



Intracoastal Waterway, USA.

## Don't be a stick-in-the-mud!

Techniques for re-floating your boat

from

**Salty John**

Few people would admit to being an authority on running aground, but I don't mind doing so. In my defence I can point to the many miles I have travelled in shallow water with a deep draft, and to my tendency to be both adventurous and optimistic when it comes to exploring off the beaten path. Although I first ran aground in Scotland many years ago, it was in traversing the Intracoastal Waterway in the USA that I perfected my art. Eight trips on the 1200 miles of the East Coast Intracoastal dragging 6' of keel under me meant groundings were almost inevitable. Chesapeake Bay, with an average depth of less than two fathoms, provided plenty of opportunity for me to take to the mud and even the Vaal Dam in South Africa has felt my keel. I have run aground several times in the Bahamas; once it was a bizarre situation on the Great Bahama Bank in which I was out of sight of land but had my keel buried in the sand.

If that was the strangest grounding then the most damaging was the time I hit the spoil bank on one side of the Houston Ship Channel in Texas. There are few opportunities to cross the spoil banks which line the edges of the channel and I was feeling quite pleased with myself for having found the gaps and crossed in front of a supertanker steaming up to Houston. I reckoned without his wake, however: The tsunami being pushed ahead of the tanker picked the boat up and dropped it into the shallow water behind the wave. We hit the bottom with spine-compressing impact; like being dropped from a boat lift onto a concrete dock. It was unfortunate that at this time I was sailing a fin-keeled light displacement French design and, although I appeared to have survived unscathed at the time, I subsequently discovered that the hull had cracked alongside the keel. The first clue was a steady trickle of water into the bilge which could be seen to accelerate when the saloon table pedestal was wiggled. Happily, this is the only damage I have sustained in all my groundings.

The first advice I can give, therefore, is: Have a boat that can take the ground safely. A full keel, heavy displacement cruiser, of the type I owned before and after the ill-fated French racer, will stand up to terrible punishment. I'm not suggesting that your choice of boat should be based on performance on land rather than sea, but it is a consideration if you intend to dry out, deliberately or not.

When you run aground it takes a few seconds to comprehend what is going on; the boat grinds to a halt for no discernable reason; the rig might judder alarmingly; the skipper and crew lunge forward as if on a train that has hit the buffers; the dinghy, if towed, crashes into your transom and, if the engine is running, gets its painter tangled around the prop. My advice is: As soon as you realize you are aground – STOP! Put the engine into reverse. If sailing, slip the sheets to kill the drive. Do not gamble that if you continue forwards you will ride over the obstruction into deep water again. This NEVER happens. The only direction in which you can confidently predict there is deep water is that from which you have come. There may, in fact, be deep water ahead of you, or on one side or the other, but at this point in the development of the grounding you have no idea where the deeper water lies, or you wouldn't have gone aground in the first place. A long boat hook or lead line will help you seek alternative sources of deep water later, but at this point you know only that there is some in the direction from which you have arrived on the putty.

So, my first action, if I am motoring, is to go into reverse gear and try to back off. This is frequently successful. If you are towing your dinghy the chances of success are diminished because you have to factor in the possibility of getting the painter around the prop. If you want to tow your dinghy, do it on a floating polypropylene line or a buoyed line. Without the danger of the prop getting fouled by the dinghy painter you can give it some welly in reverse and save the day. It sometimes helps to steer the boat from side to side to release the keel if it is imbedded in mud. Be careful if your rudder is not fully supported because it is now that it is most vulnerable to damage.

Ok, let's say you have driven on hard and no amount of reversing will get the boat loose. The next course of action is damage limitation. You must stop the situation from getting worse. It is particularly important to act quickly if the wind or current are driving you further into shallow water. Get an anchor out towards deeper water, and this is where the dinghy you were towing comes into its own. If you don't have a dinghy you can try swimming an anchor out, but it is rarely successful. I've tried supporting the anchor on floatation cushions and swimming it out but this is futile because the weight of the chain you are dragging behind simply stops your progress when you have gone a depressingly short distance. (If you are an Olympic hammer thrower you could try tossing the anchor, otherwise don't even think about it). Without being able to deploy sufficient rode to give at least three to one scope the whole exercise is doomed to failure. A call for help at this point would be prudent; if you have run aground on a high spring tide with an onshore wind it might be months before you can refloat her yourself!

A happier situation would be that you have run aground on a rising tide in which case, as long as you can stop the boat being driven further on as the tide rises, it is just a question of waiting.

If the tide is falling you can do nothing about it, unless you have more influential friends than I do, but you can mitigate the effect. If there is a preferable direction for the boat to lay – keel towards incoming waves, perhaps, now would be the time to take action.

Once you are happy that the boat is as secure as it can be in the event that you fail to refloat her in the short term, you can redouble your efforts to get her free. To assist the towing or motoring off process you can try to reduce the draft of the boat by heeling it one way or the other.

I have had some success with heeling but it isn't as easy as it might seem in theory. A heavy displacement boat is unimpressed by the crew simply standing on one side deck, unless you are taking the local rugby team for a sail. You need leverage and that means getting something heavy out on the end of the boom. Best would be a fit, agile, heavy and, preferably, willing crew member. I've never had one of these to hand so have usually undertaken the task myself.

Another recommended technique is to tie the dinghy to the end of the boom, fill it with water and then try to lift it with the topping lift or with a halyard taken to the boom end. This should allow you to significantly heel the boat.

Bilge keel boats and some wing keel boats cannot be freed by heeling sideways because their draft increases when this is done. Such boats must be forced down at the bow to reduce draft and the best way to achieve this is by having the entire crew stand on the foredeck.

With the boat heeled and the draft reduced, motor or tow the boat towards deeper water.

A very effective heeling method is the masthead tow. In this process the rescuing boat, hopefully operated by someone who knows what they doing, takes your halyard and heels the boat. One variation of this system is that the rescue boat, or a crew member in your own dinghy, provides only the heeling motion and the stranded boat provides the motive power to move off into deep water. Another variation, where the stranded boat cannot provide motive power, is that the rescuing boat takes lines from bow and stern of the stranded vessel and very carefully pulls in the appropriate direction whilst heeling the boat with the halyard. My first experience with this method was on the Neuse River in North Carolina and it turned out to be the most frightening experience of my sailing life to that point. I had called for help after I'd been forced to shut down the engine when the raw water intake strainer had become clogged by all the mud and debris churned up by my attempts to save myself. A skiff with a powerful motor was despatched from a local marina. We were working against the time constraint of a

rapidly falling tide and this seemed to pressure the rescuer into ill-considered action. The rescuing boat had my halyard and we were heeled to the point where the rail was submerged and water was sloshing into the cockpit. This made it difficult and tediously slow to prepare bow and stern lines. Probably fearing he would miss cocktail time at the marina our rescuer decided to just drag us sideways by the masthead halyard rather than wait for the tow lines. We did, in fact, slide off and come upright in deep water, rig intact - but I think this was due to good luck rather than good management.

Sometimes you can get a helping hand from passing power boats – their wake can give you that little push that does the trick. Or, if pride permits, you can simply ask for a tow.

The people that have the most experience with grounded boats are the operators of the various rescue boats belonging to commercial towing services located up and down the Intracoastal Waterway. (A subscription to a service such as TowBoatUS is money well spent if you are contemplating the ICW run for any distance). I was once hard aground near Wrightsville Beach and after failing to free myself with the usual techniques at my disposal I checked my policy and called in the experts. The bright red rescue boat was quickly on the scene and assessing the situation. The bottom was sandy and my keel was seriously buried. The skipper of the tow boat then delivered a piece of advice that I wish another rescuer some years earlier on the Neuse River could have heard: Take it slow and gentle; no-one gets hurt and nothing gets broken.

He positioned his boat amidships of mine and stern towards me. He took lines from each of his aft quarters to my bow and stern. Then he ran his two big outboard motors so that they gently blew away the sand around the keel and in ten minutes or so we drifted free: no-one got hurt and nothing got broken. Of course, had it not been for my TowBoatUS insurance policy it would have hurt my wallet to the tune of \$400.

#### To summarise:

1. Recognize that you are aground as soon as possible and stop forward motion.
2. If motoring, go into reverse immediately. If sailing, get the sails down, check for lines in the water and start the engine, then go into reverse. Be aware that your rudder is vulnerable when backing up in shallow water.
3. If this fails, limit the damage by getting an anchor out to windward. If possible orient the boat to provide the most protection from wind or waves.
4. Reduce draft by heeling the boat. A very effective method is by pulling on a masthead halyard. Another method is putting weight onto the end of the swung out boom; a crewmember or a flooded dinghy being the main candidates. Motor or tow the boat off into deeper water.
5. Seek assistance from the professionals, or hail a passing Good Samaritan.
6. Running your engine in shallow water and when aground churns up the bottom: Check your raw water intake strainer; if it is filled with sand and mud check your raw water pump impellor for damage.

Happy cruising!