

## OCEAN RACING AND SAILING AT SEA

by Monk Farnum

The result take on lightly the Atlantic no matter how often you come across the water and I've been through two hurricanes at sea not I'm glad to say so far in a small boat but on merchant ships. The first was in a ten thousand ton freighter. We were coming back from England, (Dallas) we had about two thousand tons of pig iron and two hundred pounds of pigs in the lower hold and we got caught in the tale of the hurricane in the Atlantic and the ship was blown over. I was a pretty good helmsmen, and the skipper was insistent that I take all four hours of our watch (normally you took two hours of watch and two hours of -----), during the day two hours of watch and two hours of deck work. I was on the field for four hours at the time the hurricane came up and the ship was blown over so far, that when it came up it blew for about twenty hours, I guess between 60 and 70 knots and up to waves that are s----- waves like so. It wasn't tremendous sea but the force of wind on a light ship just turned the ship on its side practically. We came out of that all night long the big pigs alarmed kept thundering down through the hold (sound effects) we kept waiting for them to go through the sides of the ship and sink it, but it didn't. We came out of that storm with a fifteen degree list that we carried eighteen hundred miles into -----  
---. If you've ever tried to steer a vessel with light and with a list, its an interesting exercise, particularly when you have a damn caution court behind you reporting every time you go off course, and quick, the skipper nervous -----guilty who was anxious to have his course straight as an arrow so that the carrier this and this get back ----- and send his nasty notes about how much oil he used by not steering a straight course. (laughter) It always amazed me, one trip I was super cargo for three months and that was because I carried a typewriter on board, I thought I ----- follow instructions of the comrade and from the start I'd take my typewriter you have to make them respect you in the Navy ---- quarter back saw the typewriter and said you come up forward and you be super cargo this trip, which meant I do all the dirty paperwork so that I can be free to go out and chew the fat on the bridge with all the mates. I learned more -----talk ----- the home office and the mate, here is a man who had in his chart ----- and crew and a ship that was worth perhaps in those days four of five million dollars and perhaps that much cargo, so the whole investment apart from the largest sum of eight to ten million dollars and yet some. This was back -- years ago when some \$30.00 a week clerk in

it". He had to comply with it and they asked if the man in question was why we had burned so much oil. --- make that very careful ----- position on one of their number of ships and they can scare us before -----the worst ----- they compare me -----consumption of fuel how many barrels of fuel used, how many RPM you ran if you ran over 104 RPM, ran 108 RPM obviously used more fuel and this was at a time when crude oil was coming to this country, crudely coming to this country in barrels back in 1930. --- you can get an idea, its astonishing that here is a man that spent 35 years at sea or more and he had to take that --- from the home office. Who-----he was master on the ship --- that was the first mate and the second first mate was on a coast guard coal ship running down from New Bedford -- drives slack coal picked up from the C & O docks in Norfolk and they --- were trying to beat the hurricane into Norfolk to pick up more coal. We were ----- This is an old British ship 35 years old and she had been, things had been falling apart ever since they had grinded her in Boston and uh when you turn about to cut some steam off and the damn bow was there and there was continuing question as to what's going to happen when you put a strain on a vehicle. Anyway we had just rounded the -----life vessel. I had been down --- sick from 8:00 or 9:00 until midnight and uh the hurricane was coming up and we were trying to beat it into the harbor, and it caught us just at the Chesapeake Light -----, back about 16 miles off shore, and we had just rounded the corner. Well I had turned in before we got to the lighthouse and the crew slept --- so we got all the motion. Well there wasn't any sleep to be sure, I turned -- -- except for my boots and made a wedge of my ----- I just put a life jacket on ----- obviously we were jumping around. About 3:00 in the morning the door burst open and we heard a tremendous bang and the ship came down. We thought the bow section had broken off. That something had happened. It didn't though, the door burst open and -----"All hands on deck" ----- leave shortly----- the hurricane was coming up from the southeast ----- So we all scrambled out on deck and there wasn't a light on the ship. Something had happened to the lights too. We were in the dark and we ----- tried to radio emergency ----- I came the --- at midnight and worked from 8:00 to 12:00. I had no sleep. We went out and worked until dawn trying to work in that impossible wind. It was blowing so hard you had to really hold on one hand to yourself and one to the ship and trying to take off the big turn buckles that held the steering compartment and hook them up the emergency steering wheel was an impossible job. What had happened, this ship had chained the -----

--- she was an old ship chained to a big drum, a makeship behind the midships's house, and then the chain went down from there and out to each side of the deck where there was a huge ship that turned -

----- This sea wind kept lifting the fiber and the ----- shift off its spindles and the chain promptly slipped off and caught under the ----- so we had quarter wheel on the ship and we drove in circles as it kept ----. So all we did was drift while we tried to fix the thing, but by 7:30 in the morning were making a pretty square drift right toward the shore and I guess were drifting about three knots at 7:30 in the morning. We began to get into a grayish green light and over the side you could see it was muddy. Some sections garbage and fence and stuff in water. We didn't know when we were going to go on the beach and the skipper had finally figured that he had enough so he said let go the starboard anchor. So we let go the starboard anchor ---

----- let go the starboard anchor and we tried to set the -----  
-----thirty feet and freight boat so we came all around it was fortunate we made it fast below but we had a 115,000 thousand foot chain around our neck (laughter) type anchor -----  
- weight and our links were twenty pounds a piece and it held, it held. It held and then that was 7:30 or so and at 8:00 I was back on watch I went up to the bridge to get my orders and the old man said to his third mate ----- mister ----- I can see Willoughbys' ----- over there and gotten some bearings and knew pretty well where we were. We could finally see some land----- take some----- midships -----.

The old man said "we gotta get out of here, this tide is all backed up into Norfolk", which indeed it was. There was water blocking the Atlantic hotel. He said "we gotta get out of here. You take the wheel mister and send your men down in the chain house to get that chain out". That was bad news indeed because we had to go down, my friends and I had to go down into a space about as stuffy --- width of this apron on the fireplace here, and up to there and the chain locker with a ladder and take that chain in a continuous turn around because there was no chance to use a break and if it ever started back again, we'd go out with it right out the ---- pipe come out standing on the --- deck and uh. So we started to take that chain continuously. Periodically it would catch, a link or two would go up and we'd stand there waiting and then it would come in and you would have to be very careful because you kept pushing it and it wet even though they had a hose on it trying to get the mud off you had to keep pushing it. If you get it caught on your foot, its impossible to be heard on the winch. You are buried and then you are crushed to death and-----  
----- so my friend and I were, my shipmate and I, worked the whole damn 115,000 twenty pound

links. Got up --- and then scrubbed the sweat off our necks and then we had cluster lamp above us. It was all we needed. It was July and that was putting 110 degrees down there. We staggered up on deck and collapsed. We could hardly move a muscle for three days, but in that hurricane I had watched the uh sea and I've been a small boat sailor and I thought I (cough) and I also was on a swimming squad in college and I think I can swim in almost any storm and I was kind of cocky and then I thought that had I fallen overboard in that kind of storm, I wouldn't be able to swim at all. The storm was depleting the air there wouldn't be any water, anything but the water to breath if the --- that high and again it had gone probably 60 or 70 knots maybe higher. Thirty miles away from us the steamer Madison of the old --- line had a real hot water fall, lost the second mate and another man and they sent out an S.O.S. --- say he was on the ship. We engineered the fifth speed to finally fix the steering wheel. They got the fifth diagnostic thing going down in the ---- and uh we got underway and got into the dock casino. Some people were putting their clothes on in the kitchen, but those two hurricanes made a lasting impression on me. (laughter) and uh it was only five years later that I began to get the idea of sailing around the world. And that to came in a hurricane as a result of helping to rescue Dwight Long. Dwight Long had circumnavigated, he was in the process of circumnavigating. Having started in Seattle, some three or four years before in his 33 foot ketch, the "Idlewild", and I met him down at the back of the wood -----in August ----- . He invited us to help him sail his boat around ----- the following Saturday, so we did. And on the way he encountered the river even though it was not a sailing day, we got to see the island yacht club. He was on the guest --- he wanted to drop his hook, chain and they offered him the yacht club mooring with big ---- three inch, three inch ----- for --- schooner and I said to him , Dwight you can't drop your chain here you would ----- in the area. He said yeah that happened to me in Sydney Harbor, it took me three days to get my chain ----. So he followed my advise and took the yacht club mooring with its three inch --- and made it -----

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So then he invited us down to the show that was going to be on the Island-----  
----- dancing and he was going to be the guest on Wednesday night. When I was working in New York at that time in Harold Square, and uh Wednesday the hurricane ----. I hadn't heard the warnings but I looked out the windows and see the sheets of rain going horizontally. Got up under the street light that night and

you could see and uh said that we couldn't leave because of the hurricane. He said my boat has  
 been torn loose from her mooring at the City Island Yacht Club and was last seen going out of the  
 ----- starboard --- (Laughter) out of the Yacht Club. Oh, he had said this on the air and I  
 thought it was just a gag and that they were trying to get sympathy for him. ----- came off.  
 I said that was stupid thing to let happen. He said, "No, its true!" I said, "Oh, my God". So well I  
 had a car in this town. We'll go out in spite of hurricane ----- and he and -----  
 and I tramped the beaches of the north shore of Long Island between ----- until finally  
 we just gave up. There was wreckage all over, boats had been dragged, and sea walls 50 feet  
 inland, big schooners ----- ground tackled strewn out between the two lighthouses -----  
 ----- . We walked until about 7:00 and then I left word for the late night police to call us if they  
 saw the boat. About 8:30 they had found the boat and she was ---, this --- was ----. She had  
 been wrecked on the shore and had come in on a bulkhead that was somewhat -----  
 had ----- on it and about I guess since 5 maybe 7 feet tall and made of stone, built of stone and  
 mortar and this boat was 32 foot. 32 foot boat ----- had been towed against the tide, had  
 been banged against it the mass of the main ----- was caught up in a tree, banged against  
 this bulkhead and had broken that bulkhead through with down about that far and 8 feet of the  
 bulkhead had been broken by this boat, she was double ----- oak and her ----- were  
 3 X 2's on eight inch ----- . She had ----- . So I had my first lesson on what you  
 need to take on a boat around the world. You have to have a solidly built boat. Now she lost  
 about 14, 14 planks and 8 frames. Crews came forward and repaired it ----- in the --- yard and  
 she went sailing ultimately like continuing the circumnavigation. But I think that partly the idea that  
 ----- do something. So I started my around the world pole, my APW pole, but then my  
 marriage and kids interfered and I never got away. Finally I kept the APW pole and I -----  
 sort of ----- and finally a couple of years ago I decided I was ready to get a boat, -----  
 but in the meantime I had been racing and sailing and cruising ----- Everybody in this  
 room probably at one point or another had to leave to make a long trip --- off shore but a not  
 around the world trip transatlantic or South Atlantic, somewhere. So the first requirement  
 obviously is a good boat and I bought the Shannon 28 after a two year search in 1979. She is a  
 well built boat. Its a good boat. Uh, the uh, I don't know how, do you want to put that slide on for  
 people who want to view and (cough) discuss the boat. What ----- . An offshore  
 boat has to be ruggedly built obviously, and in the old days, old days there was a very ruggedly  
 built boat plans that we used to sell when I was editor of ----- called "Tahiti Ketch". It was built by

what I call a "Cape Horn" type of boat, it would go around the Cape Horn under full sail and never even feel (laughter). ----- A friend of mine built one in Long Island Sound. As you know, the highest wind and sun are between June and August about 4 knots, that wasn't ---- like a piece of driftwood to go back and forth with the tide. (laughter) Most dramatic name most dramatic name we sold two thousand copies of that plan every year the "Tahiti Ketch". Isn't that magnificent. Bill ----- designed it. But she had no performance. While the extreme of course is to get one of those skinny ----- like Gypsy Moth 4 or Gypsy Moth 5 that ----- which felt like a bat out of hell but break up the crew. ----- pinball keel and ---- rudder had no directions to boot. You can't get a hold of it. The slightest wind you would go over on your side and have enough steering. It was just impossible. So you want a boat somewhere that has directional stability so that you don't have to be on the half 24 hours a day and then secondly have some ----- Well this boat will do it and she's reasonably easy to handle, single handed because her, she doesn't have a big main sail of a sloop. She has a cutter rig and her total sail plan is only 470 feet, and her main sail has only 175 feet and a Yankee skiff, on the ----- has a 165 feet and ----- of 125 feet and it handles very nicely. If you come and blow too hard on the long, I just drop the anchor and jot along at ----- The main had two ----- and I'll tell you more about that (noise). Uh, but the, I went down to the plant four times while she was building and I hired a surveyor to look over what was being built. I've been in the boat business and I've been through enough boat plants to know that you have to check a new boat just as carefully as you check an old boat or used boat. The investor had a good surveyor named ----- and he did a good job. The biggest thing he did for me, and I passed this on to Shannon, they may make it standard, I don't know -----, was that he came just after hull had been laid out first. Then he came when the bulkhead was ready and looked at the way they had the grounding for the electrical system to prevent lightening damage. They had wire running in festoons along under the rail connecting the change plates and connecting ----- all together. The wires -----, he said, "No that's not the best way. The best way is to use 5/8ths soft copper tubing running in straight lines from the change plates or from the engine or wherever to a single seacock" ----- seacock and have the lines as straight as possible, because lightening does not accommodate itself to curves. It goes in a straight lines ----- Furthermore, tubing has a bigger capacity than wire because of something, I don't know understand, but high voltage would get up into the ----- volts tend to go away from center and go to peripheral. So if you have a 5/8 band of pipe, you get better dispersion with electricals than

you do with wire. It neatly handled rig then we, I developed a scheme for testing boats and rather getting a bird's eye when you're hunting, a bird's eye impression of whether it is worth spending any more time on by just having certain standards. The first thing I do when I come on a boat is look at the deck. Is the deck a non-slip deck and this has an excellent non-slip deck with a pattern molded into the plywood, molded into the hull in the mold for the hull that is positive and good. Then the next thing I do is look at the hardware. Personally the white rails, the stantions have to be good. The stantions have to be solid or it will take the side thrust and have to (clear throat) -----; and all the hardware cleats and the chocks and everything have to be backed up with backing plates so that it can't pull out of the deck. I've been on boats where the cleats were held in pop rivets ----- power boats, cheap power boats. Then look for bronze seacock, not bows, but the seacock a positive level that controls and shuts and no question of gumming up from corrosion. You look for electrical fittings that are properly color coded so that their harnesses going to the boat are easy to get at. Look for easy access to you engine. If you have an engine, and I did. Look for solid grab rails, well secured and enough of them in the right places. So there are certain standards you establish when looking for a boat and uh, one the rarest ones, people don't realize, when you see an awful lot of boats right here in Oxford and St. Michaels and uh our local waters with miserable ventilation below decks. Most ----- boats have poor ventilation and that means you want to have open ports, you want to have ----- vents or some means and then the great option that I put on ----- fan ----- keeps the air circulating. In the cockpit, large cockpits stuffers, when you take a ----- aboard you want to get rid of it in a hurry, you can't get rid of it with a half inch scupper. My inch scupper per inch and one half and I just as soon they were two inch. Then for ground tackle. A good framework floor, a solid framework. Rugged, in which you could have two anchors always ready to let go. Not just one, because one can fail and you need a second one. And then or course the ----- and everything else, lifelines -----. Then the ship not too big if you're going to sail shorthanded, and I intended of course my wife and myself to sail, Uh, that the sail areas both ----- units and that would mean whether a catch or ----- preferably catch or ---, I've forgotten -----. But there's the boat, we might as well leave that on we can talk about it as we go around. Uh, alright, so you've got a good boat and then you say where am I going to take this beautiful boat, and I'm not going to go around the world with it because its kind of late and uh, going around the world isn't the picnic it once was particularly since World War II since a lot of automatic weapons got down to the small islands and there is an enormous amount of piracy going around that we don't get any word of back here.

I got up and I was ----- to people who had been subjected to close seizures and had escaped and I was hired as ----- in 1973 and that was already current between 1965-1973. So we decided to go to England, we had friends in England, then from there to Sweden and uh, ----- my wife was Swiss and ----- I had already had plans from Swiss ----- to take the boat up the Rhine to ----- and I guess we got a good reception in Switzerland. So the destination was no problem. We were going to take a transatlantic and uh if you are going to take a boat transatlantic you have to figure when you're going to do it, well obviously you don't want to do it in the winter time because the North Atlantic in winter, I've been there at sea in the merchant ship, and I want no part of it in a small boat. The time to do it is in the summer months before the hurricanes get underway, and to help you in that of course the Federal Government publishes ----- charts for the North Atlantic Ocean, they publish them for all the oceans showing the currents. Showing what ocean currents there are and what the prevailing winds there are in every five degrees square right across the whole ocean so you can see, you can't see this too well, from Cape Henry to Bermuda, or from here to Cape Henry was roughly 100 miles and from Cape Henry to Bermuda is was about 600 miles, from there to South Hampton it was about 3200 miles, and the prevailing winds are more than 50% from the west and southwest and more than 70% are ----- So the chances are pretty good that you'll have fair weather during that period. And if not at excessive courses these observations ----- there few winds more than force 4 or 5 during the summer. Now of course you have to remember, and I had this experience, that these are averages of and averages made of extremes too. I was taking a 28 foot ketch down to St. Thomas from Fort Washington some years ago and we got to Bermuda and we had a little trouble with our gap, it was a gap rigged job, and she went through wind like a barn so we had to use the engine to -----, uh, but we wanted to go to St. Thomas, and as I remember the course from Bermuda to St. Thomas was 179 degrees, -----, and uh we headed out of St. Georges town, and uh the wind was 180 degrees right in our teeth, so with the template the power chart promises 60% winds from the east, east or from that quadrant, 60-70% from the northeast, or the east or the southeast which was ----- So to make a long story short we went 200 miles to Weber, head up right into this thing, I stayed over on the starboard side, I took her 200 miles toward the ----- and then flopped her over hoping that the engine would make it. The wind was still out of the south. Finally we got 70 miles west of ----- down near Puerto Rico and now were getting overdue, I'd said ten to twelve days, this was the twelfth day and we were still 150 miles from our destination. So we flopped over and the wind

us in San Juan (cough) ----- St. Thomas, but I learned that the average can happen, it isn't always exactly what the power chart says. Going to Bermuda we have to figure of course on the gulf stream and head south of the gulf stream and figure ----- the angles to the east, you have to figure the gulf stream and uh plan on ----- . In the uh, then we said what route are we going to take from there, Bermuda. Well that's much simpler. From Bermuda, you have a straight shot (noise) with nothing interfering with the Great Circle Course, The Great Circle Course [END OF TAPE] I wouldn't know what that is until I get to Bermuda, because the uh they keep the data coming in constantly from the ----- Patrol, the Coast Guard Patrol this shows, this pilot chart is from the month of June, 1980, and it shoes the southern most limit of the iceberg drift here. You see? So when we raced across, I have been in three races across the Atlantic in the summertime and in each one of them when we started, the two we started from Bermuda, one was from Newport, the two we started from Bermuda, they gave us a point out and we put do..., we, know the Great Circle Course to England from here actually goes like that, its a curve on a ----- chart, like that, but they would give us a point Alpha, we could not go on the Great Circle Course and we got to point Alpha. In the 1960 race to Sweden, point Alpha happened to be 1100 miles from Bermuda and I was out here somewhere, before we could then make, of course there was running on top of England, and we were going, then went the Great Circle to the ----- up here, and then from there down to ----- and on to ----- But I would go until June when I get to Bermuda where the iceberg drift is and where I have to go ----- port, but that is one of the hazards of trying to plan ahead. Its uh 3200 miles from Great Britain, South Hampton, that's where the ---- ice might ----- . Now how long will that trip take, how fast does a small boat go, well those of you who are sailors, and a great many of you here know that the theoretical hull speed is a function of the water line length, and the new ----(formula) is  $1.35 \times \text{the square root of overlying length}$ . Total overlying is 23 feet. So  $23 \text{ feet} \times 1.35$  is a theoretical hull speed for this boat 6.479, about 6.5 knots, lets say 7 miles an hour. Uh, but Rod Stevens, I believe thoroughly that Rod Stevens sailed generally overestimate their speed in the sail, they overestimated their weight, how much the wind blew, and how much, the height of the sails ---- wind and uh, the waves, all these things are exaggerated in land lovers, I guess. But uh, he once said that sailing a boat can get you anywhere across an ocean was the most expensive way known, if knowing what the speed of knots are, otherwise if you can average 3 miles an hour, average 3 knots, you're doing well, so instead of projecting for this boat which has a theoretical hull speed of 6.47 that's probably with not an ounce of water on there no storage of

any sort. She, she displaces ---- 9300 lbs, about 5 tons, by the time I have the gear aboard, I expect she'll be 1100 lbs with all the gear, but I estimate that, I can be able to do about between 70-80 miles a day, 75 and 80 miles a day. Well on that basis, to Bermuda, I figure it would take 9-10 days with 15 days maximum, depending on ---- somewhere, and to England 6-7 weeks or 56 days ----. And that's why those times are important because on them I base how much storage I carry and how much water. I think its better to be on the conservative side, and I'm sure whatever I buy in the way of storage its going to be cheaper here where I can ----- than it will be in England. all right, so I want to make that passage and uh the crew, uh, I'd like to do that single handed the whole way, but I'm not that much of a hero. I recognize that being single handed in the Chesapeake, I've been single handed in the Chesapeake and; I don't want to be on watch 24 hours a day. I'd like to keep moving, the only way you can keep moving is to have somebody on watch because of the traffic. The modern ship has radar. The problem with radar it's not self-monitoring, yet some of these big new, multi-thousand ton, 200,000-300,000 tankers, ---- twelve men, and its incredible but they are not monitoring stuff, the computer are going to do everything, including evasive action, maybe but having twice had the experience of sea, once with on ---- a freighter from Florida to New York outside the race line, our engines broken, and were holding on forty of us on the boat, and I watched a ship coming up, and we were on----- course, and I kept waving for them to you know, give us some information, like where are you going -----  
--- but he kept steadily on, and at the last minute I realized ----- he wasn't going to change and the wind was light, I couldn't, I didn't want ----- so I managed to, managed to get the boat around and --- just swept by about 150 yards away, there wasn't a soul on the wheel house, no one on the bridge. And then 5 years ago we were taking a Dutch-Star 50 to ---- city in ----, Grenada, and that's the (cough) Bermuda Triangle, and it was just, I was watch captain, they had a professional skipper, I was watch captain and the man on my watch --- had never been to sea before, he was ----- man architect, and he was holding the wheel, and my wife was on deck, and uh, I was looking at the chart or something. It was just about dusk, and uh Ruth called and said do you want to come up? I said all right, and here was a steamer approaching, a freighter approaching, oh about 45 degree angle, ---- Wisconsin -----  
----- and I started the engine and put it over in the other tank ----- . And she like crossed our bow about uh, 100 yards away, not a soul in sight, no one on deck, no one on deck, no one on the wheel house, no one on the lookout that we could see. Had we kept on we would have been run down, we would have another thing to uh. (noise) We uh, later that same young

man spotted a red flare off the northeast and we stopped everything, and we could see the light coming from the direction for a couple of hours and then tried to get on the channel \_\_\_\_\_ Never did find out what caused the red flare. \_\_\_\_\_ The Coast Guard in Miami. But you have to keep a sharp lookout and you have to take evasive action yourself early, because even if they spot you, they can't take evasive action, it takes ten miles for one of them to stop. And as for turning, it probably takes the distance you can see them before they can turn to you. You can see at the height --- 10 feet of sea, your horizon is less than 4 miles than away, -3.6 miles, to that you add the height of super structure, whatever ----- the most you can see from a ship is 10 miles away. If he's coming at you at 18 knots, he is doing 1800 feet a minute, and that means he's covering miles in 3 to 4 minutes. He is 10 miles away, and at 3 miles he's going to be there in less than half an hour. He's going to be right on you, so you have to take your evasive action early. So this is something the steering vane can do for you and I find when I get to the single handed, being on watch all night long, and do my sleeping during the day. One -- was single-handed at the ---early was that you had no complaints from the crew (laughter). (intell sent). But you have to get charts and the number of charts you have to get is staggering, but what's more staggering is the cost. Time was when charts were 50 cents, 75 cents, \$1.00 for a big one...but now the smallest chart is \$3.50 or \$4.00.. \$4.50. I went to the New York Nautical Club a few weeks ago and I had \$10.00 and I ordered -- charts and I gave him the \$10.00 and he said, "that's \$14.75"... I thought I was going to get \$3.00 change! (laughter) You had to have three times the trite(?), you had to have a small scale trite(?), which may be on the order of 1 to 6 million because of the ocean \_\_\_\_\_. This is the southern sheet of the North Atlantic Ocean, there are two sheets, and it's one of the six million, one of the 6,333,310, there's Bermuda, that's how big Bermuda is, 600 miles to the nearest \_\_\_\_\_ and about 100 miles to the inch. You need those for plotting your daily position so you can see your approach to port, how much sea room you still have left. When you get closer, of course, obviously, you try to \_\_\_\_\_ drop down to maybe 80,000 or a couple of hundred thousand and then when you get into harbor you may go down as low as to around 7,000. Then, something I learned the hard way, is that you have to have all the steps, we used to fly light planes and file these flight plans for instrument flying you always had to have an alternate airport, because you couldn't be sure you were going to fly \_\_\_\_\_ at your destination. So you had to compare and file with alternate airports, which meant you had to have the airport landing plan, you had to have all the specifics for that airport otherwise you'd be in a spot if you had to land there. So this is a good thing, I had to slowly learn, at sea,

I've always been trying to economize and I figure that you can't get very \_\_\_\_ in the water very much and just last year, a year ago, \_\_\_\_ Stevens cup in '56 in Tarpon Springs to \_\_\_\_ my way of saying \_\_\_\_ and we had come out of, we had some rough weather, the roughest 12 days I've had in 28 years of sea and we were bushed. I was down taking a nap when we picked up, we'd seen the monitor and \_\_\_\_ in St. Thomas, and came in full side and then started along the south side of it and there is \_\_\_\_ cap in St. Thomas which is a very distinctive landmark but I hadn't seen it since 1959 when I had last been there by boat from that side. And we started to wind and we got to the west end of the island, there was some land, as we approached farther down, there was some land guided charts, immediate island had just come up and the answer was that just beyond \_\_\_\_ which is to the west of St. Thomas. But we didn't have the Puerto Rican chart that showed it, we had a small scale chart but not enough to give us detail. Fortunately we had no problem, and I had made the mistake of trying to call the Coast Guard and get some help from them and \_\_\_\_ we're lucky we weren't found by them (laughter). Talking to, I'll have alternates for the Azores and north coast of Spain and for the French side of English Channel... and also for Ireland because if the English Channel acts up, and it does have a lot of storms during the summertime, it's no place for small boats to be.. the tides are too strong, shores are short on both sides... it's much better to go up St. George's Channel and go into port. I sailed into port but I \_\_\_\_ and that's a much better harbor. All right, so you had the charts, you had the sails. The sails, as I said, are three sails, I've had them over all the trip - they are 7.5 ounce, vinyl(?) cloth which is a resinated cloth which holds its shape very well, but I'm not sure it's as easy to handle as some of the other cloths (Excuse me a minute, I'm going to change this tape...) but I had a third row of stitching added to the sails- they had originally double stitched-and then at each flue and the tack grommets I had them reinforced with dacron tape going in three directions... this is the sailmakers suggestion...and the headboard had been strengthened and then all the slides along the loft, the shackles had been replaced with a new type of minimum tape shackle. I had a third line of reprints added so that sail will reduce down to about 75 feet. It's 175 feet fully posted and it will reduce down to about 75 feet. The space hoop has a single reef in it and reduces to about 95 feet and then I had a storm jib- I ordered a flat cut storm jib which would be 46 square feet and can be set higher on the head stay or fore stay or on the \_\_\_\_ stay. I'll probably be set on the spacial(?SP) stay, I want to stay away from the eyes of the boat, the bow of the boat, as much as possible. More men have been lost off of the bow strip of boats, even in the Bay on a sailing trip, than any other part of the vessel. You dip into a sea, you think if you're running, if you dip into a

sea and that water comes up under you and lifts you and you cannot hold on no matter how strong you are. You may hold on to the lifelines but it's asking for trouble. Spacial, then a storm hit, and then I had weather cloths around the cockpit, which you can't see here, but they are made of sailcloth but they are not nearly as sail competent, although I guess I get unrated windage when I'm off the wind because the sailcloths do provide a certain amount of push. You're going to be gone for all this time how do you handle your food. You know it's been a cinch on all the races I've done, someone else has done all the game planning, I've cooked a lot, I've cooked and navigated on a number of races, but I didn't have to shop for the food. I didn't have to plan the menu and when I used to sail with Bill Snath, his wife Debbie was a wonderful ship's hand.. she would plan menus for everyday of the race and beyond and catalog all the storage so that it was stowed exactly according to a storage plan and if on July 6th it said you were to have beef stew with carrots and potatoes and it was blowing like stink and you weren't up to anything except a single pot of soup, you just take the storage from September 1st and put those in and then just keep your wad going. But you have to stow your storage and very carefully mark them off, a religious exercise because you get all screwed up if you don't. Then you stow your storage so that the boat has always in trimmed- you have 40 pounds of potatoes on one side and 40 pounds of canned soup, sweet potatoes, and one can of soup the boat stays to the left! (laughter) \_\_\_potatoes will be lop-sided and you'll be \_\_\_ on a ship coming back from England... our bow .. and the same thing is true fore and aft. If \_\_\_ forward using beer is too heavyweight then put some of rum there! I'm strong on garlic. I think garlic is a great sail \_\_\_\_, sailing along you can eat all the garlic you want and don't care, but uh... I would have refrigeration, that's another thing I think is kind of sissy stuff, although I'm not up to Captain \_\_\_ who you remember that wonderful recipe he has for making dried cod edible? He is such a persuasive liar he makes it sound almost edible unless you're tried dried cod prepared the way he makes it... I'd rather eat my shoe leather. Winston moutard le mou - I think shoe leather and moutard le mou... but I find I had my diet worked out with vitamins and supplements and I think it's pretty much an individual thing, what you like and what would be nourishing. I do find that pick up \_\_\_ growing from ship to ship he has frogs(?) growing successfully that are wonderful. I don't think though I have room for the past whipporail that he had ... he took my easy chair and was howling off the horn until about quaffing down his ale. His friends used to say, very, very nastily, we used to say he went to sea to get away from Sheila, but I think that is a bit much (laughter) did often save his life... but you have to plan your food carefully and the other thing single handers, you've got to have food right in hand...

I'm a great believer in dried fruits. Dried fruit along side the helmsman, and minimize the chocolate bars. I found that chocolate bars retain bulk of very large especially \_\_\_\_ and finally \_\_\_\_ they are productive or they are a \_\_\_\_ indicator if you have a tendency to herpes of the lip and this is gratuitous.. I'm not giving you medical treatment I'm just passing on to you the notion that was passed on to me. I often have to slow down when I start developing fever sores around the lip. Sometimes I do want to \_\_\_\_ sun so we'll get to that in a minute. The \_\_\_\_ carried 65 gallons of water which is very good for a boat that size. I figure half a gallon a day, that could take me well across and keep me in good shape. There were 3 tanks - the bow tank had 15 gallons and then the two other tanks port and starboard \_\_\_\_ are 25 gallons each. Again, keeping the boat in balance. It is good at sea to keep the weight out of the end of the boat as all you seamen know. The boat will hobby-horse if you have too much weight or should dive her nose in and will be slow to race in the stern if you have too much weight \_\_\_\_\_. So the first tank I'll drain will be my bow tank and 15 \_\_\_\_ weight figure fresh water by the gallon 8 pounds a gallons is 120 pounds off that bow. Then I have a holding tank on my boat and it's perfectly legal if the boat \_\_\_\_ but that holding tank has not been used to date and I'm going to have 10 gallons of reserve water in \_\_\_\_ (laughter). I'll have two additional 5 gallon \_\_\_\_ cans, I have rain casters from the boom that I learned recently you have to be careful about drinking the water from some sails it contains some kind of treatment that may be harmful to your health. But I have rain casters in the boom and then I am debating whether or not to carry solar \_\_\_\_ in case I have to take to my zodiac raft but... I figure my estimated half a gallon a day should be enough and I wash in very occasional fresh water, rain water, do all my dishes in salt water which works well provided that you rinse it enough. When I get to the makeshift tanks I put them both open at the same time, so the water level goes down simultaneously and both of them don't get out of balance. You have to keep these things in mind. The race for \_\_\_\_ in 1960 we had an alarming thing happen - we were really getting across the line although maybe we were not early but we thought we were and then Dick \_\_\_\_ said, "Hey, you guys we're over early" \_\_\_\_ we went around and started again, because if we had been over early it would have been a 2 hour penalty added to our time and as it turns out it would have cost us the race, but it didn't. But we checked in that boat we had a very good crew, 5 of us had been in trans-Atlantic before and every man knew every other man. Bobby \_\_\_\_ was the watch captain, \_\_\_\_ my watch \_\_\_\_ navigated too but we checked the water in the bilge every change of watch, every 4 hours. The first change of watch was at 4 o'clock in the afternoon, 16 hundred, and I checked the water and tasted it and there was water in it, it was

fresh water! Well, all hell broke loose. Here we were only three hours out of Bermuda and fresh water in our bilge-where was it coming from? We ripped off the cushions in the settee and \_\_\_\_\_ the tank and the starboard tank was practically gone. And the port tank was losing water. Well then we shut them both down and we had some reserved water, 20 gallons \_\_\_\_\_, but we carried only 120 gallons for 8 men and if we didn't find a leak and get enough water by the time we got to Point \_\_\_\_\_ which was 1100 miles away we would have to drop out of the race. We would then be 300 miles \_\_\_\_\_ St. John's. So fortunately we stabilized the leak and then we got squalled while we were trying to get the thing under control and I grabbed a pair of socks, I lost the top off the port tank - it went down in the bilge somewhere- and I grabbed a pair of socks and stuffed it in the hole because the water would come up, and began to come out of the tank, like a \_\_\_\_\_ as we bouncing around in the squall. Spinnaker was falling off and we were trying to save water from the rain at the same time. We finally got the water supply, we poured water from the mainsail and put it in the tank and had flavor exactly of an old circus tent (laughter). So what you are saying, \_\_\_\_\_ with water to spare. We get down to having this lovely boat and we have all these things planned and then we have to do the final preparation which is fitting out. The fitting out was everything critical, fitting out is the last chance you get to make changes before you go off-shore. I'm taking those \_\_\_\_\_ to yacht maintenance to all the work on the Chesapeake for Shannon. Charles Smith is a very able guy, I tried to get him to sail once \_\_\_\_\_ with me, but he could never make it, he wanted to but he couldn't make it he told me a couple of days ago. If you'll hold up in the sand \_\_\_\_\_ and paint the bottoms and put a new stem head in because when I come back from, eventually, Europe I want twin headsills and I want a place to make my headsills fast forward on the stem, that's my fear. All the way out to here I want to make that.... I have some difference of opinion on those twin headsills and maybe there are men in the audience here who can clue me in after the meeting. A friend of mine, Forbes Morris says that he bent my \_\_\_\_\_ nearly vertical as possible, I should bring those \_\_\_\_\_ all the way into gear, and more or less \_\_\_\_\_. Harold G \_\_\_\_\_ whom I written ran his from about half-way between the stemhead and the mast so he can \_\_\_\_\_ a vertical loft too. And I am going to be prepared to carry additional space folded by me. You have to put a dodger on, you have to rig a boom \_\_\_\_\_, a self-steering vane and Shannon is going to provide me with that self-steering vane but so far all they had is the literature in German (laughter) from Deutschland and the steering vane is the "scheinpilot(?sp)". Scheinpilot, fortunately my wife reads German but she's not able to happen to get to it yet. There is a short English translation of one page, my German is so fragmented I can't get anything out of

it. I hoping to get that, but I have a backup QME that I am working on if that doesn't come through in time. A very important part of taking a vessel off-shore I learned, it never occurred to me because I never been pooped, is to have a \_\_\_\_\_ absolutely waterproof, an enormous amount of water, if you get pooped an enormous amount of water comes into the cockpit and just blacken the sail locker and water by the ton goes down below and you have a hell of a time getting it out, the worst thing is it keeps your stern \_\_\_\_\_ so another sea can come aboard completely. So I'm putting lashers on the cockpit, on the other side I'm putting stick-on waterproofing rubber that I got in New York a couple of weeks ago so that when the latch goes down that will be absolutely water-tight. Not enough to have \_\_\_\_\_ around the outside, that's all right during a spray, but you can't avoid a boarding sea and I expect at some point to be boarded. \_\_\_\_\_ to the life raft canister, I'm going to have a six man Zodiac raft, between the dodger and the main \_\_\_\_\_ and we have it lashed to the deck so it can't \_\_\_\_\_. Then I'm going to have additional fastening going across it going out to the \_\_\_\_\_ because there have been instances of a boarding sea coming from the side that just rips the raft up, tears the \_\_\_\_\_ out and leaving an enormous gaping hole where \_\_\_\_\_. I'm going to put a third step on my transom, I have two steps on now but I want a third step at the water line in case I go over and try to get back on. Double \_\_\_\_\_ on my forward deck, \_\_\_\_\_ leaks on my forward hatch, and almost \_\_\_\_\_ if the hatch leaks and the water always comes to the skipper's bunk (laughter). Well, if the hatch leaks forward I'm going to sleep on the other side because \_\_\_\_\_. I haven't mentioned the engines in all of this because I don't believe an engine is so important on a small boat going off-shore, except in flat calm. People have the mistaken notion that an engine's useful in maneuvering a storm unless you are a big engine, unless you have 60 or 70 horsepower on a small boat you can't push against that wave of water. It's good for middle range \_\_\_\_\_, perfect for getting in and out of currents, off-shore it's not all that important. Yet I want my engine to run perfectly. I have a 15 horse Yah \_\_\_\_\_ and I am reading the propeller, they have to change the propeller from 3 blade to a 3 blade propeller and that is about a 6 to 10

(end of tape)