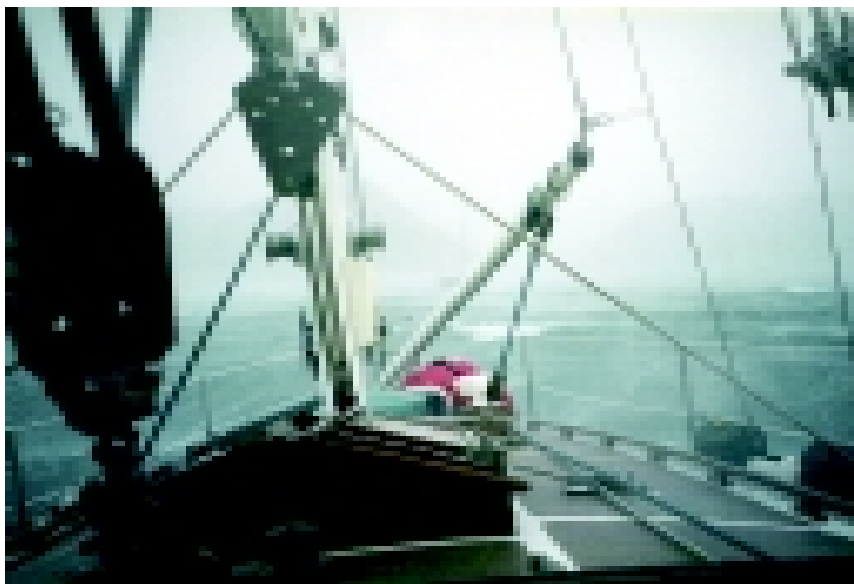


Riding out Marty at anchor

Good hurricane
preparation puts luck
on your side



by Carolyn Shearlock

Cruising in the Sea of Cortez, Mexico, my husband Dave and I got a surprise when we listened to the Amigo Net weather on the morning of Monday, September 22, 2003. Overnight Hurricane Marty had sped up dramatically, from four knots to 20 knots. Don Anderson of Summer Passage Radio, the net's weather guru, reported at 8 a.m. that the eye was over La Paz, just 100 miles to the south of us in Puerto Escondido. Boats in La Paz were reporting winds of more than 100 knots, making Marty a Category 2 hurricane. Don thought that Marty's center would pass about 30 miles to the east of us, putting us on the edge of hurricane-force winds. But, he warned, the path could easily shift, and Marty could make a direct hit on Puerto Escondido.

¿Qué Tal?'s hurricane checklist

Tanks

Batteries and water should be topped off prior to the storm
Make sure there is sufficient diesel
Remember to freshwater flush the watermaker every two days if the water is too dirty to use the watermaker

Sails and spars

Genoa down and sheets off
Pull roller-furler line out and cleat off
Staysail down
Main down
Reef lines off; mark which is which; take photos of how rigged
Center boom
Boom gallows on and bolted
Boom brake on
Vang on
Vang control line, staysail sheet and mainsheet tied off to traveler
Lead all halyards to belaying pins
Lazy jacks up, control lines to belaying pins

Anchoring

Chain around Samson post
Long chain snubbers on
Heavy-duty chafe gear on
Chafing gear on spare anchor
Spare chafing gear out
Danforth out of lazarette and ready to go
Spare anchor ready to go, on rode and tied with line, not shackled

Dinghy

Dinghy rolled and below
Dinghy engine mounted on transom and tied down

Canvas

Dodger down
Bimini down

Cockpit and deck

MOB pole down
Propane cushion down
Tie down spare propane locker
Transom zinc into lazarette
Duct tape over seams to stern door into lazarette and propane locker
Little anchor light in
Horseshoe buoy in
Fenders in lazarette
Grill below
Buckets below
Teak cockpit table and drink holder in
Plastic drink holders in
VHF holder in

GPS in
 Shoes in from cockpit
 Cockpit cushions in (do this before the first rain hits)
 Courtesy flag and U.S. flag in
 Air line (hookah) below and tube deflated
 Key in diesel ignition; Plexiglas over instruments
 Tie down solar panels
 Tie jerry cans extra well
 Empty jerry cans stowed below
 Swim ladder and dinghy step below
 Sunshower below (but take shower before it gets bad)
 Bungees and clothespins below
 Lightning chain in place
 Chain snubber bag off bow pulpit
 Sunscreen bag out of cockpit
 Binoculars in
 Screens out of portholes
 Winch handles in

Belowdecks

Canned goods out (before sails are on table)
 Spare lines out (before sails are on table)
 Books in dry place
 Tools in dry place and accessible
 Computer in dry bag
 Snack foods available
 Drinks accessible (before stowing everything in quarterberth)
 Split up where the toilet paper is stowed
 First-aid stuff accessible
 Everything secured as for leaving harbor
 Seacock for manual bilge pump open
 Handle for manual bilge pump out
 Rags out to wipe up leaks and rain blown in companionway

Personal things

Take seasick medicine
 Foul weather gear accessible
 Harnesses accessible
 Headlamps ready
 Masks and snorkels accessible
 Wetsuits accessible

Miscellaneous

Clean strainer for engine saltwater pump: have spare pump accessible

If it looks really bad . . .

Engine blower plate in
 Solar vent plates in
 Dorade plates in
 Drop boards in
 Close seacocks for head, sink and watermaker
 Have extra bungs and hammer ready
 Cut wires to solar panels and take them below



During the hurricane, opposite, and in the eye, above

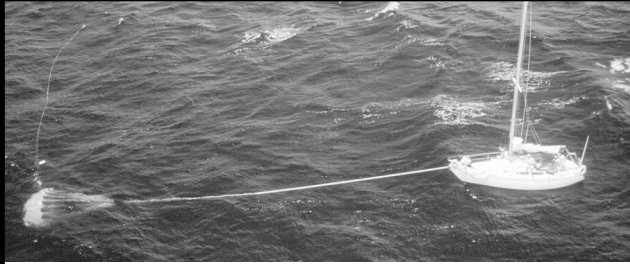
Dave and I, aboard *¿Qué Tal?*, our 1978 Tayana 37, had spent the previous day moving into Puerto Escondido, a hurricane hole, and making our hurricane preparations. As we worked we talked about whether we should stay on board during the storm or go ashore. Within 15 minutes of Don's announcement it was clear that we didn't have a choice. The storm was upon us, and we were going to ride it out at anchor.

About 80 boats were in Puerto Escondido for the storm. Of these, 24 had people aboard; the others had been left in the care of boat watchers. High hills and mountains almost completely surround the inner harbor so cruisers consider this the best hurricane hole in the Sea of Cortez. Although wind could come through two low-lying areas known as the windows, waves would be totally blocked as the narrow entrance channel made a 90-degree turn. In fact, most cruising guides say the number of boats here is the only detriment to Puerto Escondido as a hurricane hole. However, no one could recall a direct hit on the bay.

Our insurance required our boat to be in a marina during a named storm; we thought that Puerto Escondido offered protection and had elected to stay nearby during hurricane season. Had we made the right decision?

A certain amount of luck was with us. While Marty did turn and hit Puerto Escondido directly, the storm had decreased to a Category 1 hurri-

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cane with sustained winds around 70 knots and gusts to 82. More importantly, the storm moved quickly, lasting 12 daylight hours—from just after 8 a.m. to about 8 p.m.

Throughout the day the 24 manned boats talked to each other on the VHF radio. As the rigging howled and several boats took knockdowns we couldn't help one another, but we could provide moral support. Visibility decreased until conditions were a total whiteout. Suddenly the winds lightened considerably and most of the fleet thought it was over.

Unfortunately, it wasn't. The whiteout had been the eye wall, and we were now in the eye of the hurricane. For over half an hour we had almost calm conditions. Cruisers called to one another and fixed problems in their ground tackle. Some were getting ready to launch dinghies and help friends. Then the winds rapidly built back up from the opposite direction. Boats swung on their anchors and straightened out their chains once again. "Halftime" was over. We all hunkered down for another four hours of helping our boats protect us.

As the storm finally died down for real we began to take stock of the damage. Of the occupied boats, two had broken rudders, one had torn loose its bow pulpit, many had dragged and numerous others had minor problems or damage. But none had major damage or injuries to crew. Aboard *¿Qué Tal?*, we had virtually no damage. Among the unattended boats, though, the story was different.

- * Ten boats went aground
- * Seven boats sank

* Three boats were swept through the entrance channel. One was found floating three miles away with substantial damage, the second was high on a beach four miles away and the third had reset its anchor in the middle of the channel.

* Several had dragged and some had hit other boats, although none of these had major damage.

By no means did we do everything perfectly, but we did learn things to pass on to other cruisers. Virtually everyone said that they would make changes in their storm preparation for another hurricane. While each hurricane hole is unique, a number of the lessons learned by the Puerto Escondido fleet are applicable in other areas.

Two primary rules

Rule number one: Assume the worst. Assume that the storm will turn and hit you directly. Assume that the storm will speed up as it travels toward you. Assume that it will stall while you are in the worst of it. Don't try to out-think the storm. Pick the very best hurricane hole you can and over-prepare. While you are being pummeled by the eye wall—or pushed onto the beach—you don't want to be thinking, "if only I'd..."

Rule number two: Prepare early! Remember that when a forecaster predicts when a storm will be in



One of the 10 boats that were blown ashore

your area, he is predicting the center of the storm. Winds, waves and rain will be at storm force long before then. Gale-force winds usually extend out over 100 miles from the center of a hurricane. So if a storm is 300 miles away from you and moving at 20 knots, you could be in a gale in just 10 hours. And once winds are at gale force, you can't do much more to prepare for the storm. Remember, hurricanes can speed up dramatically.

Before the hurricane season

If you are going to be cruising in a hurricane area, there are several things to do before hurricane season starts.

- * Learn where to get the best possible weather information while on board your boat. If you have SailMail or Winlink e-mail, both offer numerous ways to get NOAA and other weather reports. If you will be getting information over the radio, an inexpensive tape recorder is a good investment, as it is hard to record position information as fast as it is read. Once hurricane season begins, monitor the weather every day.

- * Investigate hurricane holes. What are the pros and cons of each? If possible, spend a night or two and see what the holding is like. What anchor works best? Is there anything to watch for as you enter the anchorage? If you are hurrying for a hurricane hole, you will feel a lot better if you are entering a familiar anchorage.

- * Create a checklist for preparing for a hurricane. ¿*Qué Tal?*'s is in the sidebar. Plan where sails and other deck items will be stored. Is there anything that you need to get out of lockers beforehand? I remember my frustration in discovering that all of our canned foods and chafing gear were in the locker under the sails and dinghy.

- * Plan your storm anchoring. Spend some time reading the reference books on storm anchoring. The time to buy any needed gear is now.

- * Prepare your chafing gear. We made our own chafing gear out of double layers of reinforced hose. If you have a bobstay, figure out a way to keep your snubbers from chafing on it.

- * Buy supplies. You will almost certainly need some penetrating oil, such as Liquid Wrench or PB Blaster, to take things apart in your hurricane preparations, and it helps to put things back together with some anti-seizing compound. You will need seizing wire, too. And we seem to average losing one shackle overboard each time we prepare for a storm.

Preparing for the storm

This is where having a checklist will pay off. Following are the more general things we have learned.

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* Use your time wisely. Start preparing the boat on the way to the hurricane hole. If you are motoring, maybe you can start taking your sails down. Canvas can be taken down. Run the watermaker and fill the tanks. Rig your jacklines. Secure items below. If any lockers leak in heavy seas, see if you can relocate items that could be damaged. Prepare your ditch bag (see below). Don't spend your time on nonessential tasks.

* Start by laying out things you will need so that you don't block

What happened to the Puerto Escondido fleet

The inner harbor has a mud bottom and few areas with less than 42 feet of water. Most boats anchored in 42 to 45 feet on 250- to 300-foot rodes. The Waiting Room has a sand bottom, but is deep. Most boats there used moorings left from when The Moorings had its charter base in the harbor. Other moorings have been added in the inner harbor. About a quarter of the boats in Puerto Escondido for Hurricane Marty used moorings, the rest were on anchors. The experiences of the 18 boats I talked to can be summarized as follows.

* **Moorings.** Of seven boats on moorings, two dragged. Both put out additional anchors and motored to stay off the rocks; neither was able to totally halt the dragging. One other boat had a swivel fail on the mooring, but a safety line they had added held them. Another boat dove on their mooring before the storm and found a pin that had to be replaced. The morning after the storm another boat that had been on a mooring was found floating free. Several of the unoccupied boats that were swept out of the harbor went aground or were sunk on the jetty had been on moorings; the exact number is not known.

* **QCR/plow/Delta anchors.** Of five boats with this type of anchor, three dragged. One could not deploy a second anchor, the plow never reset, and their engine wasn't powerful enough to stop the drag. The couple thought they were within a minute of going on the rock jetty when the eye came and the wind diminished.

* **Bruce/claw anchors.** Six boats used Bruce or similar anchors. Two dragged; one quickly reset and held for the remainder of the storm, the other deployed a second anchor.

* **Two anchors on one rode.** Two boats employed a Delta or plow anchor in line with a Danforth-type anchor on a single rode. One dragged 150 feet early in the storm; they pulled up both anchors, motored farther from shore and re-anchored with the same setup. They had no further problems, nor did the second boat. Another boat set two anchors in a "V" pattern and had no problems.

* **Fouled anchors.** Four of the five boats that used a second (or third) anchor during the storm to stop dragging had problems with tangled rodes and fouled anchors.

* **Motoring.** Many boats tried motoring at one time or another to reduce the strain on their ground tackle. Most concluded that motoring might actually cause more strain, as slack would develop in the rode and then the bow would fall off with a sharp jerk on the anchor. Everyone agreed motoring was a desperation move, good only if the boat was already dragging or to maintain clearance from a boat that was dragging past. However, several boats did leave their engines running, particularly as the storm neared its height, so if they needed to motor they could do so instantly. Two boats that motored because they were dragging discovered they didn't have enough horsepower to make headway: They could only slow their rearward progress.

* **Crew size.** The storm was definitely harder on singlehanders. They had no one to help prepare for the storm and no one to help during it, even to hand them a bottle of water or provide moral support. Another boat that was dragging discovered the wife didn't have the strength to handle their tiller steering to avoid the boats behind them, nor could she deploy a second anchor.

* **Kellets/anchor weights.** Three boats used kellets; all thought they helped the anchors hold better and the boats ride better.

access to them. Make sure your tools are where you can get to them easily. Have several waterproof flashlights available with plenty of spare batteries. Keep several sharp knives.

* The first priority is to anchor well. If you are using a mooring, dive on it to make sure it is large enough and does not need repair. Make sure your anchor is well set—power back on it as hard as you can. If you drag now, you won't stay put through the storm. As you drop your anchor, record a GPS waypoint. During the storm you can use this waypoint to determine if you are dragging; if you should lose your anchor in the storm this will help you find it afterward. Be sure to have room to swing 360 degrees at the full extent of your rode.

* Take all sails down. This is crucial. Many cruisers in La Paz found their insurance would not pay off because they had left sails on the boat. Tying them down is not sufficient.

* Get everything possible belowdecks. We took all of our canvas down, although some boats did leave dodgers up to give them some protection when watching from the cockpit during the storm. We put empty jerry cans below but left full ones on deck, not wanting fuel below. Tie down anything you have to leave on deck very securely. Secure things down below in case the boat gets knocked down.

* Dinghies. The best place for your dinghy is down below, with the motor stowed as for passage. Some boats with hard dinghies tied them on deck. Others sank them and tied the painter to their boats: If you do this, be sure to put some sort of a buoy on the dinghy in case the painter chafes through.

* Leave a place to sit and sleep. It will be several days before your boat is back to "normal," particularly if you are assisting damaged boats.

* Top up with diesel and water; fully charge the batteries.

* Tie off all lines and sheets away from mast. In a storm loose ends of lines can be lethal and don't forget things like the boom vang and mainsheet that are led to the cockpit. We pulled out the furling line for our genoa (the sail was already down) and tied it off so it could not unwind on its own. We led both ends of all halyards away from the mast to belaying pins attached to the shrouds. Once we removed the mainsail we put up the lazyjacks so they wouldn't beat against the mast.

* Prepare a ditch bag. This is somewhat different from an "at sea" ditch bag. If you go aground and have to leave the boat, you will need your boat documents, passports, money, handheld VHF, warm clothes, spare shoes, canned or dry food and water.

* Roll call. If there are more than just a few boats in the harbor, have someone make a list of boats and the number of people on board.

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During the hurricane

Only you can make the decision as to whether you should stay on the boat or go ashore. It will depend on the forecast strength of the storm and the availability of hurricane-proof shelter ashore. If you stay on board, here are a few things to keep in mind.

* Once the storm starts you are on your own. No one can help you, and you can't help anyone else. You are responsible for your own safety.

* Wear your life jacket and harness whenever you are not down below, and when you are below keep it where you can grab it instantly. The situation can change in a heartbeat. We used our harnesses even in the cockpit.

* It is wet, windy and cold during a hurricane. Our foul weather gear just didn't keep us dry. We finally put on our wetsuits. Other people wore long pants to protect their knees as they crawled around on deck. Nearly everyone in the fleet used diving masks to see in the driving rain and spray.

* Keep watch; use your radar and GPS. Holing up down below and trying to ignore the storm is foolhardy. Keep watch, both on deck and electronically. As the storm first hits and you stretch out your rode, use the GPS waypoint you recorded when you dropped your anchor to determine whether you are dragging or just stretching out the rode. If you start to drag, you can take action. If another boat appears to be dragging toward you, you can try to maintain clearance by motoring.

* Check chafing gear. Until the storm becomes so violent that you can't go forward, keep checking your chafing gear and reposition or replace it as necessary.

* Bilge pump. As the waves built to four to six feet we took on water though our stoppered hawsepipe. We had to run the bilge pump every hour or so.

* Motoring is really a desperation move, something to do if you are already dragging or to maintain clearance from another boat. We felt that it increased the strain on the ground tackle as slack would develop in the rode and then the bow would fall off hard and stop with a jerk. As winds rose to more than 50 knots, however, many boats ran their engines in neutral so that if they needed to use them, they could do so immediately.

* If you are going aground, try to pick your spot. If it becomes inevitable you probably will have a little steerage as you slide backward. Boats that went into mangroves generally had the least damage.

* Too good, too fast. As the storm hits it is unlikely that you will really know where you are in relation to its center. If the storm seems to die out too quickly for the amount of wind that you had, assume that you are in the eye and get ready for very strong winds from the opposite direction. Use the calm at the eye to quickly fix any major problems but be prepared to abandon those repairs as the first puffs hit.

After the hurricane

* Call roll. As the storm dies down, make sure all boats and people are accounted for and safe.

* Check all your gear and fix things: Another storm could be coming. Even if your ground tackle held well and you had no problems, examine it carefully in the days after the storm.

* Allow sufficient time to raise anchor. If your anchor held through the storm, chances are it is buried deeply. It took most boats two to four hours to raise their anchors after the storm.

* Watch out for floating debris. All sorts of stuff can be in the water. Be sure to check your saltwater strainer frequently on your engine and watermaker. Watermaker prefilters can plug up quickly if there is a lot of mud in the water.

