TIPS AND TECHNIQUES FOR SUCCESSFUL ANCHORING

Great Lakes Cruising Club

Don't let anchoring spoil a great day of sailing.
Ken and Carol have sailed full time living aboard for 8 years. They have enjoyed many pleasurable stops in breathtaking anchorages. Learn what anchoring strategies they implement to minimize each other's stress, to maximize restful sleeps on the hook and to stay safe throughout the anchoring process.

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Voyageur Sailing
March 12, 2025

Tips and Techniques for Successful Anchoring

Objective of Seminar

Anchoring with Peace of Mind

We all try to find that perfect anchorage

- **Protection from wind and waves**
- **Good holding**
- **No other boats**
- **Beautiful Scenery**
- **Easy access to shore and amenities**

However, there is a lot of instances where we have to deal with less than idyllic conditions.

1. **Gusting Winds**
2. **Underwater Hazards**
3. **Currents**
4. **Waves or Swell**
5. **Other vessels**

But before we start looking for an anchoring area or the anchoring process we must look at our anchoring equipment and how we utilize it
Using inadequate ground tackle when anchoring can make setting an anchor very difficult and leave you and your vessel at risk while anchored

Anchoring/Docking Equipment

Typically, most cruisers/sailors/boaters don't voyage for more than 4 hours each day, covering 15 to 25 miles
That's 85% of your time is spent at dock or anchored
Even longer-range cruisers spend more than half their time at anchor.
Your equipment should reflect these percentages

Equipment based on type of cruising you are going to be doing.

- Local, known anchorages and conditions, A weekender where weather conditions are known before heading out
- Caribbean Islands with relatively shallow sandy bottoms, with winds in a constant direction
- Higher latitude bays and fiords with deep rocky bottoms, kelp **and variable wind conditions.**

Be Prepared!
However, you must be prepared for the worst
Even the most benign anchorages can get a squall or strong front move through

Anchoring in the Great Lakes area you are subject to frontal lows moving across your cruising area.
As these fronts pass through (especially COLD Fronts) we can be subjected to violent winds shifts and extreme gusts.
Neither of which are friendly to inadequate anchoring gear.

Equipment - Anchor

1. WEIGHT of ANCHOR helps it PENETRATE

Weeds and kelp
Hard Seabed
Resets quicker

2. AREA of BLADES give it HOLDING POWER once dug in

Use largest anchor that your bow roller and windlass will permit
Holding power means less stress which in turn leads to better sleep

Sizing an anchor

Manufacturer's sizing charts

Typically for boats of average windage, size and weight, in 30 knots of wind, good bottom conditions, and moderate protection from open seas.
Wind loads increase exponentially. 40 kts of wind has **twice** the power of 30 kts
For storm conditions use an anchor one or two sizes larger.

Anchor Rode

Rope

Use nylon rope. It stretches and absorbs shock loads (250 - 300 feet)
Subject to chaffing

Rope/Chain Combo:
Having a section of chain (20-50') between the rope and the anchor will:
Improve holding by improving angle of pull
Reduce chance of rope chaffing on seabed

All Chain
No chaffing on seabed or on deck
Improves holding by improving angle of pull along seabed
Must be used in conjunction with a snubber

Anchor Rode - Scope
An anchors holding power is improved by pulling it more parallel to the seabed
Scope is calculated using **water depth + freeboard and expressed as a ratio of Rode length to (Water Depth + Freeboard)**

Typical ratios are
Lunch or short stop 3:1
Overnight 5:1
Heavy Weather (wind, waves) 7:1

Weight of rode can also improve holding power by changing angle that the anchor is pulled at. However, this only applies to winds up to 20 kts. This catenary action only applies to winds less than 20 or so knots. **At this point all anchor rodes are tight**

Chain to Anchor Attachment
Rated shackle – largest that will fit through chain.

Chain to Vessel Attachment
Bitter end of chain should not be attached directly to vessel. Use a length of rope to connect chain to vessel
This can be easily cut in case of emergency
Method of cutting chain and anchor free
May have to dump anchor and chain in an emergency

Equipment - Windlass

Once the weight of the anchor exceeds 25 to 30 pounds you will require either a manual or powered windlass, or have lots of back relief medications

Typically, an electric windlass will operate at 1 foot of rode per second
A manual windlass is much slower

Used to control chain when deploying and retrieving
Powerful enough to lift anchor and all chain in a dead lift
Electrical or Manual
With or without capstan

Windlass Operation
Run engine when operating windlass. Power draw is large and will deplete batteries or trip breaker. Engine will be charging batteries while windlass is operating
Keep body parts (and Hair) away from chain and chain wheel.
Don't use windlass to pull the boat forward when retrieving anchor - Use engine power
When anchor is down, take load off windlass by using a snubber or attaching the rope rode to a strong cleat

Equipment – Snubber

Used when you have an all chain rode

1. Takes load off the windlass
2. Absorbs shock, reducing jerking load on anchor and stops snap load noise at deck
3. Use Nylon Rope (stretches)

Oversized wishbone nylon snubber

- Load is distributed over 2 cleats
- Bow roller sprit assembly is not designed to take side loading
- Larger line will be able to accept more chaffing before failure

Equipment - Chain Stopper

Prevents chain run out when retrieving chain
Second chance at security if snubber gives way

Secondary Anchor
Usually being deployed from a dingy, so it should be light enough to handle.
Fortress anchor)
Used as a stern anchor to keep boat pointed into swell or breast anchor to reduce loading between dock and vessel

Equipment - Shore lines

1. Allow you to hold yourself in a tighter more protected area
2. Use to limit swing room in confined anchorage
3. Long enough to go to shore and back to boat
4. Polypropylene (floating) easy to handle and won't get caught up on seabed when deploying or retrieving.

When outfitting Voyageur 10.10 we did it based on NOT always having those idyllic conditions

Anchoring Equipment & Gear

Anchors – Rocna 55 kg
Rode – 330' 3/8" G40 Chain
Snubbers – 30' wishbone c/w shackle
Windlass – Maxwell 2200 w/ capstan
Chain Stopper
Secondary anchor Fortress F39
Shore lines – 600' + 350'

Successful Execution

Deploying and Setting

1. Locating Your Spot
2. Communication
3. Prepping anchor
4. The actual spot
5. Dropping anchor
6. Setting anchor
7. Staying Safe: Anchor Watch

Preplan Your Anchorage

Look at charts and cruising guides and possible notes from other cruisers
Check weather forecast for changes in wind direction and speed
In Tidal Areas consult tide and current tables

Choose a tentative location in the anchorage where you would like to drop anchor

Protection
Depth
Type of bottom
Hazards
Possible waypoint given in cruising guide.

Mark that location on paper chart and transpose (lat/long) onto chart plotter as a waypoint

Communication

Communication is key throughout the anchoring process
Anchoring can be a stressful situation that is not conducive to effective communication

1. Distance between parties
2. Background Noise – Engine, Wind
3. No or little visual between parties
4. Pre-occupation
5. Stress

Improve Communication When Anchoring
Close the GAP between parties

1. Go forward and prepare anchor as you enter the anchorage (water is calm)
2. Return to your crew in the cockpit
3. JOINTLY work out a plan, maneuver the vessel to the agreed upon anchoring spot
4. GO FORWARD to drop anchor when vessel is almost stopped. Open clutch – anchor freefalls
5. Helmsperson goes into reverse as soon as anchor is released
6. Foredeck crew pays out rode as boat reverses, lock off clutch at predetermined length, and anchor sets

Note on Headsets
Headsets help overcome many of the issues of effective communication and work well. However, the two parties are working from, analyzing and making decisions based on different information
Leading to Confusion
The Bow Person will be much more useful in the cockpit until the anchor drop.
Helping monitor Depth, Charts, Radar and Vessels

Communication

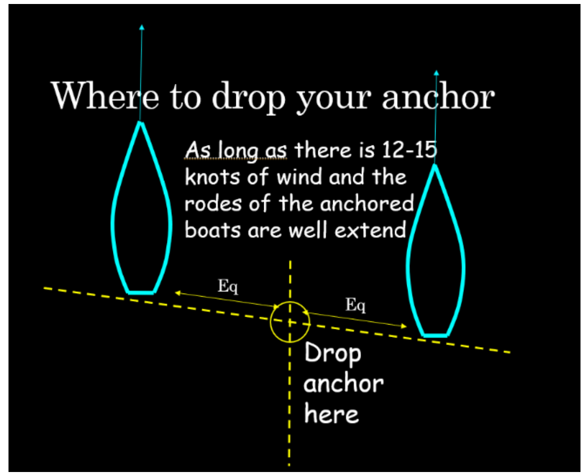
Reconnaissance Pass
If anchorage is Busy or Unfamiliar?
With the anchor ready to drop and the two of you in the cockpit

1. Complete a reconnaissance pass through the anchorage
2. Return to safe water
3. Communicate a plan to the crew
4. Execute the plan with little additional communication required.

Reconnaissance Pass to check

1. Depth of Water
2. Spacing Between Vessels – Swing Room
3. Wind Direction and Strength
4. Hazards
5. Swell direction and Size
6. Signs of Current
7. Type of Vessels
8. Types of Rode on those vessels

Where to drop your anchor



Medium to strong winds Swing radius can overlap
As long as there is consistent 12-15 knots of wind and the rodes of the anchored boats are well extend

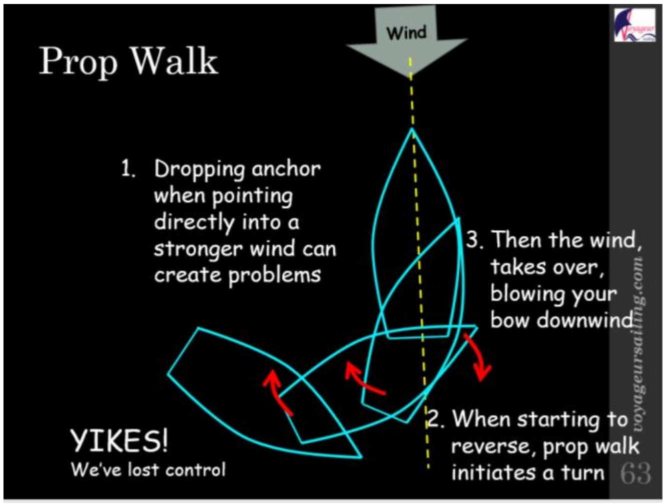
Light winds can be tricky
Light winds or if expecting light wind you cannot have any overlapping of swing radius
Caution in light winds, as anchors of existing vessels could be anywhere
Give much more distance to these boats when dropping anchor

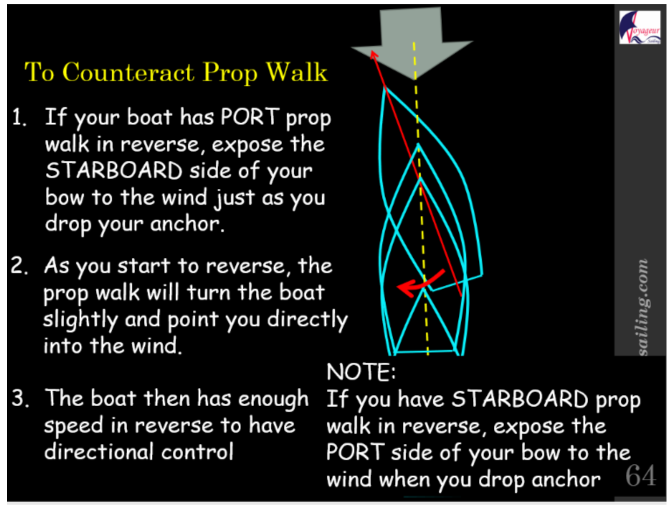
Dropping the anchor

Using the Down Button
Windlass lowers the anchor at about 1 foot per second.
This means the helmsperson must hold the vessel stopped and pointed into the wind for at least 20 seconds and as long as a minute
If you start moving in reverse before anchor is on bottom, it won't be where you planned. Chain is being deployed at 1'/sec – vessel is reversing at 1.5 knots (2'/sec)
Once anchor is on bottom you are also reversing faster than the rode is deploying.
Anchor is just being dragged along the bottom until enough scope is out
Your vessel will not end up where you intended it to be!

Dropping the anchor
Opening Clutch
Opening the clutch on the windlass and letting the anchor free fall, gets it to the bottom quickly, placing it exactly where you intend it to be.
However, you must Power the boat in Reverse immediately, so the chain doesn't pile up on itself causing the anchor to become snagged or entangled.

Counteract the effects of prop walk when reversing





Anchor not Setting?

An anchor's ability to set is improved by pulling it more parallel to the seabed

In a tight anchorage you may only be able to have a smaller scope than normal

Set your anchor with a larger scope then shorten the scope to the appropriate length

Anchor Watch

As Anchorage conditions change, we must become more alert, and an anchor watch is required

1. Chart plotter running to check for dragging
2. Checking snubber for chaffing frequently
3. Lifejackets at hand for going to foredeck
4. Engine battery on and ready to start
5. Windlass battery on

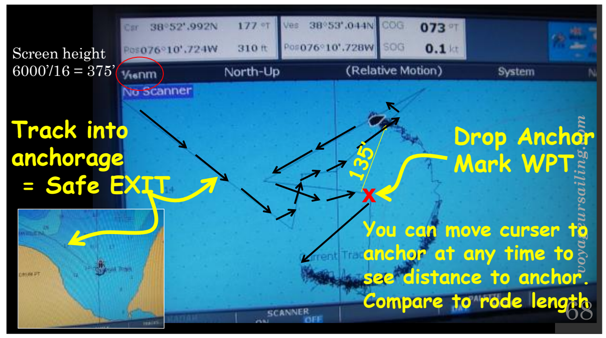
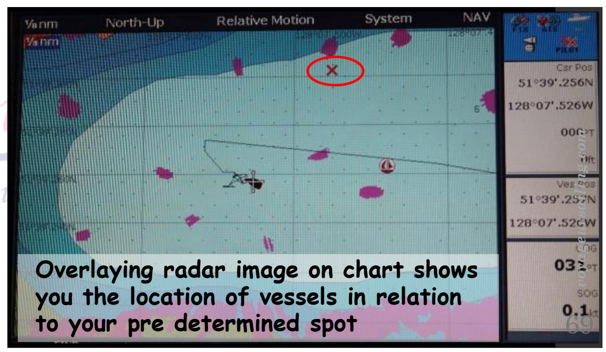


Chart Plotter for anchor watch

Place a waypoint on your chart plotter when you drop your anchor. This will mark your anchor's approximate location

Use the tracking function while at anchor to monitor movement of boat in relation to your anchor. You can easily measure distance from boat to anchor using the curser

Radar for Anchorages



Overlaying radar image on chart shows you the location of vessels in relation to your predetermined spot

Distances from shore or hazards

Distance to other vessels

Successful Execution

Weighing Anchor

1. Planning exit strategy
2. Weighing anchor
3. Transition of control
4. Responsibilities of crew once anchor is weighed
5. Setting sail or powering away

Exit Plan

Before any crew go forward, have a "huddle" in the cockpit to discuss the exit plan including safe course out when underway

Will the helmsperson have to assist the process of recovery by powering the boat forward?

1. Strength of wind or current
2. Wave action
3. Approximate location of anchor: align with a landmark making it easier for helmsperson to direct boat during recovery
4. Spacing of other vessels
5. Discuss water depths and location of hazards
6. Review hand signals to be used

   Directions, Forward, Reverse, Neutral, Anchor off bottom

Bow person goes forward/crew should be focused on them as…

Bow person is in control while the anchor is attached to bottom

Once you are ready, Signal to helmsperson and crew that you are starting to raise the anchor

You may have to signal the helmsperson to power the boat forward to take the strain of the anchor rode.

This operation is being directed by the bow person

Direct the helmsperson as to steer toward the anchor

This is easier if you have picked out a landform or another vessel that is in the direction of where the anchor is set.

Use hand signals for

- Forward
- Direction
- Neutral

Don't drive the boat faster than the rode is being retrieved. Anchor rode is being retrieved at 1'/sec which equals $\frac{3}{4}$ knot

Transferring control!

The moment that the anchor breaks free of the bottom, the bow person is no longer in control.
Control of the operation is purposefully transferred to the helmsperson with a hand signal while making eye contact to ensure the message has been received
Helmsperson is now in Control
The helmsperson's job is to keep the vessel free of danger while the bow person finishes raising the anchor, then secures it and related gear.
This does not mean the boat is to be driven out of the anchorage at 5 knots.
Helmsperson must keep boat slow and free of danger while the bow person finishes raising the anchor, then secures it and related gear.

Once bow person is back in cockpit the vessel can be maneuvered to a more open area to raise your mainsail or power away on the predetermined safe course

Closing Tips
Having the right equipment is critical to the success of any operation
Communication with crew is key when you Drop and Weigh Anchor
Use of chart plotters & radar overlays when anchoring and for Anchor Watch
Stress levels can be high - remain calm throughout the operation

Wishing you restful nights in peaceful anchorages with the comfort of Knowing Your Vessel is Secured

Thank You for Attending!

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Upcoming on-line Seminars by Voyageur Sailing
All seminars are relevant to both sail and power boaters

Marine Weather (Full Day Seminar) Saturday, March 22, 2025

The objective of this seminar is to provide you with the knowledge, tools and thinking for independent decision-making on marine weather forecasting, route planning and heavy weather avoidance.
The GOAL = Marine weather self- reliance
This seminar will be presented live via ZOOM

Passage Making (Full day Seminar) Sunday, March 23, 2025

This course will cover a variety of topics crucial to planning, preparing and executing your Passages (Sail and Power). Included in the seminar will be: The psychology of passage making, Vessel Design, Equipment requirements, Passage planning, Passage preparation and plan execution.
This seminar is presented live via ZOOM

Tips and Techniques for Successful Anchoring (3 ½ hour version)

Wednesday March 26 @ 1930 EDT live via ZOOM

This seminar is similar to the one that has just been presented, However, some topics are covered more in depth and many other anchoring related topics are added, such as.
Preplanning References, Anchoring in Tidal Waters, Trip Lines, Anchor Buoys, Secondary Anchors, Setting Shore lines, Anchoring under sail.

Tides and Currents (3 ½ hours)

Wednesday April 2 @ 1930 EDT live via ZOOM

Vessel operators in coastal waters need to be very mindful of the effect of tides and tidal currents caused by the gravitational pull of the sun and moon.
Water levels can fluctuate by several meters and some tidal currents are strong enough that pleasure craft may not be able to make headway against the current.
This course will guide you to develop a complete understanding of Tides and Currents, enabling you to make navigational decisions that will enhance safety on your vessel.

All Seminar details @

https://www.voyageursailing.com/live-stream-seminars

OR Contact Ken for more information or to Register for any of these courses