

## Missionary Sailing School

*“I learned to sail forty years ago in the little two man sailboats that were used in Alaska’s Bristol Bay salmon fishery...I survived five seasons in those little boats because I learned not to fall overboard. Don’t smile. It’s a learned skill, like the skills city children learn as they play in and around urban traffic...Not all of them survive, but most do.”*

[Denton Moore, Gentlemen Never Sail To Weather]

Lin and Larry Pardey, accomplished world cruisers in the small boat seen in the following videos, have written many books and articles on seamanship. Consider their well-experienced comments here:

**Video:** “Don’t take your landsmen’s eyes to sea”

<http://www.youtube.com/watch?v=0Eokw7jVPC8&feature=related>

*“People need a new set of skills to survive at sea”*

- Paul Steed, a personal letter

**Video:** “How do you know when you’re ready for your first offshore passage?”

<http://www.youtube.com/watch?v=q2IW6JG-fkI&feature=related>

## **Lesson 8: Downwind Sailing & Anchoring**

### **1. Downwind sailing – the gentlemen’s way**

In the previous lesson we discussed **running** [sailing with the wind coming over the stern - the preferred point-of-sail for long range cruising.] Here are a few suggestions to improve efficiency under sail, increasing speed and comfort:

- Tie a **preventer** to the main boom to keep it from ‘flopping’ as the boat is prone to roll when waves are on the stern. [However, use caution not to cause the sail to become too taut, losing its ability to ‘bag’ the wind]
- Since the headsail will become ‘blocked’ by the main you have two options for keeping it ‘in service’:

<sup>1</sup> Instead of sailing directly downwind, change your heading to sail on a **broad reach**, thus filling both sails. [You will, of course, have to **gybe** every so often to maintain your desired course. But, depending on the distance, probably only a few times during the day.] The

net result will be a faster, more 'stable' ride [less rolling because the waves come up on the *stern quarter* instead of from directly behind...more about this later in "Waves and Wind".] You will likely accomplish your journey in the same amount of time but with more comfort.

<sup>2</sup> Sail *wing-in-wing*, where the jib or **genoa** sail is flown on the side opposite of the main. Watch this 3 minute *video* of two boats sailing wing in wing. [Though the film is a little long it does give you a feel of the 'tempo' of sailing]

<http://www.youtube.com/watch?v=QZadjhHANCk&feature=related>

This next short *video* of a light air day shows how the jib can have difficulty maintaining shape. One solution for this problem could have been for the boat to 'head up' a little [more of a broad reach, but leaving the jib still wing-in-wing] which would've also eliminated some of the rocking motion of the boat seen in the video:

<http://www.youtube.com/watch?v=JkL8jMCeUrK&feature=related>

Another solution for keeping the jib under control is the use of a *whisker pole*. The following *video* shows one being used [note also the comment about sea conditions]:

<http://www.youtube.com/watch?v=tA8xn489f98&feature=related>

(Did you notice how steady the boat seemed even with seas running eight or more feet? Keeping the seas 'behind the beam' helps!)

Not all boats are set up with a whisker pole, but one would be quite useful for long range sailing. This next *video* is actually an advertisement for a particular make of whisker pole but very helpful in knowing how one is used [save this 5 min. film for later viewing]:

<http://www.youtube.com/watch?v=uXjlnF88Frw&feature=related>

• A third suggestion for downwind sailing is the use of a *spinnaker*. This is a large, balloon-like sail made of very light but strong material. There are two kinds: symmetrical [as appears in photo to right and first one below] and assymetrical [shaped more like a very large **genoa** - second photo below]



A **spinker** is an added sail on most boats [not standard inventory] but a real assist for downwind sailing and should be considered for cruising. Watch this short **video**: <http://www.youtube.com/watch?v=38Z9N748JmA&feature=related>

Also, this next **video** will give you a good introduction to the relative ease of using a **spinker**, provided you are properly set-up and know what you are doing. [You may wish to view this 6 min. video later]

<http://www.youtube.com/watch?v=CL3QzOusquE&NR=1>

Caution: this is a large sail and things can get out of hand (even dangerous) if you are not prepared to quickly douse the sail, especially if you are not attentive to changes in conditions around you (i.e. the weather) Don't get caught with too much sail up!!!

## **2. Anchoring**

Since marinas are expensive and often not to be found in many of the places you may sail to, knowing how to anchor your boat is an essential skill. It is unfortunate that many who go cruising have to learn the hard way (and sometimes not without damage to their egos, if not also to their boats!) By following some simple rules and taking care to check and re-check your anchor's hold, you will find that a restful end of a long day's sail will always await you. By all means, don't practice anchoring Captain Ron's way (as seen in this **video**):

[http://www.youtube.com/watch?v=Sut9V7\\_ZIwE&NR=1](http://www.youtube.com/watch?v=Sut9V7_ZIwE&NR=1)

Obviously, rule no.1 in anchoring is: "Be sure the anchor line is attached to something before releasing the anchor overboard." (The other 'rules' are just as common sense but believe me, in a blustery storm mistakes like this do happen...I did it twice!)

Let's begin our discussion on anchoring with these two general information **videos**:

[http://www.youtube.com/watch?v=Iv3\\_8a7N\\_aE&feature=related](http://www.youtube.com/watch?v=Iv3_8a7N_aE&feature=related)

[http://www.youtube.com/watch?v=tK\\_d6wYEsP4&feature=related](http://www.youtube.com/watch?v=tK_d6wYEsP4&feature=related)

Now go to this **webpage** and we will cover each point there one at a time, reading each section on the webpage then its respective section in the following notes [stop at '**How To Anchor**'...we'll cover that next]:

<http://www.gosailing.info/Anchoring.htm>

- **Depth**: The suggestion about anchoring in "10 to 15 feet" is not actually necessary, but two things are: never risk the possibility that somewhere within the swinging

radius of your anchored position there may be a shallow hazard (such as a coral patch, sunken debris, or anything else that might strike your keel), and know what state the tide is now and will be (in other words, you may be just floating now but will you also be at low tide?)

Though the comment about anchoring in over 15 feet is a good one, you will also need to be prepared for much deeper conditions (30 or even 40ft) in many parts of the Caribbean where the 'bottom' drops off rapidly or where the shallower waters near shore are covered in rocky coral patches not suitable for anchoring. Having anchor line of 200-300 ft can be very important for long range cruising.

- **Bottom Conditions and Anchor Choice:** As a rule, you can never have enough anchors [they can get 'lost', and you certainly would be safer to have extras in a major storm.] But anchors take up room and add weight. Use wisdom in your choices but never 'go cheap' on something that may save your boat some day!!

- **Wind Direction:** Usually wind will settle down during the night and even change direction as land nearby cools faster than sea. A current running through the anchorage may not have been noticeable while the winds were 'up' but can create havoc later on, especially when other boats are anchored nearby. In the Bahamas (where currents race through the cuts between islands) two anchors are often used, called the 'Bahamian moor'. We will discuss this 2-anchor method a little later.

- **Sheltered Anchor Location:** The webpage suggests that - "If conditions change, you may have to change your location." What is not mentioned here is the importance of checking your weather forecast before settling in on your chosen anchorage. In the Tropics, getting caught in a 'bottleneck harbor', should a cold front or tropical system turn the wind and seas against you, can become a dangerous situation. On several occasions I have been a part of rescue efforts for sailors stranded in such cases.

- **Anchor Swing:** As you enter a crowded harbor and make your way among the anchored boats in search of your 'parking spot' notice whether your new 'neighbors' are on one or two anchors (the latter very common in the Bahamas.) It is best to "do as the others do" so there are no collisions during the night. However, as you become more experienced you will learn to make that decision based on many considerations. [My having a shallow drafted multi-hull allows me to anchor well clear of others most of the time.]

- **Tidal Range:** If you anchor at high tide and have set your anchor(s) to be clear of other boats (even when your boat swings on the ‘hook’) remember that the radius of your swing will increase at low tide [even considerably if there is a great change in the tide!]

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Before continuing on the webpage watch these two computer generated *videos*:

<http://www.youtube.com/watch?v=8MwEW93RRtc>

[http://www.youtube.com/watch?v=iUtbYiZ1KqI&feature=mfu\\_in\\_order&playnext=1&videos=NRg5-IJPJhE](http://www.youtube.com/watch?v=iUtbYiZ1KqI&feature=mfu_in_order&playnext=1&videos=NRg5-IJPJhE)

Now read entirely the webpage section **“How To Anchor”**

**My Anchoring Tips** (things I’ve learned that may help):

- If the anchor does not ‘get a hold’, bring it to the surface and inspect it before trying to reset. There may be stone, grass, or other debris that has *fouled* the anchor and needs to be removed first (especially if you are using a Danforth type.) Also, if too much line or chain was lowered along with the anchor before your vessel began to ‘pull’ away, some of that line could have gotten wrapped around the anchor causing it to ‘fail’.

- Be certain that you have chosen a spot to place the anchor that is clear and acceptable. The most ideal is white sand (easy to see in clear tropical waters.) But sometimes an area may seem sandy and ok when actually there is only a thin layer of sand covering solid coral stone. You can usually tell the type of ‘bottom’ if you keep a light grip on the anchor rode while the boat begins *backing down* [moving slowly astern]. A rocky bottom will cause the anchor to ‘skip’ along, catching only briefly then skipping some more. A grassy bottom will feel like a dull tug but never really ‘grabbing.’

- You can check for *anchor drag* by using their suggestion of sighting on objects on shore [sighting on other boats doesn’t really help since they will ‘swing’ on their anchors and seem to change positions] You can also use the **anchor watch** feature on your GPS [read the manual !]

- If you are using an all-chain-rode (or there is a possibility of strong winds) use a *snubbing line* as suggested in the text. It is always preferred to use this short, sacrificial line to take the strain at the bow where **chafing** can occur and thus save your valuable rode [In the case of chain: since chain does not ‘stretch’ and thereby ‘absorb’ some of the jerking that can occur from wind and waves, using a rope snubber (some people use a ‘bungie’ type cord) will make for a more ‘peaceful’ ride]

- Once the anchor is placed, it is a good practice to view it to ensure a good 'set'. The best way is to *dive the anchor* [actually go into the water with mask and fins], the popular way in warm tropical waters [also refreshing after a long day's sail.] Another solution is to have a 'glass bottomed bucket' by which to check the anchor from the dinghy. Not hard to make: just cut the bottom off a plastic 2 or 5 gallon bucket and caulk a piece of plexiglass into place [use 3M's 5200 caulking – available at all marine stores.] Don't bother with the inflatable 'viewers' sold at the boat stores - not dependable or clear!

### **Two other anchoring techniques:**

Open this [webpage](#) and scroll to the bottom to the section on “**Anchoring**” [return here later and read these good notes on docking as well]:

<http://www.cruising.sailingcourse.com/docking.htm>

• “**Using Two Anchors**”: Read the notes in this section, then click on the illustration [to the right] to animate it.

#### **My comments:**

- If the anchors are positioned right they should each be about 45° angles to the bow [see illustration.] Any further apart will put too much strain on the **shank** of the anchors.

- When current may turn you away from the wind you can choose to anchor 'bow and stern' [meaning one anchor led forward from the bow, the other going aft attached to the stern] Since most hatches for ventilation face forward, it is preferred to keep the bow into the wind so a breeze comes in for comfort all night. You can do this by using a bow and stern anchor. This method is also helpful when anchoring in a narrow channel and you need to prevent your boat from 'swinging' into trouble. However, always lead the rest of the line to the bow (after cleating on the stern) so that, when necessary, it can be quickly released from the stern to become part of your bow configuration [very important in case of a sudden change of conditions where you might find yourself laying sideways to a strong wind, placing considerable stress on boat and anchors.]

- A common way of anchoring in the Bahamas, where currents are often contrary to wind direction, is to have one anchor 'up current' and the other 'down current' [180° to each other - essentially 'fore and aft' - but both attached at the bow.] This is called, appropriately, the *Bahamian moor*.

The following **webpage** provides good comments and illustrations on anchoring with two anchors (including the Bahamian moor):

[http://www.advantageboating.ca/waterways/issues/ww\\_00-spring/technique\\_anchor.html](http://www.advantageboating.ca/waterways/issues/ww_00-spring/technique_anchor.html)

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**Further comments can be found in this suggested reading:**

<http://www.sailnet.com/forums/miscellaneous/25495-better-bahamian-moor.html>

<http://ezinearticles.com/?Anchoring-With-Two-Anchors---The-Bahamian-Moor&id=2950531>

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Now, return again to this **webpage**:

<http://www.cruising.sailingcourse.com/docking.htm>

and scroll once more to the bottom of the page.

- **“Mediterranean Mooring”:**

Read this brief section and again click on the image to animate the illustration.

This form of ‘docking’ is common where dock space is at a premium. In many Central American marinas there will be a **mooring ball** positioned out from the dock having a line which you attach to your bow (saving you from having to drop an anchor.) Then your stern is backed to the dock to be tied there, usually by crossing your stern lines [“x” style] to control sideways movement.

This method is also necessary in some anchorages in the Caribbean (as well as the U.S.) where the water is deep right up to the shore and a line from the stern is tied to a tree! In this case the anchor is virtually ‘stuck’ into the side of a steep slope rather than ‘set’ into a mostly flat bottom (as in usual anchoring.)

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**Finally**, watch this 4 min. **video** [again featuring Larry Pardey, world cruiser, seen during our opening videos.] In this video he first discusses his **hard dink** [short for ‘hard-bottom dinghy’.] A strong, versatile dinghy is essential for cruising. Many boats carry both, an inflatable and a ‘rigid’. Then he describes **kedging** [carrying out an anchor by dinghy], a reliable way for setting a second anchor, but also necessary should you run **aground**.

<http://www.youtube.com/watch?v=3a-uvTu84YQ&feature=related>