

Dealing With Heavy Weather

Attitude

- “Heavy Weather is as much a state of Mind as a Physical State”
 - Positive outlook
 - Be proactive, keep your head in the game
 - Stay active, rotate jobs
 - Avoid inertia – don’t hunker down
 - Know your limits

Staying on the boat and seamanship

- Clear communication and teamwork
- Using your harness and jack lines
- Get rest – secure sleeping
- Stay dry and warm
- Gear stowage and retrieval
- Stay hydrated and fed
- No seasickness allowed

Sailing Options

- Every vessel behaves differently and every crew have different competencies
- The waves usually not the wind get boats into trouble
- Reducing sail before you get in trouble – think about the next move and prepare immediately
- Reefing and reef points
- Using preventers and “policing the boom”
- Effective steering techniques provide the greatest advantage
- Effective use of crew weight and windage reduction
- Collision avoidance and staying off the rocks
- Heaving to
 - Too tough to beat to weather, but don’t want to give up ground to leeward
 - Need rest or to conduct repairs
 - Delay arrival
 - 40-50 degrees off the wind
 - Finding the right balance of rudder, wind, and sail configuration
 - Mix of trysail, storm jib (inner or forestay)
 - Not a good option with breaking seas
- Forereaching
 - Beating or close reaching into head seas with storm sails
 - Helmsman heads up to meet each oncoming crest, then bears away down the back of each wave without letting the boat be caught broadside by a breaking wave
 - Need weather helm to be able to head up quickly

- Running off (scudding)
 - Only if adequate sea room
 - Often the easiest with modern hull and rudder designs, allowing for decent speed and control
 - Too much speed is a problem – falling off waves equals rig/structural failure
 - Need good cockpit drainage and solid washboards
 - Bare poles not usually enough to maintain helm control critical
- Lying ahull
 - Last resort
 - Passive
 - Asking for trouble

Storm Sails

- A trysail is a small triangular sail, usually made from heavy Dacron sailcloth, that has a luff length less than 20 percent of the luff length of the mainsail, and a foot length 30 to 40 percent less than the main. It is built with some shape for power, but is bulletproof in construction to withstand high winds.
- Setting the trysail
 - Securing the Mainsail and Boom
 - Sheeting
 - Size of trysail
- Storm jib
 - Inner stay
 - Forestay
 - Rolling reefing issues

Sea Anchors

- A large drag device deployed over the bow of a boat to hold the bow into the wind and the waves...A proper sea anchor will hold the backward drift to under 1 or 2 knots maximum...A sea anchor is used when the boat is disabled or the crew no longer wishes to sail, but would simply like to hold a relatively safe position and attitude with respect to the seas
- Effective when making repairs
- Parachute shaped
- Can reduce drift by 90%
- Deploying sea anchor
 - Secure items on board, lower sails, etc.
 - Head into the weather to "stall" the boat.
 - Toss trip line, float line and Sea Anchor into the water on the WINDWARD side of the boat, followed by the rode.
 - Drift back on the Sea Anchor, paying out the required scope.
 - Make fast the rode and employ chafe gear.
 - Secure the rudder amidships.
 - Secure the boat and get some rest.

- A boat's stability is achievable through three elements of balance. These "Trilibrium Factors" are:
 - 1) Sail trim;
 - 2) Rudder positioning; and
 - 3) Rode length.
- Rode must be "stretchy" nylon and multiple of wave length so anchor and boat simultaneously ride crests and troughs of waves. Usually at least 10x LOA of vessel
- Chafe gear critical
- Backing sail helps hold stern downwind and control yawing
- www.seaanchors.com
- www.sea-anchors.com

Drogues

- A smaller drag-producing device that is deployed over the stern of a boat to slow its forward progress when running downwind and, to some extent, to hold the stern to the seas
- More aggressive braking action than warps
- Adequate speed is slow enough so the boat doesn't surf and fast enough it doesn't take the full impact of a rolling greybeard coming astern causing the vessel to broach
- Speed-limiting Drogues can be of immense value in strong following seas and have been used to stabilize craft since antiquity.
- Towed off the stern with a bridle a speed-limiting Drogue can be used as an emergency steering device to yaw the boat if steering fails.
- Towed off the windward quarter a speed-limiting Drogue can help maintain directional stability while negotiating a dangerous harbor entrance.
- Towed off the stern of a vessel in tow a Drogue can all but eliminate the "whiplash" effect and contribute to better control by the towing vessel

Recommended Reading:

[Surviving the Storm – Coastal and Offshore Tactics](#) by Steve and Linda Dashew