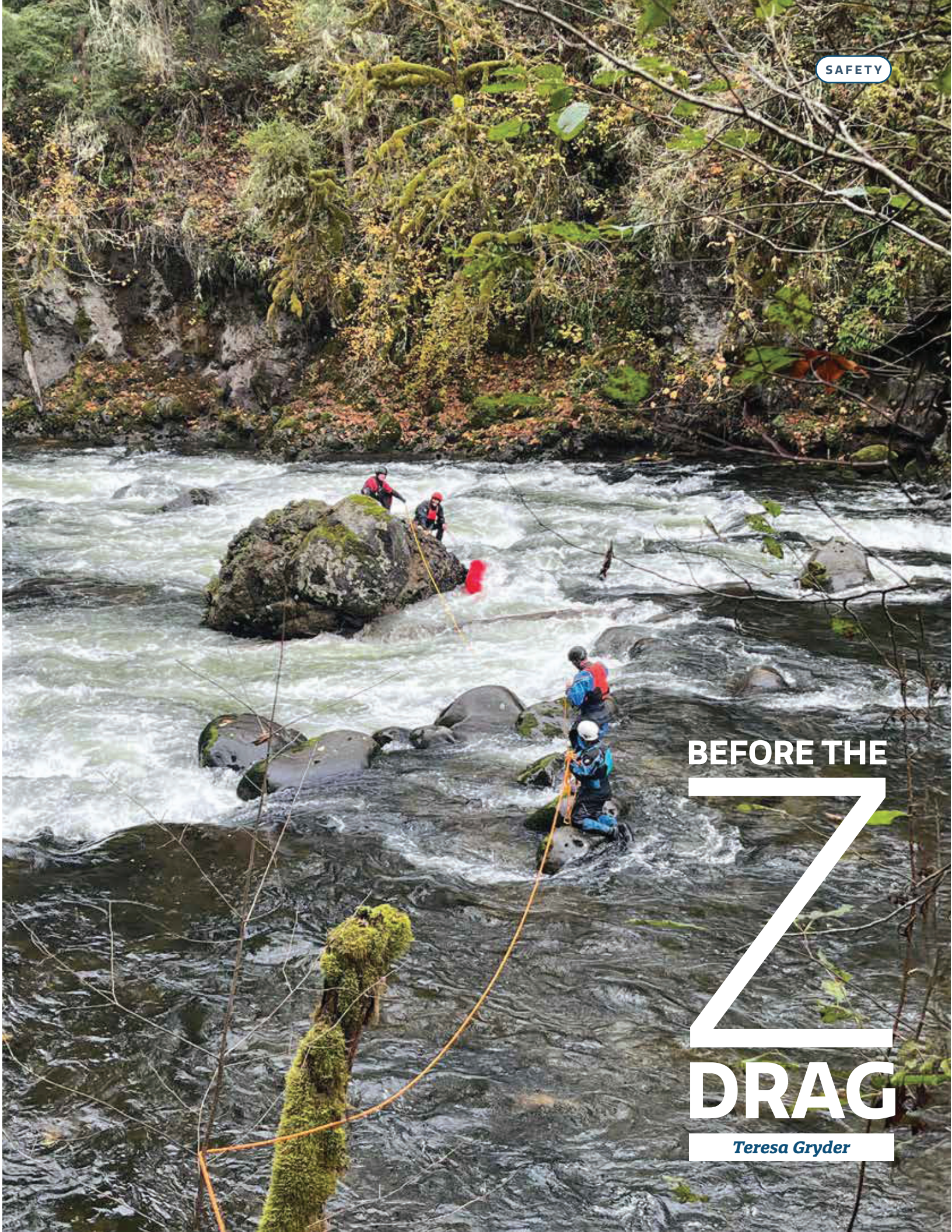

BEFORE THE Z DRAG

Teresa Gryder

SOME THINGS ARE INEVITABLE. LIKE TAXES AND DEATH, if you run rivers, getting stuck on rocks is going to happen. You can avoid it for a long time but eventually, your turn will come, probably sooner if you're in an inflatable, but even hardshells get pinned.

These days a lot of boaters are getting swiftwater rescue training. These trainings were once oriented at firefighters and park rangers. Today, however, courses for boaters are being taught by boaters who understand the practical applications of swiftwater rescue in a recreation context. More people having this training is a good thing, but one course cannot replace years of experience. I'm here to share what I've learned from my years of experience.

A weekend swiftwater training will get you started practicing whitewater swimming, live bait rescues, wading, rope, and boat rescues. It will probably not teach you everything you need to know to get a boat unstuck from the rocks, because boats get stuck in approximately one million different ways. Having been a raft guide on a bunch of different rivers, I can tell you that rafts and inflatable kayaks get stuck more often than hardshells, so many of these tips are for folks in inflatables. Some tips apply to hardshells too. If you're an up-and-coming whitewater kayaker, it won't hurt to read through and store some ideas in your brain. Your day will come.

This summer, I was paddling with some rookie rowers on the Deschutes and one of them parked their 16-foot gearboat on a rock. It wasn't really pinned, but it was stuck with the loaded bow squarely on top of a boulder. He pushed and pulled on the oars, and jumped around in the boat, but he didn't know what to do.

I was in a kayak that day. It took a while but I was able to move back up to the raft to get a closer look. I suggested that he move his body weight to the far end of the raft, away from the rock, and then without getting out of my kayak I was able to jerk the bow of the raft off the rock. I was surprised at how easily it came free, considering he'd been pulling on the oars and sweating for 15 minutes without success.

The lesson here is that brains matter more than muscles. You have to look carefully at the problem and think it through. If you can't see what's wrong, move, or get information from someone in a different position. If you can't figure it out, get more people's brains on the question.

A mechanical advantage can create that "muscle" and many people think the Z-drag is the main solution to a stuck boat. They learn how to construct a Z-drag in swiftwater class, and if they're smart, they practice the technique and bring the gear needed to put one together.

I can't fault folks who carry a pin kit (bag of rescue gear). Thanks for doing that. Being mainly a kayaker myself I feel adequately prepared with just a couple of carabiners, a throwbag, a piece of webbing, and a prusik. If I were rowing a loaded 18-footer, I'd bring more. Rafting pin kits generally include a longer static (non-stretchy) rope, more carabiners, prusiks, and pulleys, because rafts need a Z-drag to get free more often than kayaks.

The Z-drag is a rope system that provides a 3:1 mechanical advantage (minus friction) for pulling on something. We practice it by pulling on cars or picnic tables. We learn it in a class, go out and buy the gear, and then itch for the chance to use it for real. But most stuck boats come free without needing a Z-drag.

Assessing Your Level of Stuckness

Rafts can get stuck badly because they are flexible and wide, making it possible for them to catch a lot of current and even wrap around a rock like a pancake, hence the term "wrapped."

Hardshells (including whitewater kayaks and canoes) can get "pinned," but it is rare for them to wrap (bend around a rock) because they have structural supports. One extremely bad scenario is when the bow of a kayak wraps with somebody's legs in there, but this is thankfully very rare because today's kayaks have large cockpits making it easier for a person to get out when they need to. A canoe can also fold on a person's legs, trapping them. But we're not talking about that kind of emergency here.

We're talking about stuck boats, not people. When it's just a stuck boat and there's no person trapped, you have more time.

When a boat is stuck or pinned, boaters may think they have to set up a Z-drag. This is not necessarily true. The Z-drag should not be your default tool for everything. It's a last resort, or perhaps next to last.

The point here is to remember the things to try before you start rigging a big complicated rope system. Simple approaches are quicker, easier, and often successful. Several of these suggestions apply mainly to inflatables, but many apply to hardshell boats too. If the simple, easy, fast approaches fail, only then go on, and rig your Z-drag.

Also, remember that using a Z-drag requires a lot of equipment, takes a fair bit of time, and incurs some extra risks. If you ever use one, you best know what you are doing because there is a lot of force involved.

Tie Off Your Boat

Keep in mind that many times boats come free on their own. You might have pushed and pulled on it for a while, and then a pulse of water just catches it the right way and off it goes. For this reason, tie the boat off to something before stepping away from it. Also, position somebody downstream who can catch the boat, or rescue any people who might come floating downstream. Boats can be stuck for hours only to suddenly float off when nobody is looking.

Lift and Rotate
With a stuck boat of any kind, there may be one end that you can lift to slide over a rock and free the boat. Of course, a boat full of water is heavy, so hopefully you have some strong people in your crew who can take on this challenge. If they can get to the boat and move it straight up so it slides over the obstacle, you've solved the problem.

Move Weight Around
This works for inflatables and sometimes canoes. The heaviest thing on board is usually the people. People are easy to move around in a boat—just get them to relocate themselves. If they are sitting right on top of a rock, have them scramble over to some part of the boat that is not on top of a rock, and see what happens. Once the weight is off the rock it might float free on its own, or you might need to tug that part of the boat off the rock.

If there are rocks under both ends of the boat, move everybody to one end and get the other end free. Then, move them back to the freed end and you'll likely be floating in water again instead of sitting on rocks.

One thing that does not work is having everybody on board jump up and down in place like popcorn. You might float free this way, but you can skip it and try other things with more regular success.

The move weight around strategy works in the majority of inflatable kayak pins, and for recreational kayaks, it may also work. If the kayak is stuck, scooch on your butt to one end of the boat and try to paddle it free. If that doesn't work scooch to the other end and try again.

Pull and Push Using Paddles of Oars
You can also try putting your paddle or oar in the water and pulling yourself (and the boat) toward deep water. Another thing people try to do is push on a rock with a paddle. Pulling usually works better than pushing but try both, they're simple and fast. Move around on the boat and try pulling in different places. See if you can get the boat to rotate. If you can get the boat to wiggle at all these might work, especially in combination with moving weight around.

Take Weight Off The Boat
If there are humans on board and you have already tried moving them around and pushing and pulling, it might be time to get them off the boat. This may involve simply stepping out into shallow water or a dry rock, and then dragging the boat off the rocks.

Be careful when getting out of a boat and into the river! River rocks can be slippery. River currents are tricky. The risk of getting your feet stuck on the bottom ("foot entrapment") is real. It may be safer to jump into deep current and swim to shore than it is to try to wade anywhere.

Every situation is different so assess carefully, check the depth, and look at where you'll wash if you lose your footing. Have someone downstream to rope in or boat rescue any swimmers. You could even rig a zip line to get people to shore. Whatever you do, do it with your eyes wide open and your brain engaged asking, "What if."

You may want to keep one person on a raft to help attach ropes and communicate about the situation. If everybody is abandoning ship, attach a line to it first; it's hard to do once you're on shore. Rafters should learn how to set up a self-equalizing anchor so that if you ever have to pull hard on your raft, you can do so without tearing it up. You will need three carabiners and a long webbing loop to set up a self-equalizing anchor.

Mind Your Angle
The angle of pull is the most important variable. Which way you pull matters more than how hard, so look hard and think about it.

Which way will the boat want to go when it comes free? Work with the current. If you can move part of the boat so that it sheds water and changes the flow, the whole rig might just pop off and float free.

The Ten Boy Scouts Method
If you have a lot of people around, you have people power. Ten Boy Scouts might be able to pull harder than three adults, so get everybody involved. Attach a rope to the stuck boat and have everybody haul on it, ideally in the direction that it wants to come free in. Often, all you need is a little bit of oomph and the boat is released.

Trial and error comes into play here. Pull every direction. Try different anchors on the boat. Give everybody's theory a solid try.

The Vector Pull
This is an awesome option that most people don't even know about. It involves a lateral pull on the middle of a tensioned line.

The vector pull is something you can try as soon as you have a rope on the boat and an anchor on shore. Use the ten Boy Scout method to tension the line and tie it off tight by wrapping it around a tree or rock. If there's not a tree or rock handy you might have to set up an anchor using webbing or other ropes that reach to some hard connection point.

Once you have the line tight, use those same ten Boy Scouts to pull the middle of the line at a 90-degree angle. This changes the angle of pull, and on a taut line, and on a taut line, it gives you some extra mechanical advantage.

If you're doing a Z-drag and it isn't working, you can add this to the Z-drag system by capturing your progress using prusiks and then pulling laterally on the main Z-drag line.

Block the Current
This method has been used to rescue living humans and it's worth considering if something is stuck in a narrow channel. It may be possible to pin a raft upstream from a slot in order to divert the water around it and pull a boat out. Groups of humans wading in shallow water can also divert a significant amount of water and change the flow dynamic. It's risky and should be applied with care, but we're talking about options here so keep this idea in the back of your mind.

Deflation
More than once in my river life we've set up Z-drags and failed to get rafts free. One time I was on the Rio Bio Bio in Chile with ten other guides when we stuck a raft in a toaster slot at Jugbuster. We spent a day trying to pull it out and failed, camping on a rockslide that night and having a dinner of sausage, chocolate, and wine. It was a rough night.

We had tried every raft guide trick we knew except for one: deflating the raft. We didn't want to, because it's hard to get water out of a raft tube, and better not to get it in there in the first place. But we saw no other option.

First, we removed the boxes and frame, dragging them to shore one by one using a zip line. Then one guide ducked underwater in a truly dicey situation to find the valves and open them. Letting the air out of the thwarts caused the tube that was deep underwater to rise to the visible tube and the whole boat came free within moments (going underwater to deflate a raft is not recommended and poses a significant risk)..

If you have tried everything and are not getting anywhere, this may be the answer. Consider letting the air out of the end of a raft if it's catching a lot of water, or the thwarts if one side of the raft is deep underwater. Don't get frustrated and stab a perfectly good raft with your river knife! I have seen this happen too, true story.

The lesson I take from my own experiences is that if you can easily let some air out of a raft so that it will flex into a less sticky configuration, it's worth trying. It might even be worth trying before you start Z-dragging.

Wait For Flows To Change
Sometimes all you need to do is wait a little while for the water level to drop. On dam-controlled runs, the release might end, or someone could try and ask the dam managers to turn the water off. On a rain-fed river, the water levels go up and down with precipitation. You might only need to wait a while for the boat to be freed by a change in water level. It's also a good excuse to take a break and take care of yourself and your crew. Patience is difficult, but it sure does pay off regularly.

Walk Away
Nobody wants to leave a boat in the river, but it happens. I've been seeing a lot more recreational kayaks stuck in rivers these days. You can try everything in this article and still not get a boat free. You can even set up a Z-drag and fail. If nothing works you might as well get out, get warm and dry, and get some help. Please don't leave boats in the river without even trying to get them out. That's littering!

Conclusion
Here's hoping that some of these tricks come in handy when you get your craft stuck. Everybody hits rocks in the river, it is unavoidable, at least when you're new to the sport. When you get better at controlling your boat and better at reading water, you'll hit fewer rocks. You'll also learn how to hit rocks to avoid getting stuck, using tricks like the strategic bounce (hitting it head-on), spinning, and high siding (in a raft) or leaning toward the rock (in a hardshell). But even with all those skills, rocks still get in the way. ■