of Falkland Sound and hove to for the night.

We got under way at daybreak and by about 8 o'clock using our charts identified Barren Island at the southwestern tip of East Falkland. It was exactly one year since we had sailed away from Cape May in the black of early night. I noted in my journal that it had been an interesting year. During the course of the day as we worked our way northeastward, it became apparent that we would not be able to reach Stanley before dark. Because standing offshore was time consuming and tiresome, we studied the charts to see if we could find a place inside the land where we might anchor for the night. We wanted to maximize daylight so looked for a small protected water body near the end of our projected day's run. To that end we entered Choiseul Sound by sailing west of Lively Island and headed slightly east of north toward Mare Harbour as the sun neared the horizon.

We were not at all surprised to see gray masts rising slowly off the starboard bow. The chart showed a wreck on the ocean beach in that direction. But when the masts began to show a tinge of yellow we began to wonder. When we came abreast of a channel on our right, to our amazement we saw several enormous mooring buoys and beyond a full-size merchant ship secured to the rocky bank with two permanently attached ramps descending to ground level. Landward stood dozens of small, green temporary buildings. Knowing that it had to be a military opera-

tion and that we might not be welcome in what had to be a sensitive spot just a year and a half after the Falklands War, we pretended we had not seen anything, crossed the mouth of the channel and found our way a mile or two beyond into a tiny cove in Mare Harbour. It seemed to be an ideal spot. It wasn't. We tried to predict where gales, if any, might come from, calculated the expected range of tides, picked a spot where we would remain afloat, maneuvered into position and dropped the plow. In spite of our best efforts we could not get it to "bite" the bottom. Up came the anchor and what looked like a tangle of palm-tree fronds—the dreaded kelp. We tried again. No dice. We shackled a heavy yachtsman's anchor to the rode and tried again and then once more. We were in a sweat and in a bind. The sun was on the horizon and we were less than a quarter mile from what in heavy gales could be Globe Star's permanent resting place.

The best of all mooring buoys were only two miles away. I swallowed hard and resolved to ask permission to tie up to one regardless of the consequences. When we were on our way into Mare Harbour we had seen a civilian boat about thirty-five feet in length. On our way to the mooring buoys we were buzzed by what appeared to be a civilian helicopter. It did not linger and was soon out of sight. As we neared the buoys and the ship we were greeted by shouts from men fishing on the rocky channel banks. When we told them what we were doing, they yelled, "We'll meet you in the bar."

Two men on the deck of the Merchant

Providence were cordial enough when they gave us permission to use one of the mooring buoys, but seemed to liven significantly when we asked if we could come back and take showers. We tethered Globe Star, inflated our rubber dinghy, and rowed back to the ship where we gave a brief account of our voyage while walking to the showers—housed in mobile-home-type structures on the top deck of the ship. There was no response from our greeters, security officers Ken Price and Bill Smith, when we mentioned the invitation to tell our story in the ship's bar and I noticed that one of the men stood on the deck just outside the shower as we bathed. We were escorted to a small cabin where we spilled out our story of adventure while being offered sandwiches and various beverages. While we were there one of the officers called the chopper pilot who ignored us that afternoon. He reported arriving from Stanley in thirteen minutes but said he gave us short shrift because his assignment was to check out a black and white boat and the boat he found was blue and white. Our presence had been reported by the civilian boat's skipper but he had mistaken Globe Star's dark blue hull for black in the late afternoon sun. The security men told us to be sure to report to Police Chief Bill Richards when we got to Stanley for formal entry into the Falklands. It was clear by this time that we were not going to be allowed to mingle at the bar. When the ship's baker brought us a dozen freshly baked breakfast rolls we took it as a cue to leave, rowed back to Globe Star, and crashed.

Chapter 15

Falklands Interlude

We released *Globe Star* from the gigantic mooring buoy shortly after sunrise to get underway with a security escort of four local sonar experts and two apprentices—a family of six dolphins clad for the occasion in formal black and white. They guided us out of Mare Harbour and through outer Choiseul Sound to Fox Point where they withdrew when we turned hard to port for the forty-mile run to Stanley. We made the trip under power. It was dead calm when we started but a steadily cranking wind was of little use. It was dead on the bow. We bounced along in the short chop of a rising sea until about three in the afternoon when we turned west into Port William. We watched Harrier jets taking off and landing at the military airport to our left as we threaded our way among the dozens of ships lying at anchor. In a steady rain we found our way through the narrow entrance into Stanley Harbour and pulled up at government dock No.1. Les Halliday, customs officer, greeted us and directed us to lie alongside the 100-foot-long government steel research vessel, *Forrest*. It was a convenient location. The post office, library, and bank were all less than a block away.

Police officer John Adams met us and took us to the police headquarters to complete immigration details with Chief Bill Richards. He filled us in on how Bob and Nick might get

out and how crew from the United States might reach Stanley. Gear repair, crew transportation, and provisioning were overriding concerns. We had mutually agreed beforehand that if Nick and Bob could not find a way out, or a new crew could not be brought in, or if supplies were not available in Stanley, then the three of us would continue to South Africa. Chief Richards told us that passengers enter and leave the Falklands via Ascension Island but only the military flies between Stanley and Ascension. He said, however, that boat service, an eight-to-eleven-day trip depending on the weather, can be booked. Transportation beyond Ascension is by air. Ticketing is possible from there to England but not directly to the United States. Chief Richards thought it might possibly be arranged to fly crew via British military aircraft from Ascension to Port Stanley. No matter how transportation is arranged, ultimate approval must come from the Foreign Commonwealth Office in London which, he said, will take the recommendation of the local office. It appeared from our conversation that crew transportation, both in and out, might be possible. On our way out the office clerk handed us some local terrain maps to be used before we started tramping around the countryside. They were maps of known and suspected minefields—a reminder that modern war had engulfed these remote islands a year and a half earlier.

Knowing that crew transportation was

a likelihood I went to the local “supermarket” to see what provisions, if any, could be had. One-third owner Norman Clark assured me there was a good supply of staples plus canned fruits and vegetables. Nowhere, however, could you buy oranges, onions, eggs, poultry or bread. Locals baked their own bread. You could get cuts of mutton if you took them in quantity and gave your order to Laurie Butler, the town butcher, ahead of time. He would deliver them to your door after his one day a week at the slaughterhouse. Farmers were too busy at the time to sell beef cattle but I was told if I wanted beef I could go out and shoot a cow. I elected to make do with the mutton.

Recognizing my foreign accent, Norman Clark wanted to know how an American got to the Falklands. When I told him how, he insisted the three of us come to a Christmas party he was giving the following night, December 23.

The military operated a very modern satellite long-distance telephone station on the outskirts of Stanley. You could purchase a magnetic card, insert it into the telephone accessory box, and call anywhere in the world. In order to conserve on hard currency, I called Blanche and asked her to call back. That was a mistake. It took nearly two hours for her to get through. In the meantime Nick and Bob had got tired of waiting and suggested that I meet them in the bar at the Upland Goose Hotel. When I got there, they had moved on. There was no question that the “yellow penguins” had been there. Because of the rain all three of us were tramping around town in our yellow foul-weather gear and were, therefore, easily identified as outsiders. The locals immediately dubbed us the “yellow penguins.” At the Upland Goose I was informed that only guests were allowed in the bar so I would have to look elsewhere for my “feathered” friends. By that time the bartender’s curiosity had crested and he asked how the three of us had gotten to Stanley. When I told him how,

he pushed a “glass” in my direction. It was a small bar and a man at the far end overheard the conversation and joined in. He bought the next “glass.” His name was Eric Sant, retired major from the Queen’s Life Guards. He was Administrative Manager for the LMA Joint Venture, Mount Pleasant Airport Authority, which was building a new airport to accommodate jets flying directly from England. He was in charge of the military project we had stumbled into the day before at Mare Harbour and was the one who had ordered the helicopter pilot to check on us. Eric said the civilian boat skipper reported us because he thought we were getting into *dangerous* water. As it turned out we were getting into *hot* water. The military rules, we found out, required radio contact and permission before entering within a 200-mile limit of the Falklands. Eric confirmed what I already had guessed. We had been under “house arrest” the night before in Mare Harbour. When I asked him directly, his answer was, “Yes, I’m the one who pulled the string on you.” All detainees should be treated so well! David Campbell, another hotel guest, noting that banks had closed for the day, thrust a ten-pound note in my hand and said to use it until I could get some money changed. He has done extensive sailing from his base in Gibraltar where he works as a civilian for the British government. He proffered the third “glass.”

Nut Goodwin, skipper of the Forrest, stopped by early on the morning of December 23. He came at the request of the harbourmaster to make sure we were secure. He offered us some reed fenders which looked strange, but I found out later they are the absolute best for the local conditions. Later Police Chief Richards dropped in accompanied by RAF sergeant Jerry Wilson. The conversation was about yachts but I suspect the real reason for the visit was to case our ARGOS transmitter. If that was the reason, the transmitter must not have aroused suspicion. They did not return and

we were permitted to move around Stanley and its environs without any restriction while we were there.

From my journal: *[That] evening we went to a party at the home of Norman and June Clark, 32 John Street, Port Stanley. Locals were invited but not many showed up because of a Christmas function at the Town Hall. They had stereo music and an extremely wide range of food and drink. I met police officer John Adams and his wife (native Falkland Islander) who invited us to lunch on December 26. After lunch they will take us to the first of two days of carnival-like festivities just west of town—will pick us up at 10 A.M. Also met Mike Goodwin, a distant cousin of Nut, who is a commercial pilot flying charter around the islands. He said he would take us as his guests for a spin around the islands. Met Duncan and [Linda] McPhee. He is chef [and proprietor] of the Malvinas Hotel. Said he would get in touch with us. Met Lieutenant Commander Mark Stanhope (Royal Navy), captain of the submarine Orpheus. He was 'freaked out' by our navigation methods and invited us to visit the sub at lunch time, December 24. Commander Stanhope, in civilian clothes, approached me in the host's kitchen where I was picking up a few items after the other guests had gone on into the dining room. He looked at me and said crisply, "They told me in there that you just sailed around the Horn without a compass. Is that true?" Disbelief was written all over his face. I replied, "Yes. Moreover, we sailed without sextant, clock, or electronics." His immediate response was, "How in the hell did you do it?" Answers led to more questions—questions about finding directions, latitude, how we managed at night and in overcast. And then the surge was over. He relaxed and said, "I know it's Christmas Eve tomorrow, but you've got to come out to my submarine and tell your story to my officers."*

We took a Kiwi boat, i.e., personnel carrier of about 85 feet, through the narrows out to the Orpheus moored in Prince William

sound. The officers were flabbergasted by our achievement. Near the end of our three-hour stay, one of them asked if we had sustained any damage. When I told him about our tiller, steering oar, and dodger frame, he told us, "We're tied up to the best repair ship in the world." He immediately dispatched a runner to carry a note to repair officer, Barry Collins, of the ship, Bar Protector, "next door." In a few minutes the runner returned with a message, "Tell him to bring in whatever needs fixing and we'll take care of it." From the time we set foot on the deck of the Merchant Providence I had been asking continually where we could get repairs for our disabled gear. By the time I heard Barry Collin's message I knew that civilian facilities would not be able to help us and knew enough to know that his offer was a godsend.

While we were aboard the Orpheus Captain Stanhope told us that we had been sighted by the crew of the RAF patrol plane that buzzed us on December 19 but were subsequently lost by the security net until we landed in the lap of the Merchant Providence two days later. He went on to say that "our case of security breach" had been taken up at the December bimonthly meeting of the 150 military officers stationed in the Falklands. It is little wonder that police chief Bill Richards paid us a visit to check us out.

The onrush of events had stifled thoughts of what we might do for Christmas dinner, a topic that came up as we were returning from our Christmas Eve visit to the Orpheus. A suitable entrée could not be had on short notice and it didn't seem appropriate to celebrate what is usually considered a feast day with the same food we had been eating the last eight weeks. I suggested that Providence would provide and as luck would have it ten minutes later Duncan McPhee found Nick and Bob and invited the three of us to the Malvinas Hotel for Christmas dinner.

The late afternoon of December 24 was bright and windy. The strong winds were a reminder of the vulnerability of boats in con-

finned waters. I wrote in my journal: *The wind is northwest and it and its accompanying waves are driving us in a pitching, rolling motion hard against the Forrest, Falkland Islands Government research boat. We are fended off with two tires, two reed fenders, and one Taylor fender. It is not a very good arrangement and I am seriously considering going out on a mooring. I would have to use a dinghy and God knows where I would land up if an adverse wind blew up suddenly, as it can here. The motion of the boat is quite jerky (hard on our lines) and makes writing difficult... The Forrest will leave January 9 and I would like to be out of here or go on a mooring. The pier would be exceedingly difficult to lie against. Globe Star's safety in a blow was constantly on my mind. If she were damaged or driven aground, how would I get her repaired or refloated? I had to find a way to protect her.*

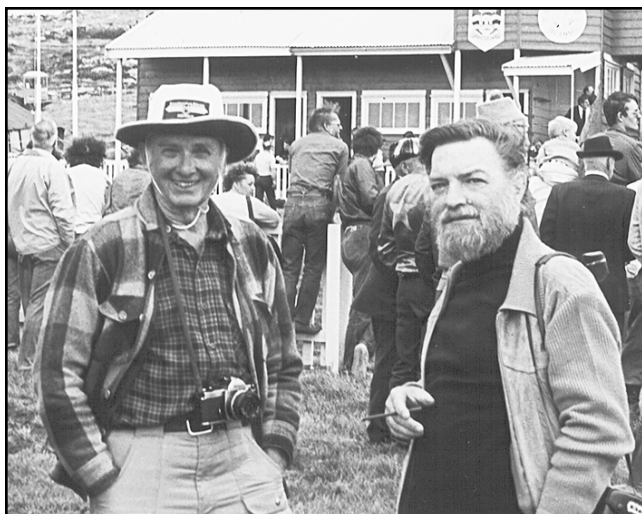
Stanley observed the holiday by literally closing up shop for four days—Sunday (Christmas day), Monday (Boxing Day), Tuesday, and Wednesday. The post office, banks, and stores were closed for the period so there was little I could do in the way of preparing for departure. I wrote in my journal of December 25: *Had a walk around town this morning. Port Stanley bears a strong resemblance to Dawson City in the Yukon. There are many small, fenced-in gardens with lettuce, radishes, rhubarb, cabbage, and potatoes. (Apparently potatoes do not blight here.) Soils are peaty and peat is cut and used for fuel. Even on slopes some clay lies beneath so gardeners have to work on their crops to get them to grow. Most of them looked good. Except in midtown, horses and stables are a common sight. Many places are ramshackle affairs. A few of the main streets are paved and paving is proceeding as are concrete sidewalks, but many streets are muddy with crushed rock preventing ruts. We went to the home (boarding house) of Duncan and Linda McPhee (children: Alex, 5, and Alastair, 2) for an evening Christmas*

dinner. He was chef in the marines and put out a very nice spread—roast spring lamb, roast and mashed potatoes, corn nibblets, thick soup, etc., party hats, noisemakers, etc.,—all kinds of beverages. We weren't able to get away until 2 a.m.

Five hours later, feeling a little bug-eyed, the three of us returned for a cleanup session. *Bob carried out dishes, I washed, and Nick dried. Duncan gave us breakfast and me a Royal Marines Commando pullover sweater... After cleanup, the McPhees and two male boarders came down to see Globe Star. Duncan looked at our bag of garlic and said it was 'gold dust.'* Around 1100 John Adams, one of three local policemen, called with four-year-old daughter Genna to take us to the races and lunch. *His wife Marjorie had a buffet-style lunch. I couldn't help noticing that plates of cold beef and mutton helped Nick and Bob overcome their fear of "protein poisoning."* The Boxing Day festivities were held on a natural grass-covered field at the western edge of town. There had been no leveling so there was a mild slope but only an occasional small boulder showing here and there. In addition to a few modest games of chance, there were horse races, foot races, three-legged races, backwards races, wheelbarrow races, tug-of-war games, etc.—the same activities held on May Day at the rural, two-room school in Union Grove, New Jersey, where I learned the three R's.

At the carnival I ran across LCDR Mark Stanhope who introduced me to Barry Collins, in charge of the repair shop on the Bar Protector, and its Captain Pat Middleton, who said our stainless-steel welding jobs on the tiller, vane, and dodger would be no problem and to show up with them on the afternoon of the twenty-seventh. I ran into Dave Campbell and repaid him the £10 that he had lent me. He reported that he had sent an article announcing our arrival to a Scottish newspaper. I also had a chance to ask Les Halliday, customs inspector and harbor-master, about getting Globe Star on a mooring. He said he would check with the

Navy, who own the moorings in the harbor. He said I could try talking to Mike Bleney of the Falkland Islands Company about the possibility of lying alongside the company pier but he was very pessimistic about any positive outcome. He was right. I tried later and it was no go!



At the Boxing Day Fair in the Falklands: Marv and Dave Campbell, who gave Marv the ten-pound note to “tide him over.”

Early on the twenty-seventh Nick and Bob helped unbolt the stainless-steel items — vane, tiller, and dodger frame—and get them to a Kiwi boat that took me and the items to the repair ship Bar Protector. The Swedish-owned, British-leased vessel was built to service oil rigs in the North Sea. It has thrusters that can be directed by its computer to stay at a fixed location or move to another by using a land-based reference point. It has a Merchant Navy Captain, Graham Vale and mate Ian MacDonald-Watson, and a Navy Captain, J. Patrick Middleton, who is in charge of repairs. Captain Middleton was on the tender that took me over and he became very interested in our navigation methods. As we were crossing the harbor he asked where we were tied up. I said alongside the Forrest and

pointed back toward government pier. He paused briefly and said, “That’s not a very good place, is it?” I replied, “It’s a terrible place, I’m thinking of sailing to Africa to get out of the slop.” And then he came back with, “You don’t want to do that. You ought to be in the Camber.” He looked in the direction of the opposite shore and pointed to a revetted rectangular enclosure about 300 by 400 feet. When I asked how that could be arranged, he said that he was going to see the ones in charge that evening. He pulled out a pocket notebook and made a note. Captain Vale took me to lunch where we were joined by Barry Collins, officer in charge of repairs. Later he took me to the shop where the Chief Shipwright Jim Berry had already examined the gear and started working on it. He told me the tiller would be ready the next day and the rest some time after that.

When I got back from the trip to Port William, Maud and Charlie McKenzie rode up on two well-polished motorbikes. Maud is a telephone operator at the long-distance telephone station and both are ham radio operators. Maud’s call sign is VP8NY and Charlie’s is VP8ML. They broadcast on a frequency of 14.275 between 2030 and 2400 GMT. They told me they make regular contact with ham Sam Pavone in Boonton, New Jersey, and that he has visited them in the Falklands.

On the twenty-eighth I hitched a ride out to the Bar Protector to pick up the Globe Star’s tiller from Chief Shipwright Jim Berry. He had shaped the internal sleeve, brought the two pieces of the tiller together so the two met parallel, welded the break, put stainless-steel pins through both sides and welded the ends of the pins to hold them in place. I couldn’t have imagined a better-crafted repair. Shipwright Berry said the vane and dodger frame would be worked on as bench time became available.

While I continued efforts to get a crew together, both civilians and military personnel went out of their way to make us welcome and feel at home in Stanley as indicated by excerpts from my journal. December 28: *David Crabb and Stephen Elliott stopped by this morning for a chat. I met them at the races Monday. They are very much interested in crewing except that they are under contract and would be subject to a 25% penalty if they withdraw. They are paving the streets of Stanley... They have access to apples and oranges and will drop back with some. Steve says he is into pie-baking. I told him to come do some baking some time. Fred Clark and wife Yvonne (Falkland Islands native) stopped by. He is the governor's troubleshooter. He was trying to signal a tug to give them some pieces of mail. Arriving at the same time was Charlie McKenzie with a message. Maud was on the switchboard when Blanche called today. She did not call last night because night calls are not allowed. She will call me at 1300, 12/29. Yesterday on the tender Captain Middleton said he would try to get me berthed at Navy Point where there is an enclosure. LCDR David Atterbury, RN, Assistant Queen's Harbour Master, just stopped by to invite me over tomorrow to have a look at soundings with the view of moving [Globe Star] over. I would lie alongside and use 'Kiwi Boats' to go back and forth. It would be better than a mooring because I would be able to get back and forth to Stanley by small boat. It is far too windy in the sound most of the time to use the inflatable which I would have to use if I were on a mooring. As changeable as the weather is here (wind speed and direction) I could land up to five miles away if caught with a wind change in the middle of a trip ashore.*

December 29: *Major William Thackwell, Royal Engineers, stopped by to say hello. He sails in the English Channel (lives in Kent) and has sailed to the channel islands, through the Kiel Canal and in the western Baltic. Earlier I had a visit from Murray MacPhail, naval architect from the Bar Protector whom I*

had met at lunch there on Tuesday. He is a sailor and says if I can hang on until February 15 or so he will crew for me. This morning I went to Navy Point to see LCDR Atterbury. I will be permitted to take Globe Star in a very small enclosure and tie up to a solid timber floating dock—the best of all possible worlds. If weather permits will move Globe Star tomorrow. After that will have to use small boats to get back and forth to Stanley, about a ten-minute ride. One nice result will be that I will be able to circulate around the harbor without worry and will be able to accept dinner and overnight invitations. Blanche called today. She has called Bob Watson who will come... Picked up a cable from Lee Houchins and paid £5 to Cable and Wireless so that I can receive Telex messages.

On the morning of the twenty-ninth I made the trip across Port Stanley to look at the Camber and charts of the enclosure. The depths were quite adequate to accommodate Globe Star's draft of five feet and I told LCDR Atterbury that I would return with Globe Star that afternoon. Before I went to the telephone station to receive Blanche's call I got Nick's assurance that he would be ready when I got back to give me a hand moving Globe Star into the Camber. When I returned neither he nor Bob was in sight. My journal of December 30 tells the story: *Had a big row with Nick and Bob. Nick said he would be on hand yesterday afternoon after Blanche's phone call to help move the boat. When I got back, the boat was being slammed against the Forrest by gale-force winds and across-the-sound waves. There was no way that I could get the boat away alone so I had to get more fenders between Globe Star and Forrest. When the two left they left flour all over the counters, stove, and galley floor, a stack of dishes, dough hook, etc. in the sink, crap in the head, and had made off with the trash basket. I was chagrined when MacPhail and Thackwell stopped by to visit. I held in when they returned but told Bob of my annoyance with the messy galley. Later he said he thought I*

could at least wash up after he had baked the bread. I suppose I should have; after all, it was my flour that was scattered around. When they persisted in rattling dishes, pots, pans, etc. and talking after I went to bed I asked if they could sleep during the dark hours and do their business by daylight. Nick got hot. I smoldered all night and in the morning gave them a blast detailing their "crimes." Nick gave me a song and dance about using people including him and how I would never have got around the Horn without them. I "played the violin." He said that I was mercenary and then had the gall to say I should have paid them to crew. I never asked either one of them to crew. It was they who asked me and they were made aware of the ground rules (\$4/day, etc.) when they came aboard. Anyway they helped me move the boat, and took the Kiwi boat back across the harbor to Stanley... It is nice to have the privacy and solitude for a while. As usual it is not the sea or boat that makes the biggest problems—it is the crew.

George Frost was on hand to take our lines when we motored into the enclosure at Navy Point called Camber. Warrant Officer Jake Jones came aboard and welcomed us. He had nylon bow and stern lines spliced for us so we would not get our lines dirty. I learned afterwards that military personnel had shuffled their own craft around in order to accommodate *Globe Star*. We were now entirely within a military compound but were made to feel just as much at home as we were across the water at Stanley. What had begun with an invitation to a party had resulted in the opening of gigantic doors to British military facilities. Later George Frost returned with a telephone message that I had been invited to a New Year's party given by Faircloughs the paving contractor. I was delighted to be asked. It would give me

a chance to talk further with David Crabb and Stephen Elliott about crewing for me on the final leg of the circumnavigation and a chance to make up for the social deprivation and confinement of a long sea voyage.

My socializing on New Year's Eve and New Year's day was limited to the company of one, i.e., my own. I held out to the very last minute hoping I would escape the clutches of what the locals called the Falkland Islands flu. On January 1, 1984, I wrote: *No entry yesterday. Very little activity except sneezing and nose blowing. I came down with the worst cold I've had in thirty years. My chest feels a little raspy but it's mostly in my head and sinuses. I still have a little fever but the chills have gone. My head right now feels like it has a 'pilot light' burning inside. It came on quickly and I'm hoping it will leave the same way, but I doubt it. Just an observation—Sickness at sea is rare. It is when we come in contact with people that we come down with contagious diseases. I was scheduled to go to a New Year's dinner and party at Faircloughs but just couldn't make it. I tried to send a message about 1600 but I doubt that it got through. I was disappointed but was in no condition to go anywhere except bed.*



The Globe Star in the Camber, Port Stanley in the Falklands.

Docking here has taken an enormous load off my shoulders. I would have been in terrible shape if I had been trying to hold Globe Star off in the gales that have been blowing, especially with chills and fever.

My prescription for getting well was to engage in some old-fashioned self-pampering. The boat was secured on a floating dock so no lines required attention and a fifteen-foot high rock wall provided a shield from wind and waves, gear repair was in progress, provisions were no longer a worry, and Blanche had one crew, Bob Watson, signed up. I could afford to relax. On January 2 I wrote: *Spent my time today listening to tapes ('Music Man' seems to give me a real lift), working crossword puzzles, and playing solitaire. My nose is drying up a bit, I'm sneezing less, and in general feel somewhat better. Gave my sleeping bag a good airing in the dry southwesterly that has been blowing all day. Haven't been off the boat since Saturday [12/31] because of the danger of driving the infection into my chest. Have been enjoying juices, Scotch broth and tapioca.*

A major reason for easing up was a fear of a lengthy illness. Almost forty years earlier I had spent 68 days in an army hospital with a severe case of viral pneumonia. I didn't expect a recurrence of that duration but being incapacitated for any length of time could throw a monkey wrench into planning and scheduling for the final leg. On January 4 I wrote: *George Frost, C.P.O., brought me a note this morning. Maud McKenzie telephoned to say Charlie would try to call Blanche for me tonight or tomorrow night. He also brought me a fender to help hold Globe Star off the floating timber dock. It has been raining hard and blowing from the east all day—most unusual. Wrote to Blanche yesterday and wanted to mail it today but didn't dare venture out in the wet weather—still apprehensive about more cold or pneumonia although I am much better. The ferry schedule is not operating because of war games this week. Anyway when the rain slacked off I bundled up (ski pants and heavy*

jacket) and c.1915 got a boat to Stanley with no assurance that I could get a boat back. Charlie and Maud have told me anytime I get stuck I can stay overnight with them. Charlie was able to raise his friend, Sam Pavone in Boonton, New Jersey, and I chatted first with him and [then] his friend [George] in Manasquan. George would like to crew if I plan any more trips. Sam tried to call Blanche but she was still in Phoenix where she was spending the holidays with our daughter Andra. He was able to reach Blanche's sister and her husband in nearby Elizabeth who promised to contact Blanche and other family members. Reception on the ham set was good. Charlie indicated that the sun's position near capricorn made for good bouncing off the earth's ionosphere. I left the McKenzies with an invitation to return for the night if a boat was not available for the trip across the harbor. However a passenger ferry was coming in as I approached the dock and after a short patrol leg in the west harbor they radioed ahead that they had "the American" on board and minutes later dropped me, the sole passenger, off at Camber. Luckily, it didn't rain while I walked.

The next day I was able to talk to Blanche in New Jersey via the McKenzie's ham radio and a telephone patch. She told me that Bob Watson would be coming and that she was still trying to find another crew. When I boarded the ferry for the trip across the harbor, crewman Brad Bailey asked me if I would take him to New Jersey to see a girl he had met in the Bahamas. I asked him where in New Jersey he wanted to go and was astonished to hear him say, "Glassboro." I told him that I needed a crew and Glassboro was where I was headed but, unfortunately, the timing was wrong for him to accept my invitation. Too bad. The young woman he wanted to visit lived less than a mile from my home. The following day I went to the Secretariat to talk to Liz Smart about getting crew flown in from Ascension Island. She made it clear that flying from

Ascension to Stanley was on a compassionate basis only—death or sickness of a near relative. I was sure that any foreign crew would have to make the trip from Ascension Island by boat—an eight-to-eleven-day voyage of 3400 miles which potential crew might shy away from.

On Saturday, January 7, after I sang happy birthday to Blanche via ham radio, she told me that Bob Watson had called the Colonial Office in London and had secured air passage all the way to Stanley. I was delighted to get this bit of information but it was something I planned to keep under my hat lest a local bureaucrat find a way to recover lost control. On the way back to the Camber I met Jerry Milsom, a diesel expert, who volunteered to stop by Monday to tune up Globe Star's engine.

While I was in Stanley on Friday to see Liz Smart, I stopped by the Roseland Hotel where I ran into Jean and Shamus Mahoney. I had chatted with Jean earlier when I met her on the street. They asked me to join them for "tea" on Sunday. Jean had asked her friends for salad materials and one of them came up with a tomato—a real prize in the Falklands. Her salad was lettuce, corn kernels, sliced onions, and tomato. The main course was chicken and chips. Both she and Shamus were teachers on government contract. Jean, Brooklyn-born, was a kindergarten-primary teacher and Shamus taught "maths" up to age 16. After that age the children went elsewhere for more education. Before the war of 1982 they went to English schools in Argentina. The Mahoneys said that children who desire and can afford higher education go to England. One boarding school in England offers scholarships. The Falkland Island Government pays the transportation. The Mahoneys took flak from the islanders (Bennies) because they chose to leave after the war broke out in April 1982. When they returned in July after the war had ended, they were given the "treatment" including strong words in

town meeting. They said it resembled a lynch mob. After "tea" Jean and I watched Shamus play soccer with a locals-civilian team against a team representing the military forces. The military won 3-0. On the way over to the Mahoneys I saw the annual raft race. I had seen these in the making around Stanley. Power was by paddle, tiny sails, bicycle paddle wheel, etc.—all craft were gaily painted and I didn't have my camera!

Early Monday morning George Frost brought a message from Jim Berry. He had finished straightening the bent steering oar from the self-steering vane and had welded the dodger frame. Jim arrived in the afternoon with the repaired equipment and two associates to help install it. I was very pleased to have help with the self-steerer because its weight and odd shape made remounting it a two-man operation. Military rules prevented monetary payment but later in my stay I was able to provide them with a "spiritual" reward. This was only one of the many instances of concern expressed by British military personnel while I was a guest in the Camber. When I was confined with the flu someone looked in on me daily and when I felt better George Frost or others would stop by for a morning cup of tea. When I was ready to work on repairs, there were offers of tools, use of shop equipment, materials, and expertise. I was invited to use washers and dryers to launder salt-impregnated clothing and sleeping bags and told to help myself to freshly baked bread whenever I needed it.

Ships' officers invited me to lunch and to dinner, offered charts, and provided information on navigation aids that I might encounter on the trip to Cape May. Enlisted personnel chatted freely with me on the passenger ferries and had me join them for evening dart games on ships in the harbor. I was adopted by an RAF Search and Rescue helicopter crew and invited to use the facilities of the Senior Ratings Club. When night-

time gales made using ladders descending to the floating docks unsafe, I was assigned a bunk so that I could sleep over. If I insisted on returning to Globe Star after spending an evening at the Club, one of the members would accompany me to make sure that I got back to the boat safely. The buddy system had been adopted about the time I arrived in Stanley after a merchant vessel captain had lost his footing on a ladder, slipped into the icy water and drowned.

Word came from Blanche on January 12 that Ed Gibson, retired surgeon and crew on the 1980 voyage to Africa, and his brother-in-law Dave Lansdale had signed up for the last leg of the circumnavigation and would join Bob Watson for the flights to London, Ascension Island, and Stanley. It was going to be a good crew. I had not sailed with Bob before but Dave and I had crewed for Ed Gibson on his Allied Seawind, Hebanje, when he sailed to Bermuda and back from Newagen, Maine in 1979. The following night I took the passenger ferry over to Stanley to visit the McKenzies and to speak via ham radio to Jim Faries, another of Ed's brothers-in-law, about flight schedules and items to be brought.

When I got to the dock to board the ferry, I found that the harbor had been closed because of strong gales and extremely gusty winds. I joined the stranded passengers who had gravitated to the deck of the "Black Pig," the oceangoing tug, Yehuin, which the British had captured from the Argentine Navy in the Falkland Islands War a year and a half before. Three crew from a "chopper" unit based at Navy Point invited me to return to the Camber aboard their helicopter that was trying to hold steady enough to winch them up two at a time. I accepted and immediately regretted the decision as I watched the hovering helicopter being blown away repeatedly by the violent gusts. After numerous attempts the pilot gave up and returned to his base. I would have gladly stretched out on the "Black Pig" for the night but the Navy

relented and sent a Kiwi boat for one last run across the harbor. I spent the rest of the evening at the Senior Ratings Club with my new buddies, Tom, Roger, and Bob.

Shortly after I arrived in Stanley I was hailed by the name "Yank" and found myself talking to American Giles Mercer, who was born in Maryland but yearned for a more rugged environment. He lived for a while with his wife Crystal in her native Scotland but both wanted a life with fewer amenities. Stanley, a place where you couldn't buy bread or have garments dry cleaned, was more to their liking. Giles tracked me down later to ask me to dinner with Crystal and their two blonde daughters, Simone and Catherine, on January 17. Giles and Crystal's story is one that I had heard repeatedly in Alaska when I drove there with my family in the middle sixties. Hardy types had found themselves attracted to the rugged environment and left the stresses of modern urban life behind. The meal cooked over a peat fire in an old-fashioned kitchen range was hot and satisfying. When I left I took with me a gift of seven fresh eggs laid by hens kept in a coop in the back yard, and a big bunch of red radishes. On the ferry ride across the harbor I realized I had received more than dinner, eggs, and radishes. I had been given a trip back to my boyhood on the farm.

The week that followed was filled with catch-up jobs as recorded in my journal. January 18: *Got after the fo'c'sle door. Planed off the hinge side and reset the hinges. It has been a royal pain! Also got after the fridge. The fan motor shaft is tight and the fan motor fuse was blown. Royal Navy man has taken over the fan motor repair.* January 19: *Reattached the dodger frame this morning. The frame makes an excellent hand hold but this in time works the screws out of the teak trim alongside the hatch where it is secured. Found some... [bolts] so drilled out the frame and tapped the steel sides of the hatch... and bolted the frame with 3 bolts on each side. That should hold it for a while. Also re-*

assembled the ignition switch and ran the engine for a half hour or so to oil the cylinder walls and charge the batteries. Will try to take the [refrigerator] motor housing apart and free up the shaft.

On January 27 I stepped from the galley into the cockpit to check out what sounded like an outboard. It was an outboard attached to an inflatable flying the RAF flag. I hailed the two crewmen and asked if we were being invaded. Their names were Ted Little and Keith Mursell. They were in the helicopter crew that tried to “rescue” me from the “Black Pig” ten days earlier. They immediately asked if I were short of any items. Ted offered me his “torch” and said they would get me some jerry cans of diesel fuel. Later after I had explained that I planned to return to a fort built to protect Philadelphia from British invasion during the American Revolution, they brought over an RAF Union Jack and asked me if I would fly it as I sailed up the Delaware. I assured them that I would.

Any lingering concern I had about crew for the final leg vanished on January 28 when Ed Gibson, Dave Lansdale, and Bob Watson arrived at the airport with a phenomenal amount of gear, mostly their own but also a lot of things that Blanche had gotten together at my request. While we waited for entrance formalities they gave me a blow-by-blow description of the two in-air refueling operations carried out during the Hercules’ 3400-mile flight from Ascension Island. The rendezvous sites are located about one-third and two-thirds of the distance along the route. Individual, fast-moving tankers are dispatched from Ascension one at a time in order to meet the slower Hercules at the predetermined points. It was this cumbersome operation that hampered the British military response to the Argentine invasion in 1982. The runways at Stanley airport could not accommodate long-range jets so they had to rely on the short-range Hercules that could make the flight from Ascension only by in-flight refu-

eling. The Mount Pleasant Airport project that we inadvertently stumbled into while finding our way to Stanley was initiated to make long-distance flights possible and therefore reduce British Military vulnerability in the Falklands. While we were at the airport I followed a lead given anonymously by a British airman at the Camber and obtained an aerial photograph of Globe Star taken by the RAF as we approached the islands on December 19.



The RAF was watching: Aerial taken as Globe Star made its approach to the Falkland Islands.

We piled into Collin MacDonald’s taxi, gear and all, for the five-mile ride to Public Jetty where we transferred to the passenger ferry that dropped us off at the Camber. With the baggage safely aboard Globe Star, we went back across the harbor for a welcoming “tea” at the McKenzies and for a ham radio report to Jim Faries letting the home team know that the crew had arrived safely.

The four of us spent the next morning getting caught up on mutual news and laying out plans for departure. There was a slight hitch. In London the lithium batteries, replacements for the spent ones in the transmitter, were judged improperly packed and were held over for approved packing and subsequent shipment. This would cause a period of delay. A short wait was not a

problem. We expected the return to Cape May to take about three months and had targeted the middle of May as a good time to arrive in order to avoid spring storms near the New Jersey coast. We decided to wait and see but in the meantime to check daily with the shipping department at the airport in a kind of lobbying effort. In the afternoon we took the ferry to Stanley for a “photographic tour.” From my journal: *Spent an hour or so talking to Willie Bowles who was firing up his two small greenhouses filled with tomato plants bearing tomatoes beginning to ripen. He had a very nice garden—ripe peas, turnips & rutabagas (He gave us some of each), parsnips, potatoes, carrots, etc. He is also the local Olympus dealer. Has been to the U.S. and would like to return sometime. We had spaghetti for dinner. Used muttonburger in the sauce and it was O.K. Will fill empty pint jars with it for use in chili con carne, spaghetti, etc., on the way home.*

When I made the spaghetti sauce I discovered I had used up almost all of my supply of oregano. It is one of my favorite seasonings and I didn’t see how we could get along without it for three months. Ed and I set out early the next morning to see if we could remedy our situation. From my journal: *Couldn’t get oregano at West and other stores. Clerk at Speedwell suggested I try a ship, perhaps the John Briscoe, British-sponsored Antarctic research vessel based in Stanley. On the way to Orlanda and Laurie Butler’s to pick up a hind quarter of mutton (£3.20) we saw a long-haired, red-headed guy for the third time and spoke to him. He was an ornithologist from the John Briscoe and said to talk to Steve, head steward, about oregano. We went on to Butler’s for the mutton and then to see Steve. He gave us a generous amount of oregano and wished us well.*

On the morning of the thirty-first while Dave and Bob continued taking inventory, Ed and I went to work on the galley stove. Properly maintained, the pressure-kerosene stove is an excellent choice for long-distance

sailing because the fuel is not very flammable, packs a lot of energy in a small volume, and is universally available. The burner of a pressure-kerosene stove ejects preheated kerosene through a small orifice that vaporizes the liquid. The “atomized” fuel then exits a sieve-like cap where it burns with a blue and very hot flame. The high temperature of the flame, however, carbonizes some of the kerosene which eventually clogs the orifice. The burners we used had internally mounted “prickers” which could be rotated by the control knob to clean the openings. When we took the burners apart we found that our spare orifices were too large for the burners and the spare prickers were too large for the old orifices. We wound up repairing the old ones. We had better luck with a ruptured sealing washer that was bleeding air from the pressure tank. We “borrowed” some “O” rings from our next-door neighbor—the Royal Navy. Later in testing the “tuned up” stove I passed a milestone. From my journal: *In the afternoon, Bob, Dave, and Ed went over to Stanley and I put a leg of mutton in the oven. First time I ever put a roast in the oven. Rubbed salt over it after trimming off the fat and inserted cloves of garlic. Put rutabagas around after it roasted a while. Let it roast for about 4 hours. Dave [who had announced on arrival that he was taking over the cooking] served it with frozen peas and baked potatoes. It was superb—the best meat I’ve eaten since leaving home.*

Two days later we put the two-burner stove and our cabin table to the supreme test. The four of us were joined by four members of the helicopter search and rescue group—Keith Mursell, Bob Griffiths, Edward (Ted) Little, and Roger Whitehead. Dave served baked ham, peas, baked potatoes, homemade bread, pineapple slices, and cookies. There were compliments to the chef on the “home-cooked” meal. I tested the stove again on February 4 by processing ten pints of “muttonburger” in the pressure cooker. The mutton would be a substitute for beef in spaghetti-

ti sauce and chili con carne.

Late in the day Keith Mursell and Bob Griffith brought a package of batteries which we took to be our transmitter batteries that had been flagged in London. I asked Bob and Keith if these were the ones from the airport and got an affirmative. When Bob handed me the batteries wrapped loosely in a plastic garbage bag the package of batteries shot out of the slippery bag and into about eight feet of murky water. We panicked. We were sure we had lost our irreplaceable lithium batteries. The non-transmission of position information was not a major concern but I was committed to sending out weather data and was unwilling to sail without an operational transmitter. On the other hand I was reluctant to enter the icy water for fear of inviting pneumonia. We all agreed that someone should search the bottom. It wasn't the proper environment for the ship's chef but nobody objected when Dave volunteered. Just as he crawled out naked and exhausted from three fruitless dives, Bob and Keith returned with an identical package of batteries—flashlight batteries. The ones on the bottom were not our precious transmitter batteries, only a dozen expendable "D" cells.

Fifty-knot (58 m.p.h.) gales swept the islands on Sunday, February 5. I wrote in my *Journal: Mast shaking. Bad weather even for Falklands.* We watched as the ships Keren and Andalusia Star dragged anchors to move slowly across the harbor. A Greek ship anchored in Port William was driven onto a rocky lee shore. I was afraid the floating dock holding Globe Star would give way and she would be crushed between the dock and the rocky wall on the leeward side of the Camber. Only two lines, albeit heavy, held the floating dock to the Camber wall and they were being severely stretched by the pressure of the wind hitting Globe Star's rigging and hull broadside. Because of the danger of being blown off the fifteen-foot-high wall into the water, military personnel had been given orders to stay off the

wall. When I inquired I was assured the orders were not binding on me so I borrowed a sledgehammer, some heavy steel pins, and some hawser-weight rope and went to work. Using the materials as ballast I crawled out on the wall, drove pins into its revetted surface, and then used the rope to secure the floating dock to the pins. The jury rig relieved the strain on the lines and the strain on us. Globe Star was safe.

On Monday with the inventory complete and a shopping list in hand, Dave and I took the Kiwi boat across the harbor to stock up for the final leg. I had purchased small quantities of several items for the new crew to sample and pass judgment on. Case lots came from the Falkland Islands Company, lesser items from the West Store, and a few small items from the Coop. As usual we built in a safety factor in the event of a longer-than-expected voyage. The final piece of our preparation puzzle fell into place that afternoon. The transmitter batteries were delivered to Public Jetty No.1. In the evening the McKenzies and I were guests at a farewell dinner hosted by Ed, Dave, and Bob at the Upland Goose Hotel.

The next day I turned on the transmitter and plugged in weather data and after mailing film, writing cards, and packing got word from Charlie Layton via ham radio that the transmitter's voltage had dropped from 227 to 191 volts. He recommended putting in the new batteries immediately. We planned to leave on the eighth but delayed departure for a day after Captain Nick Warren of the "Black Pig" informed us of impending heavy weather. I checked out with customs officer Les Halliday and immigration officer, Police Chief Bill Richards while Ed and Bob installed the fresh transmitter batteries. Word came back that the weather data was garbled as it had been between Hobart and Sydney. When we pulled the set apart we discovered that a twenty-prong plug had been reversed. Curious, we opened the spare set that Ian Milne

and John O'Brien had converted to run off our twelve-volt, onboard batteries and found that its twenty-prong plug was reversed. We restored the plug to its intended position and held the set in reserve in the event of more battery failure.

From time to time during my stay in the Camber, I stopped by to chat with Royal Navy divers who were quartered in temporary buildings alongside the Camber. On one of my visits they volunteered to give Globe Star an underwater inspection. Apparently they had heard we planned to leave on February 9 and stopped by at an early hour to tell us that they would be blasting some subsurface obstructions along the eastern wall and

that the Camber entrance would be closed until they were finished. They also told us that while they were "suited up" they would take a look at Globe Star's underwater body. The two blasts were finished by 11:30 and Globe Star's inspection was completed by 12:00. The divers reported the hull fairly clean and the rudder's single gudgeon and pintle combination in good shape. I made a hasty trip to Stanley to bid the McKenzies goodbye and to take them a few onions. Their parting gift to me was their first head of cabbage. I called Blanche to confirm transmission of weather data and to let her know that we planned to leave as soon as I returned to the Camber.

Chapter 16

Home Run

It was close to three in the afternoon of February 9 when we cranked up the engine, cast off dock lines, and motored out of the Camber's narrow entrance into Port Stanley. Because of very light air we continued under power northward into Port William and then east to Point Pembroke where we entered the South Atlantic and set a course a little east of north. Our "float plan" was to move toward the equator while paralleling the South American coast at a distance that would keep us clear of the southwestward flowing Brazil Current, a weak mirror image of the mighty Gulf Stream of the North Atlantic. The heading would shift from east of north to west of north after we reached the "bulge of Brazil." The planned route from there would be to a spot a hundred miles or so east of Cape May where it would bend abruptly westward toward our original point of departure into the Atlantic.

During the late afternoon we were overtaken by the Polish fishing vessel, *Lyra*, out of Gdynia. We continued under power for that first night. While the danger of gales from the east was minimal, prudence required getting clear of the land as quickly as possible. At sunrise we raised a double-reefed main, yankee, and staysail. It was a good feeling to be under sail and heading in a direction that would each day put us an increment closer to home. I allowed myself some cautious opti-

mism. Prospects for accomplishing what I had set out to do seemed good. *Globe Star* had survived the stormy Southern Ocean, cleared the fabled Horn, was in good condition, well provisioned, and carried a fresh, capable, and enthusiastic crew. The planned route was through open ocean, a safety plus for a small boat, where as we moved toward and then away from the equator, our chances of meeting violent weather were indeed slim. Moreover, the only remaining landfall was on a familiar coast and at a time when lengthy storms were unlikely.

Because we had experienced heavy gales in Stanley, we expected to run into bad weather at the outset. Instead the wind was frequently light or nonexistent. We worked to find sails that would give us some headway in a suitable direction. Often we sat for hours at a time in dead calms or sailed slowly well off a desired course. The log is replete with phrases such as *becalmed for six hours*, *becalmed for first two hours*, *almost becalmed*, *all but becalmed*, and *wind nearly died*. By the thirteenth Dave and Bob had begun to overcome the seasickness that had tormented them from the beginning. The next day Dave took over the galley—a job he kept for the rest of the voyage. Ed, Bob, and I took turns doing the dishes. And on the fifteenth Dave made his first apple pie. He used a pie crust mix that Blanche had sent and apples that came from the "Black Pig".

Ed and I provided maintenance as shown by journal entries: *Ed and I had a look for diesel fuel line leak but came up dry. Ed tightened the packing nut on the shaft stuffing box. Worked on stove. Got forward burner working. Replaced burner in stove. Worked on stove again. Got aft burner working but not to full heat. Sewed patch on genoa. Lubricated winches.*



Dr. Ed Gibson doing a water clarity study for the Bigelow Laboratory in the South Atlantic just north of the Falklands.

We saw flocks of prions on February 17 and wondered about their presence so far offshore. The ARGOS record shows that we were passing over a small area of very shallow water at the time. On the twentieth my journal reads: *Pilot whales galore—also dolphins and jumping fish—skipjack (?)* On the twenty-first Ed identified a fogbow which sent us to the **American Practical Navigator** which had this to say, “A faint, white arc of about 39° radius is occasionally seen in fog opposite the sun. This is called a fogbow, although its origin is controversial, some considering it a halo.” The note-carrying bottle that Bob spotted on the twenty-fourth was likewise something of a mystery. Supposedly, it was written by twelve-year-old Carolina Susana Cortes who said that for two years she had been throwing bottles in the ocean and receiving answers from all over the

world. She said that she was studying the Malvinas current and requested the finder to respond. She sent a message of peace and friendship from the children of Argentina. The return address, however, on the note dated January 1983, was hardly that of the average twelve-year-old señorita. It was Liga Naval Argentina, Revista “Billiken,” Lineas Maritimas Argentinas (ELMA), Prefectura, Naval Argentina. Some time after returning home I mailed a letter with the date and place of retrieval but as yet have not received an acknowledgment of its receipt.

The new crew’s first taste of heavy weather came when forty-five-knot gales struck just after midnight on February 25. What we judged to be a 170-degree shift in wind direction under completely cloudy skies made direction-finding exceptionally difficult. For a short period we believed we were sailing southwest—just the opposite of our intended course. The storm had its brighter side. It brought air temperatures of 72° F. and water temperatures of 68° F., both of which improved night-watch conditions. Warm-water dollops in the face do not seem quite so breathtaking as cold ones. On watch I conjured up visions of being wafted along in light air on tropical oceans filled with luminescent creatures. Four days later we recorded temperatures of 79° F. and 75° F. for air and water respectively. We were living!

[At noon on February 28, nineteen days out of Stanley, we placed ourselves at 33° 15’S and 40°42’W, a position 276 miles WNW of the position established by ARGOS. We were off in latitude by 112 miles and longitude 250 miles.]

On leap day we boated a small dorado which we promptly filleted and added to the dinner menu. The fresh fish, a visit by a pod of dolphins, always a welcome sight, a clear sky for the first time in a week, and some good sailing following several hours of calm and fog at night made February 29 a better-than-average day. The northwest surge

that dispelled the fog and gave us good mileage and direction ended in a calm on the morning of March 3.

Marvin Creamer and his crew aboard *Globe Star* are an estimated 1600 miles north of the Falkland Islands, sailing north in the South Atlantic Ocean on the last leg of a circumnavigation that is unusual because no navigational instruments are being used...

Creamer's journey, aboard a 35-foot steel cutter, is regarded as the first circumnavigation to be made without such navigational tools as a compass, clock, sextant, or radio...

Creamer began his circumnavigation 17 months ago, leaving from National Park, N.J., on the Delaware River. *Globe Star* is expected to return there in early May...

—Joanne Fishman, *The New York Times*,
3/4/83

Knowing that we would soon be within the tropics, Ed and I took the opportunity to have a look at the refrigerator—a look that spanned a two-day period. We were able to get the compressor to run for an instant but it would immediately shut off. We concluded that the problem was in the controls and tried to wire around them but struck out. It was not a matter of much consequence but chilled water and juices would have made the steamy days near the equator easier to abide. While working on the refrigerator we found the alternator on the engine was not working. Solar panels would have supplied enough power for occasional use of running lights but I worried about continuous use when we approached the shipping lanes of eastern North America. More serious was the problem of getting the engine started in an emergency with weakened batteries. We had a hand crank for the engine but even by using compression relief to build up momentum in the flywheel, it was impossible to crank against the compression of just one of the three cylinders. This is a problem I had

given some thought to long before the engine was installed. In a do-or-die situation my plan was to begin the cranking operation with the hand crank and compression relieved and then call for whatever help the starter could add at the same time compression was restored to one cylinder. I figured with a bit of luck the engine would start on that cylinder and then with the restoration of compression to the other two, one at a time, the engine could be coaxed to full power. It was a plan I didn't want to have to test. I discovered in checking out the alternator that it worked fine when a live lead wire was touched momentarily to the exciter terminal on the balky alternator. The source of the problem was in the control panel which had succumbed after more than a year's drenching of sea water. It was obvious that we would have to "hand-tease" the alternator for the rest of the voyage. To make this easier I brought one wire from a twelve-volt source on the engine and one from the exciter into the galley and used a makeshift switch to provide a brief shot of "juice" to the alternator when needed.

A changing atmosphere encountered as we moved northward is recorded in my journal. March 4: *Lay in calms yesterday and this morning but air has picked up now (early P.M.) and we are jolting along with genoa and single-reefed main. We had heavy rain late yesterday and collected c.20 gallons of water. Took a full bath on the fantail and stood in rain for a fresh-water rinse. Washed some of my dirty clothes and rinsed them in fresh rainwater trapped on the starboard cockpit seat.* March 5: *Got zapped by a heavy shower at dinner time last night. We had just finished [eating] when a hard blow came in from the port side. Bob [at my direction] tried to run it off to starboard but with heavy air Globe Star heeled down severely on starboard side and water poured in open port over the starboard settee berth, soaking the tape recorder, my clothes and personal items, and cans of food under the berth. Spent c.2 hours rinsing cans, cleaning lockers, etc. Put my clothes and mattress cover*

out in the cockpit to get rinsed by fresh rain-water. Lay in lumpy seas with sails slatting (or down—ahull) for most of the night with lightning flashing all around. Got underway c.0400 when Jupiter and Antares came into view for a brief time. March 8: Motored 4.6 hours early this morning in a dead calm after lying with sails down for part of the night. Got underway c.0600 with wind on the nose. We are having a hard time making headway toward the equator. March 9 (log): During evening dropped sails and motored for 6 hours. Our idea in motoring in calms was in part to compensate for the relatively low sail rig which made the going slow in light air. We also had in mind that because wind belts generally stretch across the oceans in an east-to-west direction, motoring northward might just possibly put us into another wind belt—one that might have wind for our sails. There was always the hope that usable air was just beyond the horizon. March 10 (log): Wind from the north; slow progress considering adverse current.

The shout of “Fish on the line!” caused a stir in the cockpit on the afternoon of March 12. It was a twenty-five-pound dorado that provided entrées for two successive dinners and a goodly amount for pickling. We interlaced thin fillets with onion slices and pickling spices, packed the combination in a large glass jar, and added a mixture of sea water and vinegar. Our attempt at pickling might have been more successful if we had been sailing away from the equator rather than toward it, especially in view of our lack of refrigeration. Three days later we enjoyed fine pickled fish but by the end of a week the container frothed like the jug of a West African palm tree tapper. We gave it the deep six. The stomach of the dorado had been filled with small fish that looked very much like bottom fish leading us to suspect that we were sailing over a shallow area shown on the chart.

During the dark period spanning March 12 and March 13, we were able to get latitude from Mars and from beta and delta Scorpii. It was the first time we had been able to use cele-

tial bodies for latitude since leaving Stanley in the Falklands. In the thirty-two-day period we had sailed about 2250 miles through the horse latitudes and into the tropics. We had sailed through a lot of overcast skies but nevertheless had seen stars, especially the Southern Cross and Hadar and Rigil Kentaurus which provided direction at night but which because of declination or clouds at the time of meridian transit could not be used to determine latitude.

On March 14 I wrote in my journal: *Winds have been better for the past few days but turned fluky with rain nearly all night last night. For a while we sailed nearly north but today we have slowed down and turned well to the east. It was cool last night but for a few days it has been HOT. The sky has been filled with a tremendous variety of clouds. Showers occur daily in late afternoon or evening. Rainbows are striking against towering white cumulus clouds. Sky color has ranged from aqua to a deep blue.*



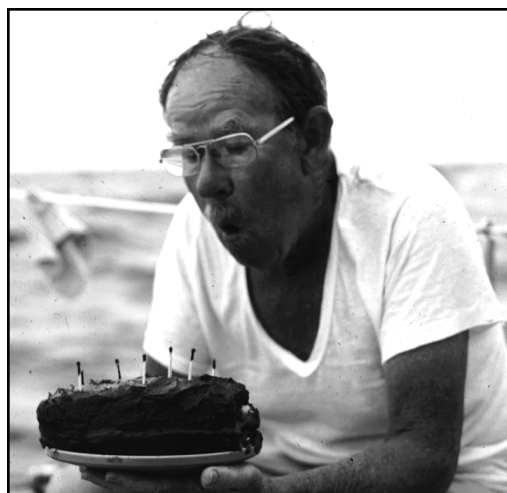
Bob Watson lands 25 lb. dorado.

The calm of March 15 provided me with an opportunity to get back into the repair business. Dave had decided that his newly grown beard made him look too old so I got to work on the shaver that had died months earlier—a victim of the salty, humid environment. The flat, tin-coated steel conductor which connected the rechargeable batteries to the motor had disintegrated, breaking the circuit. I spliced in a small piece of copper wire with a light, twelve-volt soldering iron which was in the repair kit. The iron, which clipped to battery terminals and heated in seconds was a real gem for making electrical repairs. The rest of us agreed with Dave, after he shaved, that he did indeed look much younger without the beard.

The next day we raised the drifter in northeasterly air. It was the first easterly air in those latitudes. Our direction was poor, west of north, but improved with the passing of time. On March 17 I wrote: *Still moving well with easterly air. We are able to sail straight north (as near as we can judge), and at fairly good speed, c.4 knots. We all look forward to clearing the Brazilian hump c.7° south latitude. At that point we will be able to sail directly toward home.* The easterlies continued to propel us toward the equator. March 23: *Have been moving smartly with easterly air. Turned northwestward last night and are at last headed more or less directly home. Passed a blaze of lights (off port side) last night. We thought it might be a research ship doing borings in re Gondwanaland.* [Editors' note: Gondwanaland is the name scientists have given to the southern half of earth's original supercontinent, "Pangea," which split in two more than 200 million years ago. This half, the pieces of which would fit together snugly if they were somehow rejoined, in turn broke into six major pieces: South America, Africa, Australia, Antarctica, India and New Zealand.] *Porpoises came over to greet us this A.M. Water seems a little less blue. Evidence seems to indicate our longitude is not too far out. Ed's 69th birthday today. Dave went all out—made brown bread for us and white raisin for*

Ed and made potato salad as requested. He made an orange cake from mix and frosted it with chocolate icing. Used wooden safety matches for candles. Ed was visibly pleased.

[On March 23 our latitude was off 116 miles but longitude was off by a whopping 692 miles. Our on-board position placed us 702 miles WNW of the ARGOS position.]



Dr. Ed Gibson blowing out the candles on the birthday cake baked by his brother-in-law, Dave Lansdale.

As we neared the equator we sailed under a greater number of stars useful for latitude-finding. From March 20 to March 26 we corrected or confirmed our latitude on the basis of observations of Spica, Alphard, and gamma Virginis. Traditionally sailors have regarded crossing the equator as a major event in a long-distance voyage. It was no different on board Globe Star. The star sightings gave us relatively accurate latitude so we were fairly sure of the big day. From my journal of March 27: *Have been making our way northwestward slowly in light air from the east. Last night the usual night showers brought a wind shift from SE to NE. We are hoping that we have finally entered the NE trades. The multi-layered cloud decks seem to be thinning as we proceed across the equator. We have been handicapped by poles (each broken and shortened in the repair) too short for the genoa, drifter, or chute so yes-*

terday Bob and I made a triple section single pole from the two shortened ones. When we need two poles we'll use the boom for one. The boom works well with the drifter and genoa. We believe we'll cross the equator this afternoon. It will be a milestone on our way home. I am beginning to have hope that we'll make it home in time for me to get to Chapel Hill, N.C., for Lynn's nursing school graduation on May 13. Had a strike on artificial feather yesterday. When we pulled the line in at dinner time, the hook was all but straightened out. Saw skip-jack jumping out of the water yesterday and today. Saw skuas yesterday, shearwaters yesterday and today, and several terns today. Ed brought a blowup woman and put it in my bunk today—He put a Bigelow Lab jersey on her and we got some pix in equator-crossing-ceremonies, bottle-tossing, Ed's mustache-shaving, etc. Of course Ed denied any knowledge of how "Mary" got on board and claimed that the Bigelow Lab tee shirt was in no way incriminating even though he was doing water-clarity studies for that institution. As to his mustache, he was under orders from the rest of us to get rid of it. Following the tradition of the sea, we had a session to divine the cause of continuing calms and were unanimous in our decision. We placated the sea gods by sacrificing the hirsute growth on his upper lip and were immediately rewarded with a heavenly gift from Aeolus.

Too bad he didn't have a second mustache. Two days later I wrote: *We are experiencing some difficulty crossing the doldrums and are using the engine when it is calm and there is enough sky to give us direction. Ed and I took care of a fuel-oil leak yesterday that has been bedeviling us since we left the Falklands. It required replacing three aluminum washers where two banjo fittings on the ends of fuel lines are held to the engine block by a hollow stud. Nick had previously replaced the washers in Sydney. Fortunately, Volvo Penta supplied us with plenty of spare washers. Ed and I also took care of a salt-water leak. When we pulled up the cabin sole hatch cover to look*

at the water level in the bilge, we saw clear water pouring into the bilge from a hose end. Thinking it was siphoning from our fresh water tank, we tasted it. So that he could get a better taste I handed Ed his cup which he filled. It was salt water! And there was only one possible source—an overflowing hopper bowl. Someone had failed to close the inlet valve after flushing the toilet. Ugh! When we finished the fuel line we cranked up the engine to bleed air out of the fuel lines and didn't bother shifting the transmission out of reverse, where we keep it to lock the propeller shaft, and the prop backed us into the dangling heavy nylon fishing line. As a result Dave volunteered to go under and clear it off the shaft with a knife. It just wasn't our day! While I was napping this morning the guys brought a Japanese, rope bound, plastic float on board and somehow managed to bring on board a tiny, three-inch shark which they kept to show me before throwing it back. It was a remarkably active 'minnow.' We've had an active morning, too—calms, a touch of motor-ing, sails up and down several times, sprinkles, downpours, hatches opened and closed, sweating, yarn swapping, etc.

Early the next morning the wind shifted to east of northeast and a few hours later a line of large cumulus clouds crossed our bow from starboard to port. Later in the day we replaced the ARGOS transmitter, whose batteries had given out, with the one that John O'Brien and Ian Milne had rigged to run on our twelve-volt boat batteries. This was the set that had garbled weather data when we sailed from Hobart to Sydney. There was little doubt that the problem was solved by reversing the multi-pronged plug in the Falklands.

The winds continued out of the northeast on March 31 when I wrote: *The sky has turned a powdery gray and the sun was a very pale yellow when it neared the horizon and disappeared before dipping into the ocean. We suspect the source of the dust is the Sahara and is the same as we saw more than a year ago when we were traveling in the opposite direction. We*

see an occasional shearwater, a few petrels, and have sighted one jaeger and one tropic bird (single-tail variety) which Ed says nests in Africa and would be seen at this distance.

On April 1 we racked our brains for a way of transmitting some April Fool's tomfoolery. We were limited to predetermined coded messages and after looking them over came up with the idea of punching in numbers which when decoded read, "We sighted our first iceberg today." It took the home team a while to match the date with the message and place of origin, i.e., just north of the equator, and realize our intent. Unfortunately, the incident caused some embarrassment to Dave's grandson who for show and tell reported that his grandfather had seen an iceberg at the equator.

For nine days in a row we moved steadily northwestward with the yankee, staysail, and main occasionally changed between single and double reef. On April 2 I reported obtaining latitude from Procyon and on April 4 I wrote: *Sky is still quite gray. The sun dissolves in the haze about 5°-10° above the horizon at night and appears that much above in the morning. Dust has coated lines, etc. Same color as January-February, 1983.* Late in the afternoon of April 5 we boated a small yellowfin tuna which gave us two meals of fried

tuna on the sixth. That night we got a good look at Polaris low in the sky on the starboard bow. Even though it stands directly above the ice-covered Arctic Ocean, it gave us a very warm feeling knowing that we were back in its realm where it provided instantaneous orientation at the merest glance.

A sighting of Denebola at meridian transit during the night of April 7 brought a latitude correction of fifteen miles northward. Our estimated position at noon was 15° 56' north and 48° 45' west. On the eighth I wrote in my journal that *...winds are turning light and seas heavy. And the next day, Landed a large, c.12 lbs., dorado with roe this morning. It will make dinner for us two days in succession. Very light air. We have the drifter up for the first time in quite a long time.* On the tenth I observed that the dorado was good but the roe was so-so, and on the eleventh I commented, *Dorado kept O.K. without ice. Didn't smell too good but tasted fine.* We were not the only fishermen in the vicinity. In the same entry I observed, *...spotted a fishing boat to starboard which ultimately crossed our bow after coming from behind (starboard quarter). Too close for comfort!*

Two days later I noted: *Friday the 13th! Wind dropped off yesterday and has been*

Technology Follows Creamer as he Steers by the Stars

WASHINGTON—Whenever Blanche Creamer wants to know where her husband is, she simply calls her brother in Baltimore, who hooks his computer into a system in Toulouse, France, which is tuned into New York via satellite, which is in contact with a computer here, which gets its data from Alaska...

Relying on a labyrinth of technology to track the Glassboro man's around-the-world sailing odyssey may seem extravagant. It is also ironic in light of Marvin Creamer's mission -- to be the first skipper in modern times

to circle the globe without a single navigational instrument.

But if it weren't for the computers, an on-board transmitter, two U.S. satellites—each equipped with a French-made "black box"—and another satellite that remains stationary with respect to the earth, Creamer would never know how successful his experiment is, said Dr. Lee Houchins, a Smithsonian Institution Research Associate who is using a computer in the basement of his house here to track Creamer.

—Alison Carper, *Gloucester County Times*, 4/16/84

exceptionally light today. When it veered to east, we put up the chute. It stayed full until mid-afternoon and flopped since (c.1730). Cleaned calcium deposit from valves in the head. It had been filling with water even when the inlet valve was shut off. It seems somewhat better. We have new parts if they are needed. About 1645 a ship bore down on us from the east veered to port seemingly to pass astern, then when close veered to starboard, passed us on our port side then circled us clockwise and gave us a 3-blast salute. Passengers and crew came to the rail to wave to us. It was a Russian ship, the KRASNO-DON, with a deck load of machinery headed east. We presumed it to be bound for Cuba. Our DR latitude at noon was c.21° 30'N. The circling was not too surprising. Scotia was circled and saluted in mid-Atlantic in 1974 and in 1976. What puzzled us was that the maneuver began with a turn to port even though it was obvious that the ship would clear our stern. What might have been going through the captain's head? Days later it came to me. If he were going to circle us, he was going to have Globe Star at the center of the circle. If the ship passed close to our stern it could not turn tight enough to keep us at the center, therefore it was necessary to begin making the circle at distance that could be maintained as a radius all the way around. After I returned I wrote the Soviet Embassy in Washington to see if I could get a copy of the KRASNO-DON'S log but never got an answer.

Winds grew lighter and lighter as we approached the tropic of cancer and at the same time quite variable in direction. On April 15 I wrote: *We are BECALMED! Took all sail down yesterday evening and have not moved (except current?) for the past 24 hours. This morning after Ed went up the mast to bang*

tangs we 1) worked on the mast plug connecting solar panels to the batteries, 2) exchanged topping lift and mainsail halyards, 3) replaced primary genoa halyard with new line, 4) replaced secondary genoa halyard with line from old genoa halyard, and 5) scraped marine growth (barnacles, etc.) from the sides and aft bottom (Dave & Bob), Also tapped mast and put another cleat on to hold the main halyard when the main sail is furled to the boom.

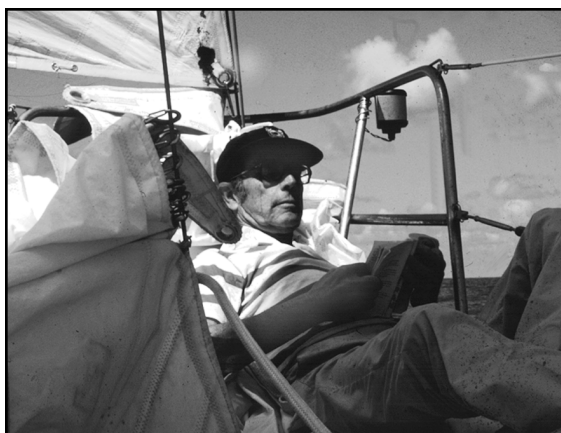
During the ensuing period of coaxing Globe Star through the horse latitudes there was a minor slipup in the galley. From my journal of April 19: *I gave Dave Blanche's recipe for sponge cake so that he could make a pineapple upside down cake which he made while I slept this morning. Knowing that I remembered the number of eggs, Blanche didn't bother to write them into the recipe so Dave made the upside down cake without eggs. It was edible! I told him the best that I could say about it was that it wasn't any worse than the canned British apple pudding we picked up from the military in the Falklands.*



The Globe Star is circled by the Soviet freighter Krasnodon.

Gentle breezes from the southwest ended the interval of calm early in the afternoon of April 21. Winds eventually reached speeds of more than thirty knots which in two days' time built seas to thirty feet. Ship sightings increased rapidly as we crossed major shipping lanes. The four ships we spotted on April

23 bobbed like corks in the foaming breakers. The part of me that enjoys a moderate amount of chaos watched in awe as man's largest vehicles pitched and rolled in the turbulence of the stormy seas. It didn't seem possible that the simple elements of air and water could exert the kind of pressure needed to fling these multi-million-pound leviathans around like children's toys in a wading pool. I wondered how many more storms lay ahead and what kind of weather we would face at the time of our landfall.



Dave Lansdale, cook on the final leg, relaxes with a book between shifts.

During Dave's watch on the night of April 24 as we were sailing north, a ship approaching from the east veered off course to intercept us. It stopped as it came close, and began sending coded light signals. Unfortunately, none of us had ever bothered to learn Morse code so our only response was to switch on the strobe light at the top of our mast and fall astern, whereupon the ship continued on its original course. It was our turn to attempt communication the next morning. In midmorning Dave spotted a sloop-rigged sailing yacht flying a spinnaker and a French flag headed northeast. Thinking we might enjoy some conversation with fellow sailors after 76 days of talking to each other, we lowered our genoa and cranked up the engine to give chase. A dirty fuel filter stalled the engine and canceled our plan. I

replaced the fuel filter, bled the fuel lines, and restarted the engine. It failed again. After several bleedings and stallings it ran all right but by that time the yacht had passed at some distance and was nearly out of sight. The boat was being steered by a vane and whatever crew was aboard was below deck and out of sight. The incident was not without benefit, however. I recorded in my journal: *Lucky for us we spotted the yacht. We might have tried making port with no engine.*

At this point we had hopes of finding Bermuda. We were using the same star, zeta Herculis, that had gotten us into Bermuda in 1980, and according to our observations our latitude of 32° 22' north was the latitude of St. Georges at the eastern end of the main island. Our longitude estimate put us about 230 miles to the east but because of the direction of the wind, a little south of west, we could not maintain a due-west course in order to run it down by the parallel sailing method and could not bring ourselves to tack south of west when our final objective lay 800 miles or more to the northwest. Even a near-empty fuel tank did not provide enough incentive for us to alter course. Even so, early on the morning of April 26 I thought I got a momentary smell of the island and late in the day saw streak lightning off to port as we proceeded on what we guessed was a course of 300°. Clouds and heavy rain obscured the sun and reduced visibility to less than five miles, hardly the conditions for locating distant land.

[On April 26 we placed ourselves 39 miles north of our actual latitude and 582 miles west of correct longitude.]

Our hope of sighting land faded as nighttime latitude estimates based on observations of delta, gamma, beta, and zeta Lyræ, and delta Bootis showed movement to the north. Our approach to the population centers of northeastern United States brought more and more ship sightings and an occasional glimpse of a jet. On April 29 toward the end of a day of numerous clouds, including towering cumulus clouds, we watched a

waterspout do a five-minute dance against the background of the setting sun. From my journal of April 30: *Ran through the night with the genoa, staysail, and reefed main with some increase in the wind speed but not real squalls. In the late dark hours sheets would loosen even though the wind was steady and the surface relatively mild suggesting current turbulence. Whereas the water was a gray-blue yesterday, this morning it has a somewhat greenish cast. We currently believe we have passed west of the Gulf Stream.* The next day I wrote: *Just after daybreak I sighted a ship headed toward us. It was a small ship and appeared to be rigged for research purposes. After it passed by it hove to and appeared to remain stationary. Around lunch time a Romanian vessel, the Zalau, veered to starboard to avoid collision and as it passed it signalled us with three whistle blasts. It had several heavy cranes on its foredeck. It appeared to be headed west. Water temperature is 19° C (67.1° F) and we have revised our thoughts about having passed the Gulf Stream but have no explanation for the presence yesterday of green water.* Even though we were not aware of it at the time, what we had passed in all probability was not the west wall of the Gulf Stream but the western edge of one of the numerous eddies that develop in the Stream from time to time. The loosened sheets and later some yo-yoing in our latitude combined with alternate sighting of blue and green water support this supposition.

A barnswallow joined us for a time on May 2. He tried perching on furled sails, Ed's knee, and the tiller lines. The strong west winds that had blown him to sea and overcast skies were now making it difficult for us to reach that land. In the early morning hours we got a look at Cor Caroli and Vega and at noon estimated our latitude to be that of Cape May, i.e., 39°. All we needed now was to sail directly west to intercept it by the parallel sailing method.

It sounded so simple. What should have been an easy week of sailing turned into more

than two weeks of maddening frustration. Before we reached Cape May we were beset by gales, overcast skies, dead calms, adverse currents, and strong headwinds. At noon on May 3 we were ten miles farther from Cape May than we were the day before. The next day southwesterly gales, wind-driven surface water, and the underlying Gulf Stream wiped out a hundred miles of movement through the water to give us a net loss of eight miles for the twenty-four-hour period.

Heavy cloud cover made direction-finding difficult as shown in my journal of May 4: *During the night a wind shift occurred. We had been on the starboard tack under cloudy skies. When I came on [watch] in the morning (still dark) noticed the cabin was warmer, the sole damp, the sliding hatch didn't squeak so changed over to the port tack and set a course by guess and by gracious. When the sun appeared about four hours later we were within ten degrees of our desired course! Wind increased during the day and was pretty heavy by nightfall.*

Churning seas made nighttime sleeping nearly impossible. On May 5, I wrote: *Very little sleeping last night. We tried to maintain some westing in SW gales. Reduced gradually to the storm jib and storm trysail and still averaged 4k. We took a lot of heavy thumps during the course of the night.* The next day gales from the west forced us to reduce sail, first to jib and trysail and then down to storm jib only.

The rising water temperature on May 6 was cause for alarm. My journal notes: *Early yesterday the water temperature was 15° C (59° F) and by noon 17° C (63.5° F). So went the blue-green sea battle with us in no-man's-land and promising [Globe Star] to become the sister ship of the "Flying Dutchman." The appearance of a beautiful laughing gull was a bright spot in a very gloomy day.* It did not do much for the morale of a crew fighting to get free of the Gulf Stream and into the cold, green coastal waters. The reappearance of blue water and sargassum was demoralizing to say the least. The cessation of three days of gales offered a respite from the

severe physical buffeting but served as a reminder that we were cradled on a conveyor belt, the Gulf Stream, carrying us toward Europe at the rate of thirty-six miles a day. According to the ARGOS record, in the 72-hour period we had gotten only 68 miles closer to Cape May and winds were still from the west, the direction we had to sail to make our landfall.

We were cheered by the sighting of green water again on May 8 but dismayed by the onset of dead calm and a glassy sea. The “green flash” did little to divert our attention from what had come to be “our problem.” The day that ended in calm saw us 56 miles closer to Cape May. Southerly gales the following day propelled us 65 miles along the way. I noted that *Seas became heavy under south wind and the cockpit was wet!* and further that *Water color is back to blue and temperature at noon was 19° C (67.1°F)*. Our mood matched the color of the water. The push toward the west was short-lived. Calm and dejection settled on Globe Star in the late afternoon of May 9. Our day’s run was a measly 26 miles; the next day’s was hardly better at 38 miles.

[On May 10 we placed ourselves 28 miles south of ARGOS–determined latitude and 447 miles west of ARGOS longitude.]

Dejection continued on the Globe Star. I wrote in my journal of May 11: *Almost no movement yesterday morning partly because of light winds but mainly because of overcast skies. Black veil of yesterday brought light air which we were able to use during the dark hours. Around noon yesterday saw the sun and set a westerly course. Early this morning saw Vega at meridian transit and noted that our latitude was much farther north than our DR showed. It appeared to be about 42° 15'N. It came as a shock. Storms and currents had pushed us much farther north than we had reckoned. We came over on the starboard tack and just after noon have been sailing about eight hours southward. We are concerned about clearing Cape Cod before turning southwest for Cape May. There is now no hope of attending Lynn’s graduation on Sunday*

[May 13]. Bob spotted a whale lying on the surface about an hour ago and is out right now trying to get pictures of some friendly dolphins. It is a cloudless and cool day. Air and water temperatures this morning were in the low fifties. Our breaths were plainly visible. Sailing is extremely smooth.

In the early dark hours of May 11, I got an excellent look at Vega and corrected the gross overestimation of latitude that I had made twenty-four hours earlier. It peeled away one layer of the pall that hung over us. Another layer lifted when we spotted two large flocks of yellow-tinged land birds—small birds flying north and larger birds flying south. But the big shot in the arm came when a gigantic bird broke through the overcast and circled with landing lights aglow and its portside cargo door wide open. We whooped for joy as the crew pushed, one by one, five large, orange-colored containers out of the plane. My journal entry was ecstatic: *WOW! What a surprise we got about 1230 LAT [Local Apparent Time]. A P3 Orion from the Navy base at Brunswick, Maine, dropped five large boxes of mail, newspapers, fruits, vegetables, cokes, etc. [meat, shrimp, cookies, asparagus, oranges, grapefruit, lettuce, tomatoes, & 2 kinds of salad dressing] via triple parachutes and marked by flares. The ‘care’ packages had been picked up in Norfolk, Va., arranged by Lee Houchins. Phillip S. Hughes, Acting Sec’y, of Smithsonian, requested the drop in a letter to the Sec’y of the Navy, John F. Lehman, Jr., dated May 9. We made three passes to pick up the first package but got each of the other four on the first try. We had to take care not to get the parachute shrouds caught in the propeller. The packages weighed 55 pounds each. We have saved all the gear and will return it to the Navy. We set fire to plastic, wrappings, etc. and set it adrift. Got pix. Ironically, we were eating a lunch of baked beans when the air drop began. We put them aside to haul in and open the five boxes. When we saw all the goodies in the boxes, we just dumped the beans over the side. We had shrimp, tomato and let-*

tuce salad, and fresh asparagus for dinner tonight—Delish! Steak tomorrow! As the air drop began a tanker at some distance on our port side (and going in the same direction) hove to. We thought at first it might be waiting for currents in the Delaware to change. Later we concluded that the Captain of the tanker thought a rescue might be under way and hove to until it was clear he was not needed. In rereading Lee Houchins' note, I find that he was in the Navy plane.

It seems that Blanche had gotten concerned about our food and water supply. She wondered whether we might have used up our reserves in the three months we had been at sea and called Lee Houchins to see if he could arrange an airdrop. His response: "Blanche, you know I can't just snap my fingers and get this done." When he got in touch with Pentagon officials, he learned that we were within the area covered by Navy Patrol 23 that shuttled between Norfolk, Virginia, and Brunswick, Maine. He was told to assemble what he wanted dropped and the Navy would deliver it. And deliver it did. We were like kids in a toy and candy store. The Christmas-like atmosphere more than made up for the holiday we had missed by sailing away on December 21 a year and a half earlier. At our homecoming reception eight days later I was asked if we had food shortages on board at the time of the drop. My response: "Oh yes, we were all out of tomatoes, lettuce, asparagus, fresh shrimp, and steak!"

The next day we sighted a spouting whale, pilot whales, porpoises, gannets, a ship, and a house fly. The fly caused the most excitement. Usually the flies found on a boat are the ones that board where passengers board—in port. If flies had joined us in Stanley, a most unlikely event, they certainly would have surfaced during our prolonged stay in the tropics. In my years of outboarding experience I had rarely

seen flies more than fifteen miles offshore. We had gotten longitude hints from Saharan dust, rocky islands, jaegers, a barn swallow, and now were proposing to wring east-west information from a house fly! We assured ourselves that land could not be far away.

In the early afternoon of May 13 we spotted four fishing boats. Judging from ARGOS records, they were fishing on or close to Georges Bank. The wealth of jellyfish and other forms of sea life reminded me of the huge pots of boiling potpie Union Grove Church women supervised at community chicken suppers. The sea water, however, was cold. We dared hope that we had finally cleared the Gulf Stream. The price for our good fortune was greatly diminished visibility. Yet the range of a half mile or so was tolera-



Bob Watson, Dave Lansdale and Ed Gibson opening two of the five boxes of "goodies" dropped by Navy Patrol 23.

ble provided we maintained a careful lookout. One of the fishing boats was the Kerry Jean out of Point Judith, Rhode Island. The crew wished us well but pointed east, we assumed jokingly, when we asked the direction to Cape May.

Soon after that encounter we entered a patch of dense fog. It was my watch and as I sat in the cockpit with my feet resting on the fiberglass box that held our life raft, I wondered how we could possibly get the raft

released, inflated, and launched should we be run down in the fog. As I turned the thought over in my mind, I saw the big black bow of a ship less than a hundred yards away headed straight for us. I yelled, “we’re being rammed” and asked for the key to the engine. Before I could get the engine started, the ship passed breathtakingly close to Globe Star’s stern. Two radar antennas were rotating on the Hapag-Lloyd container ship of Hamburg, Germany, but its fog horn was strangely silent. We had escaped disaster but had little feeling of relief. We were still in the fog and still in the busiest shipping lanes in the world.

In a few hours we sailed out of the fog only to be becalmed under an overcast sky. As we watched ships glide by on either side, a whale played around us in a heaving sea. We hoped the band of darker clouds passing overhead would bring usable air but it didn’t. The front stalled as it neared the horizon leaving only a narrow band of orange-red sky between it and the sea. We stared in vain for a glimpse of the setting sun. We desperately needed a clue to direction but there was none to be had. In gathering darkness we saw two long rows of what appeared to be stationary white lights. It took a long time to determine that these were not affixed to land. The lights, it seems, were those of fishing boats hove to for net-tending. Among the many lights, we spotted a white light blinking every five seconds. We searched the **Light List** for a light with a five-second interval to no avail. Stuck in shipping lanes without wind, we felt compelled to motor close enough for identification. It was a gloomy hour-and-a-half ride that used up fuel we knew might be needed to dodge one or more of the dozens of fishing boats and ships that were swarming around us. The blinking light was attached to “N” buoy, a replacement for the old Nantucket Light Ship. The switch had been made while we were at sea and the light characteristic changed from a double flash every ten seconds to a single flash every five seconds.

By the time we had cleared the buoy and the main body of the fishing fleet, the front that had stalled earlier advanced and provided enough air to move us slowly under sail. The front peeled away not only the overcast but a heavy layer of gloom as well. The white cumulus clouds drifting in a blue, moonlit sky refloated spirits which had sunk to a near-record low on an extremely stressful day and night. The certainty that we were finally free of the Gulf Stream was icing on the cake.

With our entry into the cold coastal water came a shift in the direction of the underlying conveyor belt. Cape May lay 255 miles west of southwest. The cold extension of the Labrador current would now be adding rather than subtracting miles. Our initial speed was poor and the best heading we could make was thirty degrees off target but very slowly over the next two days the wind veered and strengthened. The cool flow from the northwest brought another bonus—good visibility. Both our speed and heading improved during the day Tuesday, May 15, and by Wednesday Globe Star was sailing crisply in the direction of Cape May. When I came on watch about four o’clock in the morning on Thursday I got a good look at Vega and judged us to be on the latitude of Cape May, i.e., 39°.

By this time Globe Star had gotten “a whiff of the barn” and was streaking for home. The triple-reefed main was set on the starboard tack and the genoa was close-hauled. I knew the genny was straining but was reluctant to strike it. I was riveted by the speed and direction we had been denied for two weeks. I just let it go. And go it did. The sun was edging above the horizon when it popped like a rifle shot. The clew grommet had pulled out of the heavy canvas tabling and the sail flogged wildly in the early morning wind. The genny was our hard-luck sail. It was both the first and the last to be damaged. The first time it took a hit was shortly before we made our African landfall when a turnbuckle toggle gave way and gashed it twenty-five times. Even though I had to jump on it to keep it from flying overboard, I

had very warm feeling about this workhorse of the voyage. I replaced the genoa with the smaller yankee and barely had it adjusted when I hauled it down and put up the still smaller working jib in its place. The “rifle shot” had made me gun-shy.

Bob Watson came on watch around seven and I crawled into my bunk exhausted from wrestling with heavy sails and plummeted into a deep sleep. Two hours later repeated shouts of “Marv” and “helicopter” jolted me awake. A Coast Guard chopper from Cape May circled above. Bob, Dave, and Ed asked for the direction to sail. On the way up the companionway ladder I had spotted a red marker line on the starboard bow. My answer as I pointed was “toward that buoy.” As I suspected, it was “F” marker just 15 miles south of Cape May Harbor. It had replaced the old Five Fathom Lightship that I knew so well from my outboarding days. I didn’t bother getting direction from a chart. Instinctively I pointed Globe Star’s bow northward as we supplemented sail with diesel power to keep from losing way to lee.

It was about one in the afternoon of Thursday, May 17 when we entered Cape May Harbor. Alerted by the ARGOS monitor, Phil Travaline in a small plane with Leigh Weiss and my son Kurt flew welcoming passes above us. Blanche’s brother, Charlie Layton, who had followed us around the world via the ARGOS system was racing up from Baltimore. He was bitterly disappointed not to be on the dock to greet us. When he arrived forty-five minutes later, he said that he had been fooled by our final burst of speed.

The gentle touch of Globe Star’s bow to the fuel dock at the Cape Island West Marina brought an end to a dream that originated a half century earlier in the mind of a teenager reading about an oceangoing sailboat, and one that was embellished by the failure of a compass light forty years later. The dream was to sail around the world in a small boat; the embellishment: to do it without any navigation devices.

There was more to come. Blanche brought

word that the homecoming reception at National Park, aborted earlier because of our dallying in the Gulf Stream, would not be held until Sunday. Jim Palmer, volunteer organizer, was emphatic that we keep out of sight for nearly three days. It was a tough assignment. All of us on board were anxious to get on with our lives. Reluctantly, we convinced ourselves that after spending 98 days at sea, we could handle three more.

Marvin Creamer Back on Garden State Turf

Eighteen months after he cast off to prove that a skipper needs little more than a ship and a star to steer by, Marvin Creamer is back on New Jersey soil...

Kurt Creamer, who sailed the Atlantic with his father on the first voyage Creamer made without navigational instruments, said he saw the Globe Star’s approach Thursday from a small plane piloted by a friend of the family...

—Alison Carper, *Gloucester County Times*, 5/18/84

We managed to get away from Cape May on Friday before we were “discovered” and pulled into Greenwich on the Cohansey in midafternoon. **The Press** of Atlantic City reporter Joe Tanfani caught up to us at the Greenwich Boat Works where we had spent three weeks readying Globe Star for the circumnavigation. I couldn’t suppress the urge to twit him about an article he had written two months before our departure. To him I must have appeared laid back as I relaxed on my bed while he fired off his questions. It is not surprising that he called me a bespectacled, professorial type not the most likely to achieve what I was setting out to do. What he did not take into account was that I had had a hernia repair three days earlier and had just finished mowing our half-acre lawn minutes before he arrived for the interview. He said he couldn’t recall what he had written previously.

Our final hideaway was to be at a marina in Essington, Pennsylvania, across the river and not far from Red Bank Battlefield Park where welcoming ceremonies were to take place. To catch favorable tidal currents for the trip up the Delaware we had to leave Greenwich early on Saturday morning. Unfortunately, the outbound current in the Cohansey was running full and setting us hard against the floating dock where we lay on the outside of an elbow bend in the river. Globe Star's bow was aimed downstream but lay only about ten feet behind the ten-foot wide transom of a huge cabin cruiser. Failure to catch the upbound current in the Delaware would mean trying to find our way into a totally unfamiliar marina after dark. We had to make a stab at leaving. We put the engine in reverse and opened the throttle. At the same time we put a man on the dock to pull the stem toward the dock so the curve of the hull would force the stern outward. Crew working from the fantail used our longest whisker pole to give the stern a push toward the center of the river. On signal the bow man released the snubbing line and luckily the transom caught the downstream flow on the starboard side to swing our center line at right angles to the dock. At that moment we gambled that Globe Star, in reverse, would travel ten feet outward before the racing outbound current could smash her bow against the cabin cruiser's stern. The maneuver worked to perfection but when I looked back to the dock, there stood our bow man, photographer Paul Trace. I had forgotten to tell him to jump aboard as he loosened the snubber. He was on assignment by **New Jersey Outdoors** magazine which was holding its presses for a last-minute photo to put on its front cover. Getting back to the dock was not easy but a cinch compared to our earlier getaway.

It seemed that we were all set. We weren't. Going down the Cohansey I let Globe Star wander too far toward the left bank where the propeller struck a fixed object that almost stalled the engine. The engine recovered but after we had cleared the Cohansey and were

approaching the Delaware's channel near Ship John Light the engine speeded up and Globe Star glided to a halt in the dead calm. I didn't want to face what happened. I knew instinctively that the inch-thick, stainless steel propeller shaft had twisted off. We put down an anchor to hold against the still-outgoing tide and sat glumly reviewing our options. Among the limited number was, of course, the possibility of hailing a boat with a radio and asking for a tow to the reception. I pondered that for a while and then came the question: "How would it look to circumnavigate the world without instruments and then be towed to the site of the homecoming ceremonies?"

That thought kicked my butt. While I dug out tools, Ed, Dave, and Bob cleared stowed items out of the cockpit locker and opened the sidewall of the engine compartment. The engine compartment was flooding. Not only had the propeller shaft twisted off but had pulled through the stuffing box allowing water to gush in. Luckily the rudder had prevented the shaft and attached propeller from dropping into Delaware Bay. By unclamping the stuffing box we managed to get hold of the barely visible end of the shaft and haul it back into the boat. With the shaft inboard we replaced the stuffing box and stemmed the flow of water.

The shaft had sheared where it exited the transmission flange. In our favor there was about three-quarters of an inch of keyway left on the shaft. On the flip side the forward end of the sheared shaft had rotated inside the hub of the flange flattening the key and jamming itself solidly in the opening. There was no doubt about it. The flange had to come off so that we could work on it where there was light and room. Removing the flange presented a problem. It was secured to the transmission with four cap screws whose heads were too close to the adjoining hub to permit the use of box end or socket wrenches. Moreover, a year and a half of dousing the bolts with salt water had rusted the threads tight. What would we do if we buggered the heads using open-end

wrenches? We had to give it a try. To loosen the bolts we hit the heads squarely with the stainless steel “hammer” cannibalized from the unused camera mount. By hitting and “wrenching” at the same time we were able to loosen the bolts and free the flange. Two set screws held the useless end of the propeller shaft inside the flange coupling. We hammered on them and heated the whole flange on the galley stove in an attempt to loosen them. With light oil and back and forth coaxing with a wrench, we got one screw out but the other twisted off still set deep in the mating hole on the shaft end. We bored it out with the same drill we used to repair the broken tiller in the southern Pacific Ocean. Harry Costill, a sailing buddy, had overseen the conversion of a twelve-volt, lug-nut wrench into a twelve-volt drill. When I asked him to do it two years before, I couldn’t possibly have imagined using it in Delaware Bay a day prior to our return.

I found a short piece of key stock in the gear that got left on board on our outbound trip. The tiny grinder that I used to fit the key to the keyway was one that I made from the twelve-volt motor of an automobile window crank. We replaced the flange, placed in the makeshift key, and worried the sheared end of the propeller shaft into the flange. I fretted because it didn’t enter the full three-quarters inch of keyway and it wobbled badly when we tried moving forward. It did move, however, so we settled on a maximum speed of one-third normal RPM’s and headed northward. As long as the transmission stayed in forward gear, the thrust of the propeller tended to force the shaft farther into the flange coupling making it more secure. The wobble concerned us but we planned to keep an eye on it.

Just before we got underway, we hailed a passing boat. The skipper was Judge Ed Miller whose boat was winter-stored next to Scotia years earlier at Leesburg on the Maurice River. We asked him to call Blanche and tell her that we would be late getting into Essington. However, during the day I began to have second thoughts about going into a marina. Normal docking procedure

would require reversing direction and that would pull the shaft out of the coupling and back through the stuffing box again. Dave Lansdale volunteered that reversing would, indeed, be necessary. He had flown a seaplane out of the Essington marina. How could we let Blanche know that we wouldn’t be docking in Essington? And further, how could we get Paul Trace on shore to meet his deadline with **New Jersey Outdoors** magazine?

Paul had taken many shots, including several framed by the Delaware Memorial Bridge. I thought to myself as he snapped away that the casual shoreside onlooker would likely see us as a weekend cruiser on the Delaware. At least one did not. Later when I showed pictures to a sportsmen’s club in Carneys Point, not far from the bridge, a member of the audience said, “I was standing on the bank watching river traffic when your boat came into sight. I said to myself, ‘That boat is not just out for a day cruise.’” The crew of the tug James F. McAllister spotted us passing under the bridge and gave us a resounding three-blast salute. It was the same tug that had escorted us downriver from Red Bank a year and a half earlier.



“The Triumphant return”: Globe Star passes slowly under the twin spans of the Delaware Memorial Bridges with no wind and a jury-rigged propeller shaft.

The last chapter in an epic seafaring tale is scheduled to be written Sunday morning when Professor Marvin Creamer of Pitman is welcomed back to New Jersey after sailing around the world without any navigational instruments...

The highlight of the ceremony will come when William Zycinsky, Gloucester County Director of Parks and Recreation, breaks the seal on a duffel bag containing navigational instruments that were carried aboard *Globe Star* for emergency use. Zycinsky sealed the bag when Creamer left National Park in December 1982.

—Tony Muldoon, *Courier-Post*, Cherry Hill, NJ 5/18/84



Coast Guard welcoming boat pulls alongside minutes before homecoming reception at Red Bank Battlefield on the Delaware River.

It was a perfect day for motor boats—sunny and calm. Dan Harvey was making the best of it in his hefty outboard and decided to come over for a close-up look. When he told us who he was, I remembered buying a Volkswagen trailer hitch from him years before. At that time I discovered that he was the grandson of Ralph Harvey, a man I had worked for in the 1930's.

Yes, he would deliver Paul Trace to Red Bank Battlefield Park and let Blanche know of our plan to scratch Essington and anchor

for the night somewhere on the Delaware. Paul, too, said he would call Blanche.

Neither did. So Blanche, as arranged, got volunteer Phil Miller to make the trip to Essington with a much-needed change of clothes. Phil arrived well ahead of time and waited. After several hours he reluctantly ordered a meal but asked for a window seat where he could watch the dock. Long after dark he gave up and returned home. Meanwhile Blanche had lined up another volunteer to search the river. That search, fruitless, went on until four o'clock Sunday morning. Blanche wondered how we could eyeball our way around the world and get lost on the Delaware River.

With our limited headway capability we chose to anchor for the night before the outgoing tide could carry us seaward. While the ebbing flow was still weak we found a sheltered place near a dredging operation just north of the Commodore Barry Bridge on the New Jersey side of the river. It was not only out of the way of river traffic but also, unfortunately, out of view of the search party. After dinner we set up the watch schedule for the night. When the crew insisted that I be relieved, I accepted with deep gratitude. I was exhausted. It had been a long and trying day.

While Bob, Ed, and Dave made sure our anchor held fast on the changing tide, I “zonked out” unaware that a final “kick” was in the offing. The crankcase delivered it at four a.m. when I pulled the dipstick out to check the oil. Gray sludge covered the stick to its topmost end. Water! There was no doubt about it. A lot of water had gotten in the crankcase. I wanted to arrive at Redbank under our own power but now there was a serious question. Would the engine fail before we traveled the last ten miles of a 30,000-mile voyage? I remembered having driven a 1937 Ford 100 miles home after discovering cooling fluid in its crankcase. Just maybe with an early start and favorable tidal currents we could make another ten miles. I was well aware that we could ruin the engine but that

seemed not to matter. We had to make a stab at it. The sun was not far above the horizon when we weighed anchor and, with some misgivings, left our “hideaway on the river.” An hour or so later a Coast Guard launch heading downstream swung around and fell in close behind. Phil Miller waved a bundle over the heads of photographers and reporters and, as the captain maneuvered the launch, handed me the clothes he had not been able to deliver the night before.

We arrived about an hour early for the reception ceremonies and then moved out of sight so as to arrive after the crowd had gathered. The launch captain, aware of our mechanical problems, stood by, ready to assist. When the time came we worked our way close to shore and waited for a ride. Bill Pancoast, Woodbury boat dealer, brought his outboard alongside and in two trips landed us back where the voyage had officially begun. **The “jolly romp” on the ocean was over.**

Chapter 17

Hindsight

The morning of May 20, 1984, at the Red Bank Battlefield on the Delaware was sunny and mild, a sharp contrast to the dismal day a year and a half earlier when we had walked through icy slush to embark on our voyage. Jim Palmer, long-time friend and fellow sailor, had organized the reception and had seen to it that hundreds of supporters, friends, and relatives were on hand to cheer and applaud on cue. One by one county, state, and national officials offered words of praise as did around-the-world racing sailor, Francis Stokes. Mrs. Kathleen Jordan, whose students at the Glassboro Intermediate School had made a club project of tracking the Globe Star voyage presented me with a plaque and Lee Houchins, our Washington coordinator and Smithsonian Associate, followed with a gift-wrapped oar. He turned to Blanche and said it would symbolize the one Ulysses put over his shoulder and told Penelope he would carry inland until he reached a place where the people didn't recognize it for what it was.

Not all of the laudatory remarks were directed toward the Globe Star crew and its skipper. One who did not sail as much as a mile of the 30,000-mile voyage got a standing ovation and the biggest salute of all. It was she who kept the home fires burning and the telephone wires hot when she thought things were not going well. Blanche warmed to the well deserved accolades and to this day is not averse to reminding me that she received greater applause than I did. I told her publicly that I could not have done it without her.

NATIONAL PARK—Amid throngs of cheering spectators, the man one local dignitary labeled a “genuine American hero” set foot Sunday morning on dry land to stay—at least for a while—for the first time in close to 18 months...

When the guest of honor was finally given the opportunity to speak, after nearly an hour of speeches by local and state dignitaries, he wasted no time (before) thanking his devoted spouse.

“I am generally hesitant to take up family matters in public, but I've got to say, “Thank you, Blanche,”” said Creamer, his voice cracking with emotion.

—Laurie Facciarossa, *Gloucester County Times*,
5/21/84



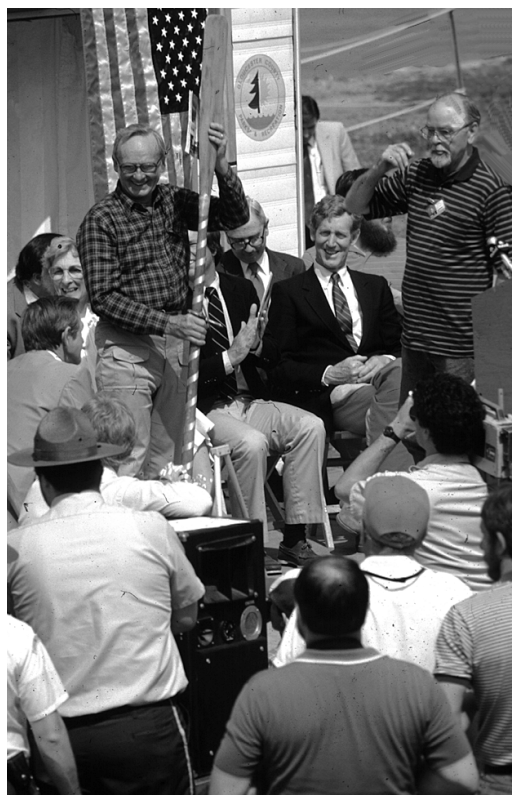
A relieved Blanche welcomes the Globe Star home at Red Bank, New Jersey.

Knowing that there would probably be questions about the temptation to break out our instruments, I made a confession. I called attention to a dire situation that we had encountered during the voyage. "Picture us, if you will, in a dead flat calm with a broken propeller shaft and being carried helplessly by a tidal current into the path of oncoming ships... That was yesterday in Delaware Bay." And were we really low on food at the time of the air drop? "Oh sure, after three months at sea we were all out of fresh shrimp, steak, lettuce, and tomatoes."

Each of the three major television networks wanted interviews after the ceremonies, as did numerous radio stations. I wondered why New Jersey Public Television was not represented. I found out why later after being kidded by my friends how the trip had completely changed my appearance. A NJPT crew, figuring I would be the first to land, filmed as Bill Pancoast discharged his first boat load of Globe Star's crew—Ed Gibson and Dave Lansdale—and promptly left. When the film was aired my image was an exact match for that of Ed Gibson.

When it was time to leave, uniformed deputies escorted me to a waiting sheriff's car and with sirens blaring and lights flashing sped me back to reality. As we pulled into the driveway the first thing I saw was a sign planted firmly in the middle of the front lawn. It read, "Boat for Sale." To make sure that I didn't overlook it Chuck Layton, Blanche's brother and ardent Globe Star tracker, stood waving, pointing, and grinning.

The "boat" however was hardly in salable condition. A volunteer crew headed by long-time friend and fellow sailor Leigh Weiss weighed anchor after the reception ceremonies, maneuvered Globe Star into the river channel and set sail for Greenwich. I had warned them that putting the transmission into reverse would pull the propeller shaft out of the transmission hub but had given no thought to what would happen if the boat was moved forward under sail. The



Blanche, Marv, George Baldwin, Francis Stokes, and Lee Houchins at the homecoming ceremony held at Red Bank Battlefield.

result was exactly the same as reversing under power—the propeller shaft was pulled backwards until only collision with the rudder prevented the shaft and propeller from being sent to the bottom of the Delaware. The stuffing box sans propeller shaft gushed water that covered the cabin sole on its way to the bilge. Leigh, who made a business of

Marvin Creamer, possibly the first man to sail around the world without a compass, left here 18 months ago as a retired Geography professor with a dream. He came back home Sunday proclaimed as a "genuine American hero."

—Joseph Tanfani, *The Press*, Atlantic City, NJ 5/21/84

solving sailboat problems, was the right man in the right place. Without his presence and presence of mind *Globe Star* might have met the same fate as some British and Pennsylvania navy vessels did two centuries earlier in that very same spot during the American Revolution. When the flow was stemmed and the bilge pumped, Leigh called the Gloucester Coast Guard for a tow to their nearby base. Two days later a Coast Guard crew towed *Globe Star* to Greenwich on the *Cohansey* where it was hauled for repair. It would be three months before *Globe Star* was ready for sail by or sale to anyone.

Gerd Hennicke was in his sloop off the Australian coast when the news of *Globe Star*'s return reached him via radio. Birger Myksvoll read about the completion in his Danish newspaper. John Jurjevich was astonished to find a full page of pictures and story about the voyage in his Cedar Rapids, Iowa, newspaper. The idea that was born in the dark of the night in the middle of the North Atlantic had become a reality now shared with millions.

Reactions to the voyage have been expressed in a number of ways. Typical is that expressed by Joe Tanfani when he wrote that I seemed an unlikely prospect to accomplish what I was setting out to do. "You don't look like what I expected to see" is the most common remark. Nobody, it seems, expects to see a medium-height introvert with high forehead and glasses step to the podium to tell of "high adventure" on the high seas.

The back-bay crowd listens attentively and then fires questions such as: "Did you anchor at night?" or alternatively, "Where did you tie up at night?" The assumption, I guess, is that somehow we managed to follow continental coastlines and thus were always in water shallow enough to anchor or near enough to land to make a landfall and tie up. A frequent question is "Did you run into any storms?" When the answer is that we sailed through some of the stormiest oceans on earth, the question comes back, "Then why

did you ever set out?"—a not too subtle hint that a screw might be loose. "But you did have a compass, didn't you?" And from those with a little more knowledge of navigation, "You must have used a sextant." The general interpretation of navigation instruments, it seems, is electronic instruments—Radar, Satnav, depthsounders, radios, and direction finders.



Safely back, but disabled: Globe Star in tow to Greenwich Boat Works.

Another reaction was eloquently summed up by an anonymous speaker at an informal Sunday afternoon gathering on the Salem River highway bridge in Salem, New Jersey, in the middle 1930's. The event that piqued the onlookers' curiosity occurred because of my great skill at getting the anchor of Ralph VanMeter's twelve-foot catboat hooked on a cable under the bridge instead of the river bottom or better yet on the nearby bridge fender. The wind died just as we neared the bridge and a swift current swept the boat beneath it. The mast hit, the boat capsized, the anchor caught on the cable, and the current pulled the boat, complete with sail, under the murky water. Ralph, my brother, Richard, and I swam after oars and clothing, and sat perched on the bridge fender to wait three hours for the tide to slacken.

A latecomer pushing his way into the gathering demanded to know what was going on. A voice in the crowd, dripping with disappointment, responded, “Three guys upset in a sailboat but nobody drowned.”

A reporter for the **National Enquirer** interviewed me at length and concluded that there was nothing about the voyage that merited a story. *Globe Star* did not capsize, run aground, hit rocks or icebergs, get lost, dismantled, wrecked, turned over by whales, attacked by sharks, hit by lightning, or run down by ships. Crew members were not taken aboard alien spacecraft, did not quit speaking, or get physical. No one was more than superficially injured and no one was lost overboard. All but one of the landfalls were made within fifteen miles of correct latitude and the return port of Cape May was hit dead on. In short, nothing noteworthy happened. Ten guys sailed around the world including the infamous Cape Horn without instruments of any kind but “nobody drowned.”

(Crewmember Dave) Lansdale said that once when the crew caught a fish, instead of gutting it and throwing the remains overboard, Creamer looked inside the fish’s belly, determined it had been eating off the sea’s bottom and concluded that the sailors were near the Continental Shelf.

Lansdale, who left the Falklands with Creamer on February 9, said the sensory deprivation sailors find on the open sea made his turns at the helm boring for the early part of the trip. But the more Creamer taught Lansdale about the subtle changes in his environment, the less monotonous the sea seemed, he said. Eventually, Lansdale said he looked forward to his two-hour watches as a time to study his world.

“He’s a very strict leader,” Lansdale said of Creamer. “He’s not a superman, but he just uses all of the things he was given.”

—Alison Carper, *Gloucester County Times*, 5/20/84

Another reporter who planned to write a story for a religious magazine sifted through my recollections and submitted several drafts to her editor. He found no evidence of divine guidance even though many of my friends and relatives told me after the voyage that

With only the heavens above him, the sea below him and the elements surrounding him as his guide, Marvin C. Creamer sailed serenely up the Delaware River yesterday to complete what had to be the easiest leg of his epic journey around the world...

Without a sextant, compass or other modern equipment, Creamer relied upon the stars that appeared above his craft each night to determine whether he was staying on course across the Atlantic, the Indian and Pacific oceans before successfully sailing through the angry waters at Cape Horn in South America.

He also relied upon the direction of the wind and the waves, the path of the sun, the color of the ocean waters and even the birds that occasionally flew overhead to verify his location.

“You take any possible clue that you can get hold of,” said Creamer. “We sailed a few miles the wrong way once, but most of the time we were headed right down the pike.”...

“You never have the feeling that you are entirely accurate,” he said during an interview after welcoming-home ceremonies. “But it always seemed to work out.”...

“It would be hard to imagine how you crave to see some sign of civilization – even if it was a broken bottle,” said Creamer. “You just have this craving.”...

“I love the sea,” said Creamer, who plans to chronicle his voyage in a book. “And I knew I wasn’t going to have a second crack at something like this—at the age of 68.”

—Emilie Lounsberry, *The Philadelphia Inquirer*, 5/21/84

they had interceded in my behalf while I was en route. The story was never published.

Captain Jon C. Uithol, Commander of the United States Coast Guard Third District, introduced me as guest speaker at a Boy Scout fund raiser in Wildwood Crest, New Jersey. When I took my place next to him after the presentation, he leaned over and said softly, "Lady Luck was riding on your shoulder." After another talk elsewhere an audience member admitting that he had arrived highly skeptical said afterward, "You didn't depend on intuition or call on the supernatural, you just used plain, hard-headed logic."

It would be foolish to maintain that luck did not play a part in our success, but I would like to think that attention to detail, anticipation of problems beforehand, experience with open-ocean sailing both with and without instruments, and careful watch at sea shifted the odds decidedly in our favor. By the time we sailed, I had crossed the Atlantic in small sailboats eight times, three of them without instruments, had consulted naval attachés for advice in sailing near South Africa and New Zealand, had sought information from sailors familiar with Cape Horn, had studied charts, coastal characteristics, ocean currents, iceberg distribution, and world climatology. Our good luck consisted mainly in not having bad luck at critical times. Certainly, the occurrence of violent onshore winds when we were sailing near land could have driven us to a violent end. But then any craft, regardless of its complement of instruments, is vulnerable in the presence of land.

There are those who argue that if a sixty-eight-year-old man could succeed in making the non-instrument circumnavigation, it could not have been all that difficult. If their point is well taken, then why were British naval personnel, ship captains and navigators for example, astonished to learn when I arrived in Port Stanley, Falkland Islands, that *Globe Star* had sailed three-quarters of the way around the globe and around the notorious Cape Horn without the benefit of navigation instruments? Andrew Bray writing in an Australian boating magazine may have provided the answer when he wrote, "When *Globe Star* rounds Cape Horn and sails back into her home waters of New Jersey he will have achieved what hitherto has been considered to be impossible." That mindset began with the Columbus voyages and is constantly reinforced in the classroom where school children are indoctrinated with the idea that long-distance navigation was possible only after navigators had access to the magnetic compass. Frank Casper, who made fourteen single-handed Atlantic crossings, wrote after our chance meeting in mid-Atlantic in June, 1974, during his thirteenth that upon hearing of our no-instruments-style of navigation he never expected to hear from us again. It is this very mindset that has prevented a serious look at ways to navigate without the venerable direction finder.

Then there are the second-guessers. Why did you start out in the wintertime? Why didn't you go through the Panama Canal? Shouldn't you have used a bigger boat? Why

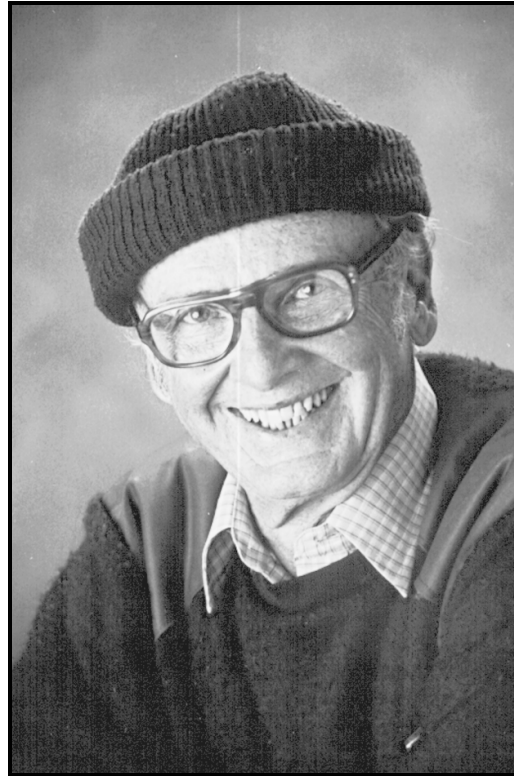
Perhaps Congressman James Florio, D-1st District, best described the voyage, made entirely without navigational instruments, when he said in his remarks, "In this age of high technology and electronics, Marvin Creamer's voyage proves that none of these things is superior to man's intelligence, common sense and determination."...

When asked what his immediate plans were, the 68-year-old navigator said he expected to stay ashore. "That was my last long voyage. I've always wanted to do it and I did."

—Richard E. Beecroft, *Bridgeton Evening News*, 5/21/84

did you wait until you were in your late sixties? Why did you sail the Indian Ocean in wintertime? The questions are not difficult to answer. The reality is we made it. It is hard to fault success.

A major question has to be, did we accomplish what we set out to do? Our primary goal was to determine whether it is possible to navigate a small boat around the globe without instruments. The answer to that has to be "yes." Did we in saluting ancient sailors prove that they circumnavigated the globe? The answer to that is "no." What we demonstrated is that information taken from the sea and sky can be used for fairly accurate and fairly safe navigation on a world-wide basis. How far pre-Columbian sailors sailed on the world's oceans we do not know and may never know. However, it is my hope that the Globe Star voyage will provide researchers with a basis for assuming that long-distance navigation without instruments was not only possible but could be done with a fair degree of confidence and accuracy.



Globe Star skipper Marv Creamer

IN COMMEMORATION
FIRST ROUND THE WORLD VOYAGE
WITHOUT NAVIGATIONAL INSTRUMENTS
BY MARVIN C. CREAMER
DEPARTED DECEMBER 15, 1982
RETURNED MAY 20, 1984

The placque marking the spot where the Globe Star voyage began and ended on the shore of the Delaware River at Red Bank Battlefield Park, National Park, New Jersey.

Appendix I

Navigating Without Instruments

Clues taken directly from the sky and sea provide the navigator with the information he needs to guide a boat over long distances without the use of navigational instruments such as compass, sextant, chronometer, or electronics. He can check the nearness of specific stars to the boat's zenith (the point in the sky directly overhead) to find latitude, and use the sun, moon, planets, stars, clouds, waves, and the wind for finding and maintaining direction. Because finding longitude is dependent upon a knowledge of correct time, the navigator, when navigating without a timepiece, must keep a running record of longitudinal change by deducing the amount of change from distances and directions made good. Occasionally longitude can be checked against water color and temperature (as sensed by the hand), bird species, seaweed, and outcrops of rock, but in general dead-reckoned longitude cannot be trusted, so the navigator must rely on parallel sailing, a method widely used before the introduction of the chronometer. In parallel sailing, the boat early in the voyage is maneuvered in a north or south direction to the latitude of the desired landfall and then sailed directly east or west until the objective is run down.

Hour-to-Hour-Steering-Directions

Non-instrument steering is easiest on clear

nights in the northern hemisphere. Polaris is always within about one degree of true north and provides excellent direction. For setting a course other than north, the hands placed palm-to-palm and opened to a right angle, then closed half way, two-thirds of the way, etc., can be used as a pelorus to measure ninety-degrees, forty-five degrees, thirty degrees, etc., from a northerly or other known direction. A distinct advantage of using the pole star rather than a compass is that all headings are true. There is no need to correct for deviation or variation. Once a course is set, an appropriate star can be selected, fore or aft, for use as an interim steering guide. As the selected star changes direction with the earth's rotation, a new one can be chosen by checking the boat's heading against Polaris at the time of selection.

By using amplitude tables or formula ($\sin A = \sin d \div \cos L$) in which A = amplitude, d = declination, and L = latitude, the direction of the sun and moon at the time of rising or setting can be determined and used to confirm or correct the boat's heading when these bodies are on the horizon. Sudden shifts in wind direction can be detected by keeping note of where the sun appears on the rail, but ordinarily a gradual wind shift will go unnoticed. To identify gradual wind shifts on clear days or any shift on cloudy days, it is desirable for the helmsman to keep in mind the angle

between the boat's keel line and the crest lines of waves and swells. Long distance swells are reasonably constant in direction and waves of a larger size do not change direction immediately upon a wind shift. Sometimes it is possible to see the wave-top curls slanting to the left or right as they tumble down the face of a wave after a wind shift has occurred. These are clues to a changing wind direction. Accommodation to a new wind direction is easiest when it is accomplished immediately following a change. The helmsman should estimate the amount and direction of change and make a mental note of the new angle between the wind and the boat's center line.

Wind shifts on cloudy nights are the hardest to deal with. As the helmsman becomes sensitive to the total environment, he will probably notice a subtle change in the boat's rhythm, sound, or motion that will alert him to a changing wind direction. Experimentation with the boat's heading may yield the needed adjustment, or it may be possible when bioluminescence outlines wave crests, to read and use wave crest—keel line angles in the same way as suggested for cloudy days. Even if cloud cover persists, it is rare when the sun, moon, and usable planets and stars are hidden for as much as twenty-four hours at a time.

Because there is no pole star in the southern hemisphere, setting a course there on a clear night is more difficult than it is north of the equator. Both for steering and latitude finding, it is essential to be able to designate a polar point in the southern sky. An imaginary line drawn from Gacrux in the Southern Cross through Acrux and beyond passes very close to the polar point, and because nearby Hadar and Rigil Kentaurus are almost identical in declination (equivalent to latitude), an extended perpendicular that bisects the line between them also passes very close to the polar point. The spot where this perpendicular, a near meridian, and the extended Gacrux—Acrux line, a near

meridian, cross in the Southern Void, is a satisfactory polar point. This imaginary point can be used for direction in the same way that Polaris is used in the opposite hemisphere.

Latitude from the Stars

To determine latitude, the navigator selects stars, preferably bright ones, and planets whose declinations match the latitudes of intermediate check points or final objectives. Each selected star or planet is observed at the time of meridian transit. At that time, if a star stands directly over the observer, i.e., at his zenith, his latitude is equal to the star's declination. If it is not directly overhead, but still on the meridian, it will stand either north or south of him. The angular distance north or south of the zenith can be estimated by comparing this zenith distance to the pre-calculated angular distance between stars in the area of the sky above the observer.

The navigator must be careful in determining the time of meridian transit. This can be facilitated by drawing an imaginary line from the polar point to the rising, pre-selected star. When the star is near the east horizon, the imaginary line extended in both directions will make an uneven distribution of the firmament, but when the extended line moved by the earth's rotation, reaches a place in the sky where it divides the sky equally into an eastern half and a western half, the revolving imaginary line coincides with the observer's meridian. At that time, the star, fixing one point of the line, is on the observer's meridian and, therefore, is making meridian transit. At this instant in time, if there is any departure of the star from the observer's zenith, the departure occurs in a north-south direction only. To make a judgment of the star's location with reference to his zenith, i.e., at his zenith, north of his zenith, or south of his zenith, and angular distance, if any, involved, the observer should fix his shoulders in a north—south direction, stare upward, fix an imaginary

zenithal point and then make a zenith distance judgment. This should be followed by facing in the opposite direction, east or west as the case may be, and making a second zenith distance judgment. Normally, an observer has a bias to his left or his right which will affect where he “sees” the star. By averaging the two “sights,” one facing east and the other west, he can fix a point for the star and estimate his latitude based on the star’s declination. Experience shows that the bias of a particular observer may be fairly constant or may vary from one time to another. As a rule, the greater the degree of concentration, the greater the accuracy will be. A caveat is in order, however. In theory, at least, meridian transit occurs for only the slightest instant in time so lengthy deliberations tend to decrease the accuracy of the observations because the star moves away from the meridian.

Vane Steering

Without vane steering it is necessary for the helmsman to be engaged in direction decision making during every minute of his watch interval. He must constantly determine the direction of the wind and the heading of the boat and make appropriate decisions to accommodate to both of these. Stars at night and the sun, moon, and distant clouds by day make the job a lot easier. Steering in cloudy weather, whether it is by night or day, can be very tiring.

When a vane steerer is used the helmsman’s task is decidedly easier. He can check the various direction references, set the vane and relax until, in his judgment, changed conditions call for a resetting of the vane. The wind itself, when a reliable vane is used, becomes a direction reference and can be relied upon for guidance a greater proportion of the time than all other references combined.

Appendix II*

Estimated vs. Actual Position of Globe Star

A comparison was made between the estimated positions of Globe Star and the actual positions as recorded by the ARGOS satellite system. Estimated positions were worked up daily at a time that was deemed to be local apparent noon, i.e., the time when the sun crossed the boat's meridian. Because the tracking system provided positions at random intervals up to several hours in length, it did not furnish a daily position that corresponded in time with the estimated position that was made on board Globe Star. The satellite data were therefore manipulated to determine the actual position at local apparent noon. Two satellite positions were used to accomplish this, one recorded before local apparent noon and one after. The boat was assumed to travel at a constant ground speed along a great circle route between the two positions. An iterative spherical trigonometric routine was then used to determine the time and the position of the boat when the sun was on the boat's meridian. This position was then compared to the boat's estimated position for that particular day. Satellite positions recorded more than twenty-four hours before or after local apparent noon were not used in the statistical analysis. Regrettably, because of problems with the ARGOS transmitter, actual positions could be determined for only 78 days of the 351 days Globe Star was

at sea.

Figure 1 shows graphically the results of the comparison. Each block on this radar chart represents the estimated position relative to the actual position at noon on one particular day of the voyage. The actual position is represented by the center of the crosshairs. As an example, day 348 of the voyage (December 14, 1983) is identified on the chart. On this day Globe Star was estimated to be 283 nautical miles farther east than it actually was. The latitude estimate for this day was very close. Globe Star was estimated to be merely 22 miles farther north than it actually was. Latitude estimates were based on the observation of stars at or near the zenith so that dead-reckoned latitude could be corrected from time to time as the night sky conditions permitted. Longitude, however, was based on the distance and direction sailed. Distance was estimated from observations of the wake and passing bubbles; direction was determined from stars at night, sunrise, sunset, and wave-crest lines when observable. Because a clock is needed to determine longitude, there was no way correct longitude estimates could be made at sea. It is not surprising, therefore, that the chart reveals latitude estimates to be nearer the mark than those of longitude. Because the estimated longitude of day 348 was based on a misidentification of rocks at the southern tip of

Estimated Position Relative To Actual Position

(Distance in Nautical Miles)

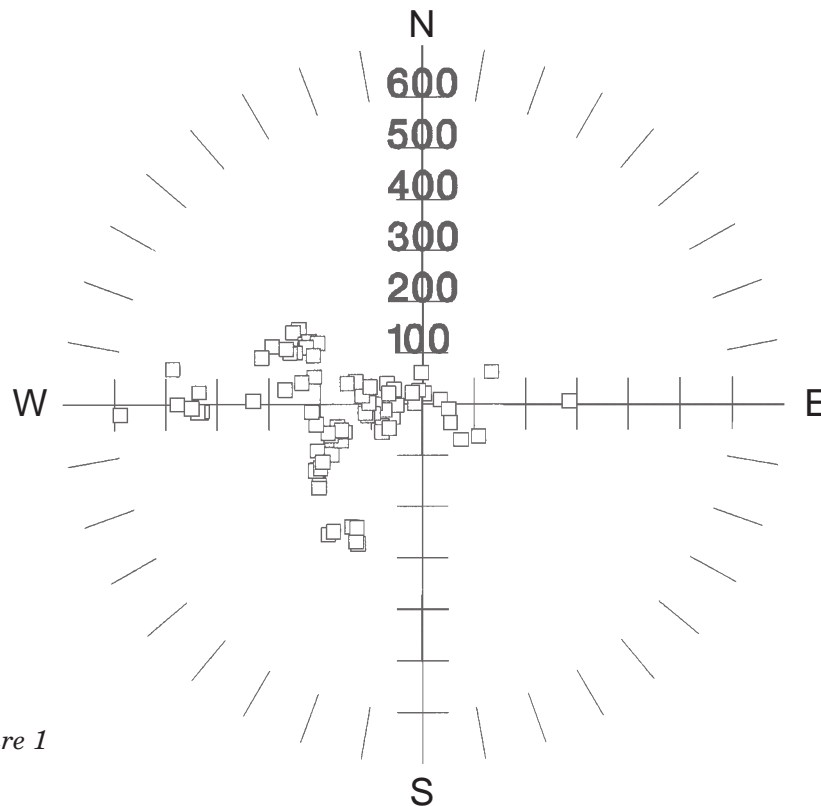


Figure 1

South America, it placed Globe Star well to the east of its actual position. Typically, Globe Star was estimated to be west of its actual longitude. Since generally travel was from west to east, the bias indicates an underestimation of distance covered.

Because naked-eye estimates of zenith-star distance were used to ascertain latitude, latitude estimates were examined separately to determine the merit of the method. **Figure 2** is a histogram of the population of differences between the estimated and the actual latitudes. The vertical axis shows the number of latitude estimates that

fall within a given distance of the actual latitude. The mean of this population is -14 nautical miles which is so close to zero that it suggests the method has no north-south bias. The standard deviation for the population is just under 100 nautical miles. Assuming a normally distributed population, this standard deviation indicates that latitude estimates were within 100 miles of actual latitude 68 percent of the time and within 200 miles 95 percent of the time.

**This statistical analysis was made by Kurt Sereno Creamer.*

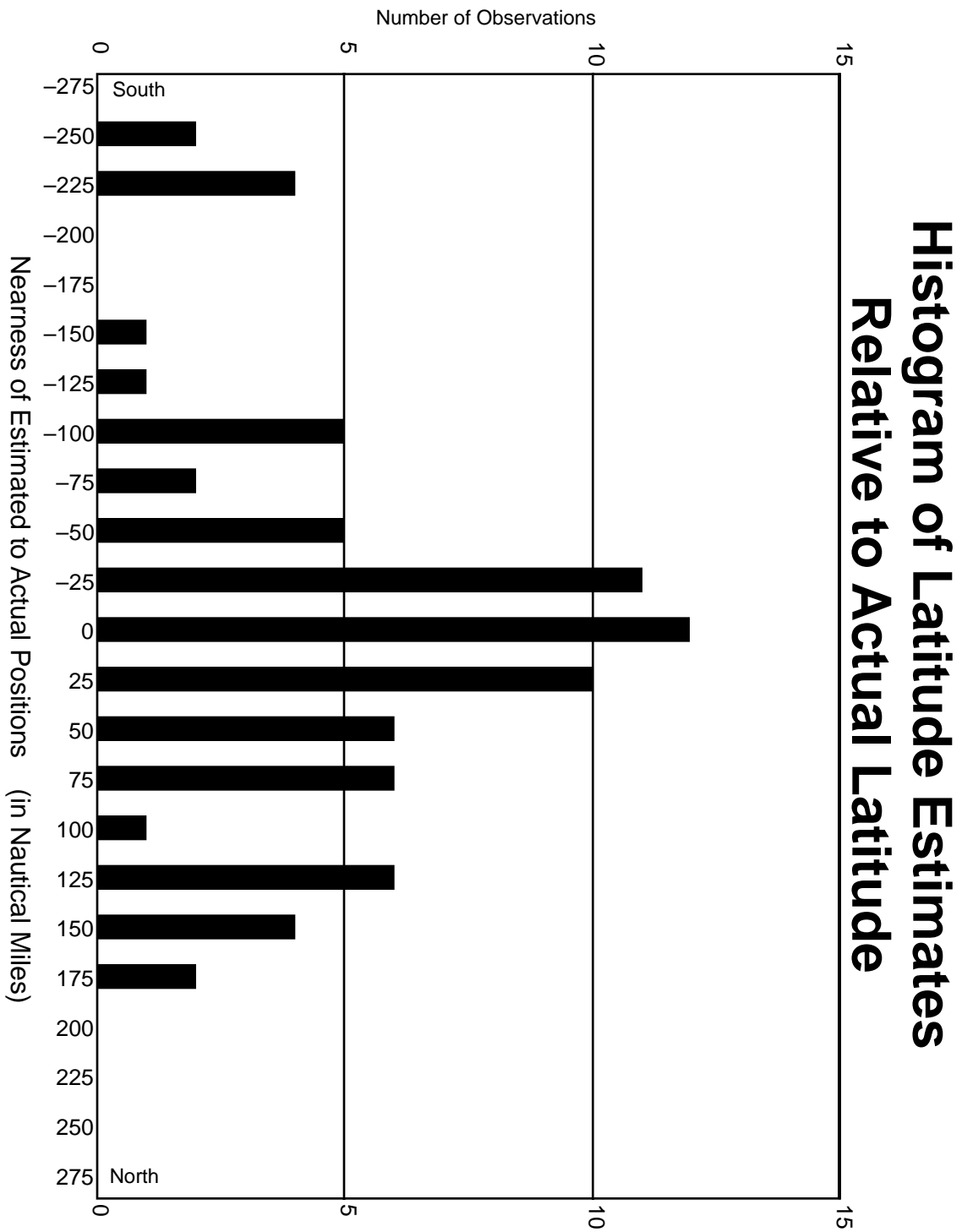


Figure 2

Appendix III

Globe Star's Circumnavigation

December 21, 1982—May 17, 1984

Port Crew members	Date of Arrival	Nautical Miles Sailed	Statute Miles Sailed	Days at Sea	Days in Port	Date of Departure
Cape May, New Jersey George Baldwin, Jeff Herdelin						Dec. 21, 1982
Cape Town, South Africa Jeff Herdelin, Rick Kuzyk	Mar. 31, 1983	7800	8980	100	57	May 27, 1983
Hobart, Australia Jesse Edwards, Nick Gill	Aug. 12, 1983	6800	7830	77	41	Sept. 22, 1983
Kiama, Australia Jesse Edwards, Nick Gill	Sept. 29, 1983	600	690	7	3	Oct. 2, 1983
Sydney, Australia Nick Gill	Oct. 2, 1983	60	70	1	6	Oct. 8, 1983
Whangaroa, New Zealand Nick Gill, Bob Rout	Oct. 23, 1983	1300	1500	15	7	Oct. 30, 1983
Port Stanley, Falklands Ed Gibson, Dave Lansdale, Bob Watson	Dec. 22, 1983	5500	6300	53	49	Feb. 9, 1984
Cape May, New Jersey	May 17, 1984	7400	8500	98		
Totals		<u>29460</u>	<u>33870</u>	<u>351</u>	<u>163</u>	

