Anchoring in Puget Sound

Good anchoring skills open up your cruising possibilities and provide a good night's sleep.

Anchoring, along with things like docking and heavy winds, can make sailors nervous, and rightfully so. If not done properly anchoring can lead to some very unpleasant situations; I know this because I have experienced and witnessed such things. For example, when I was young (many years ago), we dragged anchor and ended up with the keel bouncing on the beach. We were very fortunate in that it was a quiet night and the beach was not rocky, so we were able to motor off and sustained no damage; however, dragging anchor during the night seldom turns out this well. On the flip side, when anchoring is done correctly there are seldom problems. So, what does it take to anchor properly? There are basically four elements:

- **Equipment** – There are two parts to the equipment, ground tackle (anchor and rode) and the boat side items needed to handle the ground tackle (windlass, bow roller, cleat, etc.).
- **Conditions** – What are the tide, current, wind and waves likely to do while you are anchored?
- **Location** – Anchorages should provide good protection from wind and waves, good holding (bottom conditions) and have a workable water depth. Also, you will need to know the position and anchoring methods of other boats in the area.
- **Technique** – The skill needed to choose a good location and setup your equipment to best handle the expected conditions.

Many good resources discuss anchoring in depth, *Chapman's* and *The Annapolis Book of Seamanship*, just to mention two. I don't have space here to do an expansive discussion, so if you want to really understand this subject, do some research online or hit the books. My goal in this article is to provide the basic knowledge needed to anchor safely in Puget Sound waters during a summer cruise. Therefore, I will not be covering techniques for anchoring in a storm, stern ties, etc. With this in mind, let's go into more depth on the four elements listed above.

Danforth anchor

EQUIPMENT

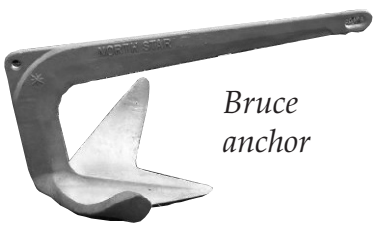
From purely a performance point of view, the anchor and the rode (rode is all the parts between the anchor and the boat, including shackles, chain, line, etc.) are the most important. The anchor needs to be sized properly and be designed to work well in this area's muddy bottoms, which are sometimes covered in seaweed. My personal favorites are the Danforth style and CQR. I know many people swear by their Bruce anchors, but I have found them difficult to set when seaweed is present. Any of the plow type anchors should be sized such that the anchor weighs more than the boat is long. If your boat is heavy, or has lots of windage, go up a size higher yet.

The rode (the line and chain connecting the anchor to the boat) should consist of either all chain or a chain and Nylon line combination. If you use combination rode, the chain should be at least as long as your boat length and double that is better.

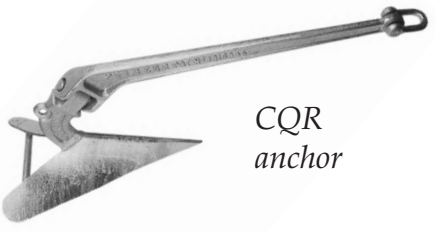
For total length of rode, I would recommend at least 200' (allows 7 to 1 scope in 30 feet of water) but 300' is even better if you have the ability to carry it. Plus, a backup anchor and rode set are good to have in case the primary fails (or is lost) and for use as a stern anchor. For this purpose the Fortress anchor is very popular, the two main reasons are its lightweight and ability to lay flat (making it easier to store in a locker). The boat side equipment is less critical to holding power but there needs to be, at the least, a good solid cleat where the rode can be secured. A windlass is not required unless your ground tackle is too hefty to be hauled by hand. If you have all chain rode you will also need a snubber line.

CONDITIONS

Before choosing where to anchor for the night it is important to listen to the weather report for your area. Are strong winds expected, and if so, from which direction? You should also know the current, the tide height and how much it will rise and fall during your stay. This does not have to be exact, plus or minus a foot is fine.



Bruce anchor



CQR anchor

LOCATION

Several factors go into selecting a proper anchorage:

- Protection – If winds are going to be a factor during the night (anything over 15 knots) it is a good idea to anchor where there is protection from the wind and the waves it will generate.
- Water Depth – The water needs to be deep enough so you're still floating at low tide and this minimum depth needs to be maintained throughout the area of your swing. The anchorage should also be shallow enough so your scope is not too steep (more on scope in the techniques section).
- Swing Room – There needs to be an open spot where you will not swing into other boats, the shore or rocks; generally a hole about 100 to 150 yards in diameter works well.
- Holding – What is the bottom like? Most of the anchorages in this area have mud bottoms which provide good holding, but, at depths shallower than 25 feet, they can be covered with seaweed. Also be wary of rocky bottoms (it is easy to get your anchor stuck and/or difficult to get a good set) and gravel (the holding is not great).
- Current – Is there going to be any appreciable current during your stay?
- Neighborhood – Look around at the boats near your proposed spot to see if their temperament matches yours; is there a party going on, do they have children onboard, is there a generator running, etc? Also, be considerate of others; if your planned activities will be noisy, anchor downwind and out further.

TECHNIQUE

Probably the easiest way to relate anchoring technique is to walk through a typical anchoring:

The process should start before you get to your destination by listening to the weather and looking up tide and current information. This tells you which side of the anchorage to favor; for example if the winds are predicted to be southerlies anchor near the south shore for better protection. And, of course, knowing the tides indicates the depth of water needed.

Knowing the predicted winds and tides is also necessary in order to calculate the scope. *Scope is defined as the ratio of the total amount of rode played out divided by the distance from the anchor position on the bottom to the bow roller.* For example, if you had 120 feet of rode out and the water was 26 feet deep and your bow roller was 4 feet above the water your scope would be 120 divided by 30 or 4:1.

Most of the books recommend a ratio of 7:1, but in our crowded, local anchorages with good holding and normally mild conditions, 4:1 is more the standard. But, if the conditions worsen, be sure to let out more scope. Once the needed scope ratio has been determined you can calculate the amount of rode to play out; here is my basic formula:

Current water depth + Expected increase in tide + Height of bow roller) X Scope ratio = rode needed.

For example, in 26 feet of water with a 6 foot tide, 4 foot high bow and a scope of 4 to 1:

(26 + 6 + 4 = 36 ft) X 4 = 144 ft of rode.

The next challenge is to find a spot to anchor, taking into account all the items listed above under Location.

I look for a location that meets the first four items; if it fails any of these it is disqualified. In other words, at a minimum a location needs to provide sufficient depth, protection, swing room and holding. Once you have a spot picked out, circle it at about the same diameter as your swing circle to check the bottom for depth. If you are in an area you are unfamiliar with, do this very slowly, watching the depth sounder and with someone watching on the bow.

Once you are satisfied with the location, approach from downwind and bring the boat to a stop where you want to drop the anchor. Start to lower the anchor until it is near the bottom and then put the boat in reverse, slowly; the idea being to lay the anchor rode down on the bottom in a straight line, do not drop it all in a big pile.

When you have played out all the rode, secure it with a snubber for absorbing shock (if it is chain) or cleat off a line rode. If you have used a windlass to deploy chain rode, let out a few extra feet so it hangs "lazy" between the windlass and the snubber: This assures that the full force of the anchor is on the snubber and not on the windlass. Then continue to operate the engine in reverse, again slowly. If the boat has a powerful engine just bump into and out of reverse. The idea is to bring the rode taut but do so gently. This allows the anchor to set itself (having too much speed in reverse will likely pull the anchor out before it can dig in). Once the rode is taut, check to be sure the anchor is holding by lining up something beside you (say another boat) with the shore; it should come to a stop. Another way to see if the anchor is set is to watch the rode and be sure it draws tight; if it bounces or wiggles the anchor is bouncing along the bottom and not set.

Once the anchor is set, it is a good idea to dig it in a bit further and test the set by increasing the RPMs in reverse (on a sailboat around 1000 RPM, maybe 1200 on a smaller boat). The idea here is not to yank on the anchor but to give it a steady and firm pull, similar to what a strong wind would do. Assuming it holds, the anchoring process is complete and you can shutdown the engine, turn on the anchor light and light the BBQ.

There is one other item worth mentioning and that's anchoring etiquette. Anchoring is a first come, first served affair; in other words, boats already anchored have the right to expect free and clear swing room. So, if I have a question as to where someone's anchor is I will frequently pull up and ask. I usually then relate what I am thinking of doing and ask if they see any issues.

Once anchoring is mastered it really becomes quite straight forward. Admittedly, it takes some patience, as in you may need to re-anchor two or three times before you are satisfied, but it is possible to get a good night's sleep while on the hook.

48° N

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