

# Ditch Your Stakes: A Guide To Alternative Shelter Anchors

**Mike Clelland! has gone stakeless!**

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by Mike Clelland! | 2008-07-08 00:05:00-06

## Introduction

Can you leave tent stakes at home? The answer is a definitive "sometimes."

Stakes are perfect in tundra, soft forest floor, grassy fields and alpine meadows, but woe be unto you if you depend on stakes in snow, sand, or rocky gravel bars. The solution for snow is the venerable deadman anchor (or, for political grooviness, deadperson).

For this text, I use the example of TARP set-up almost exclusively. Obviously, the same rules apply for TENT set-up, but since the tension on the cord is higher on a tarp, we'll use that as our worst case scenario.

Leaving the stakes at home requires a high level of competence when it comes to setting up the tarp. I teach expedition skills with tents and tarps, and I adhere to extremely high standards of aesthetics and safety. Aesthetics means the tarp (or tent) looks absolutely beautiful; nothing less than perfection is acceptable. Safety means it won't be compromised because of wind or precipitation, leaving the sleeping camper vulnerable to hypothermia.

Once I was deep in the Alaska Range on the Ruth Glacier between Mount Barille and the Moose's Tooth. Some pals and I were sitting out a storm, and I went to our snow kitchen, just a few steps from our tent. There was another team of climbers about fifty yards away on the huge flat expanse of the monstrous glacier. It was clear and sunny, but plenty windy to make being outside unpleasant. As I was walking through camp to our kitchen, I had this funny sensation that something was behind me, and as I turned - WHAP! Our neighbors' tent smacked me in the face. After it hit me, it kept right on going, tumbling through our camp, fully set up like a giant beach ball. I immediately ran after it, concerned it would roll all the way to downtown Talkeetna.

A quick sprint in my down booties got me to where I could grab the thing, and I carried it back to its little platform up the glacier. The other team had taken off on skis to scout their route, and I deduced that they had NOT done an adequate job of anchoring their tent. I secured it with a set of four of their ice axes. They may have been a team of amazingly competent climbers, but they obviously lacked a fundamental skill. Their ignorance (or laziness?) could have been disastrous in such a harsh place.

That incident (as well as a few other less dramatic ones) has made me an absolute weirdo about securely attaching the tent to the earth.

## The Pinky Test

There is something called the Pinky Test that I use to pass judgment on anchors. I'll go up to a tent and hook my little pinky finger around each cord and give 'em a stout tug. If my pinky pulls the string loose, the anchor has failed the Pinky Test. I do each and every cord on the shelter. Is this overkill? Well, only if we camp in places that aren't windy, and we camp in places that are VERY windy. I sleep a lot better knowing that the tarp is super-secure.

## Cords on the Tarp/Tent

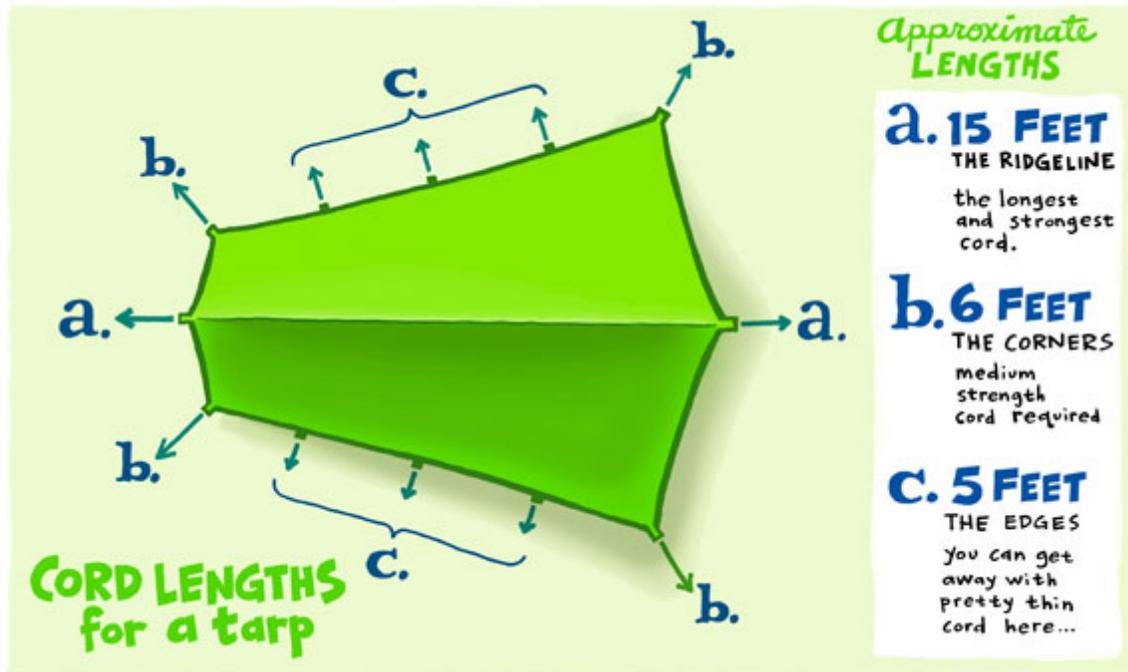


Illustration 1.

Deadpersons require some sort of string for proper tie-off techniques without stakes. The lightest appropriate cord is obviously preferred, but some ultra-light cord is so tiny (and low friction) that knots are hard to tie and impossible to untie. For example, let's say we are using the trusty [Backpacking Light AirCore NANO cord](#). This is very tiny slippery stuff. A lot of knots won't even hold on it. The length needs to be long enough to allow a buried piece to be looped and come back to same tie-off point. A classic rectangular tarp will need long cords on the ridge line points, medium on the corners, and short for the mid-point tie-offs. (See Illustration 1 for lengths.)

Attach the cord to the tie-off tabs on your tarp using a BOWLINE, as this is easy to untie and creates a wide open loop for the slippery half hitch. Tying the loop just big enough to push your finger through is plenty. This hole is important! Do not tie a closed loop and then girth hitch that around the tab, as it makes the simple adjusting tricks almost impossible. Finally, a slippery half hitch won't hold in many super-slick Spectra cords. You need to make another wrap around the standing part with the free end.

## Plastic Micro-Tensioners

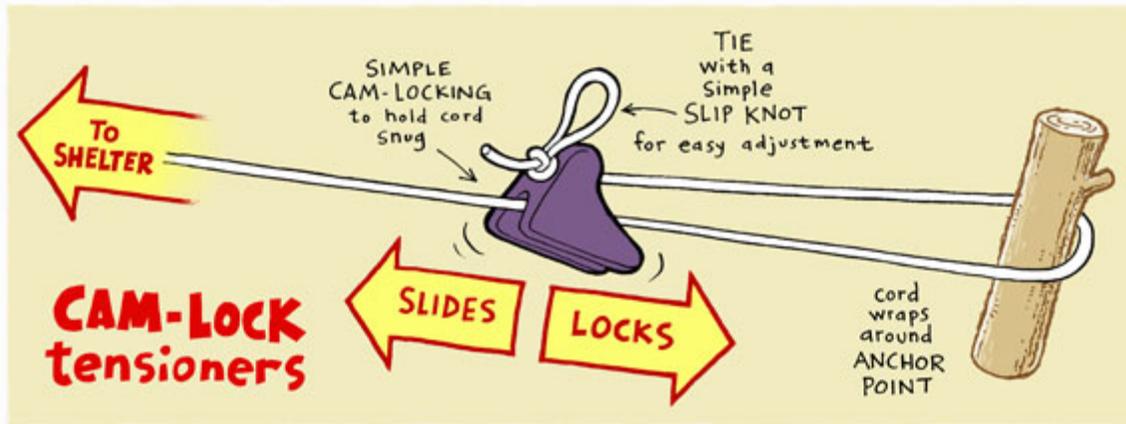


Illustration 2.

The tension on the cord can also be adjusted and locked off using the simple Plastic Micro-Tensioners. These are cute little blocking cams with the cord fed through them. (See Illustration 2.) At first, these can be a little tricky to use, but they make perfect sense once the shelter is set up. Play with these BEFORE you try to pitch the tarp on a dark and stormy night. One major problem with a tensioner is that the big loop (say, that goes around the deadperson) must be pre-formed, so it's impossible to wrap around something like a tree. I've used a tensioner without a pre-formed loop by passing the end around the "tree" and then through the cam, but it's a bit touchy.

## Slippery Half Hitch

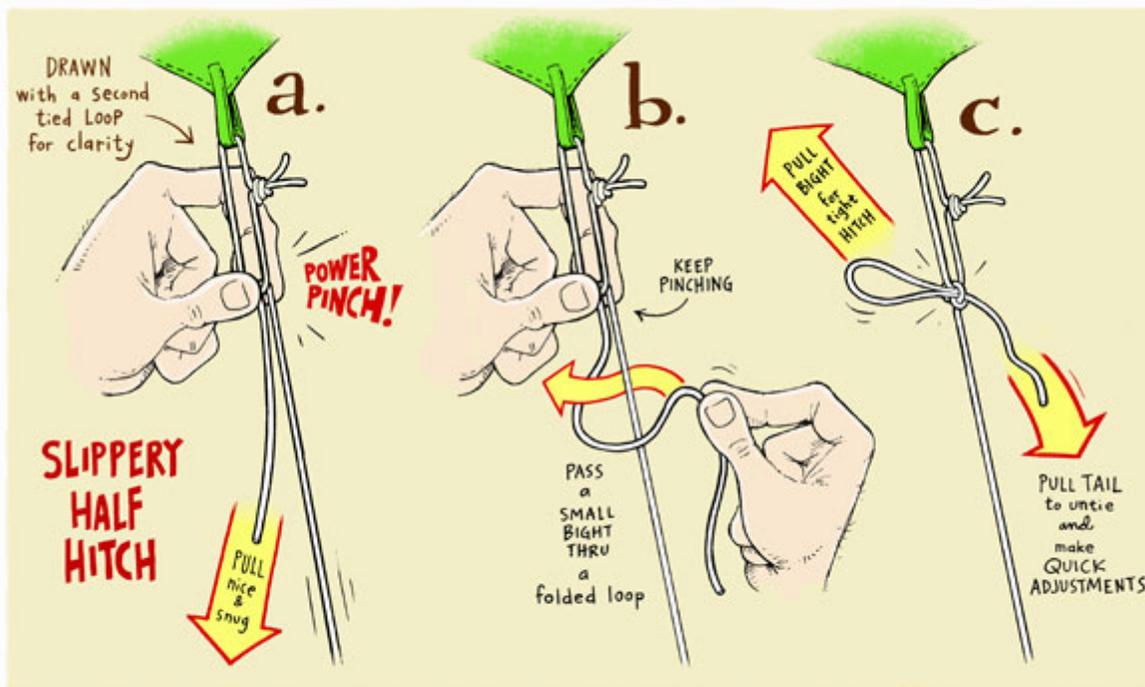


Illustration 3.

The releasable Slippery Half Hitch is a very simple and dependable knot. (See Illustration 3.) The string gets tied back on itself into the open "hole" in the bowline. This simple trick makes it a LOT easier to adjust, but most importantly, it's easy to untie in the morning even with frozen everything. Really!

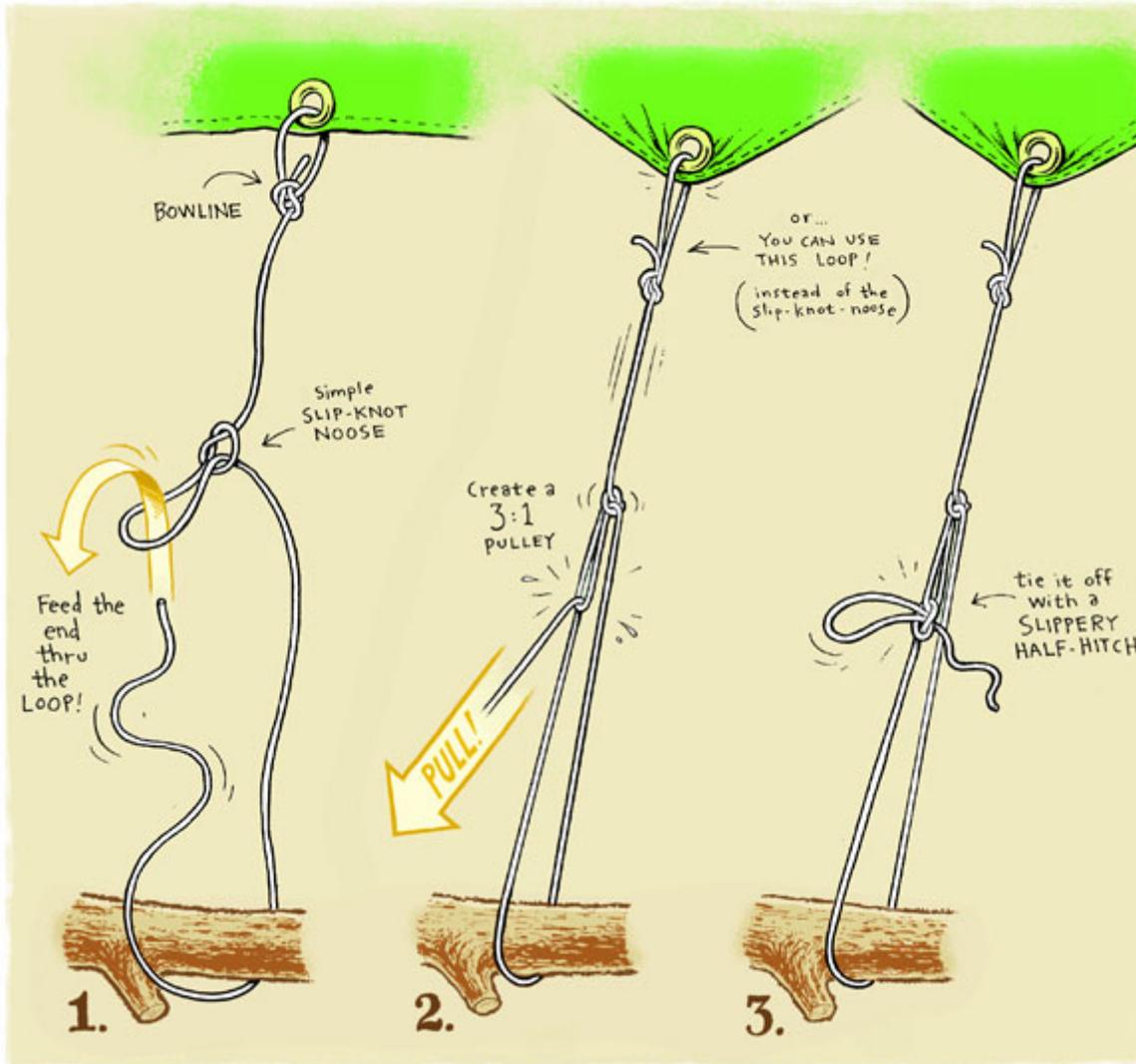


Illustration 4.

If the string isn't long enough to make it back to the little hole, you can tie a trucker's hitch. (See Illustration 4.) This uses the same Slippery Half Hitch as the final tie-off knot.

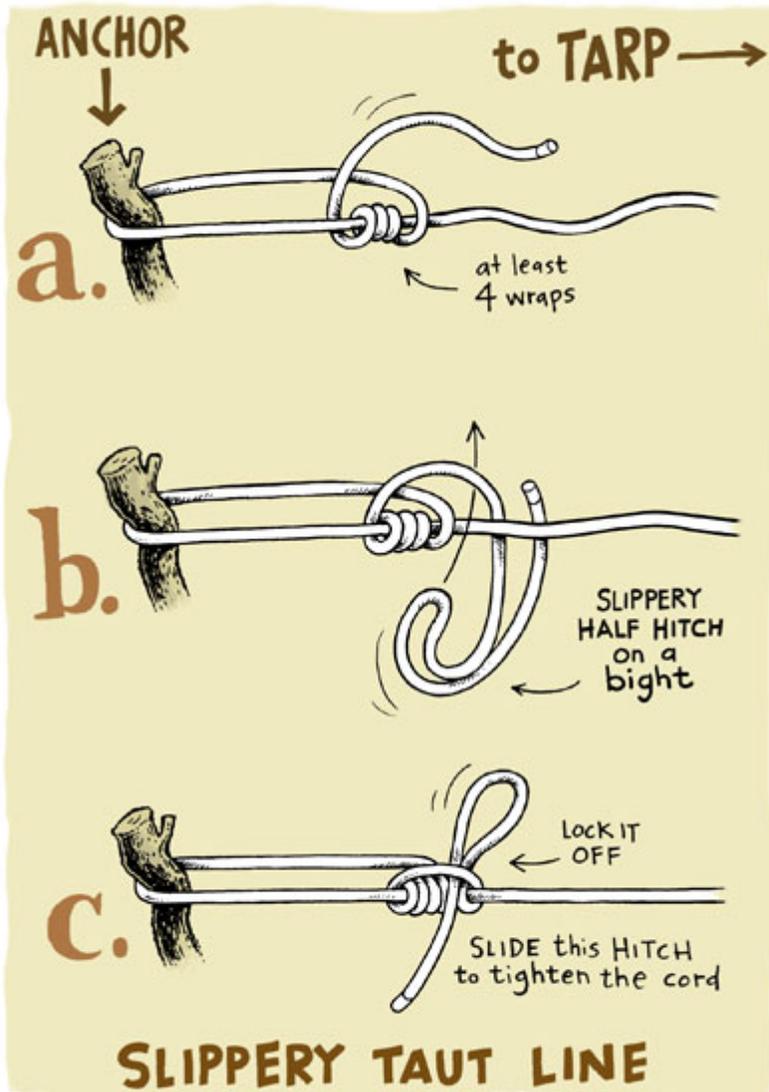


Illustration 5.

Some backcountry theoreticians love the Slippery Taut Line (see Illustration 5), a knot that performs the same function as the Slippery Half Hitch. It's adjustable because it can slide up and down the cord with a dependable gripping property...or, not so dependable on Spectra. This is personal preference, and much loved by Boy Scouts. Me? I've gotten really quick and efficient at tying the Slippery Half Hitch, so the illustrations will reflect my preference.

## The Easy Tie-Offs

Sometimes you find really nice little trees and shrubs in the perfect spot for your tarp set up. If they're there, lined up perfectly with the tarp tie-outs, it's a no-brainer: use 'em. Sadly, these little anchor points are rarely in the right spot for good tarp pitching. I have seen people tie their tents to a bunch of shrubs, but it's at the wrong angle for aesthetic beauty, and that kind of laziness drives me crazy! Also, if you are camping where there are shrubs, you probably have stakes. In addition, the Plastic Micro-Tensioners are hard to use around shrubs.

## The Buried Anchor Point

When something is buried under the snow, it's important you do NOT tie the string to the object (like a stick). Simply loop the cord around the stick so the cord will still easily slide under the snow. If you have to adjust the tension, untie the knot on the tarp, and slide the string a little tighter. This is called FLOSSING. This is a super-efficient trick, and the term FLOSS will be used throughout this article. In the morning, when the snow is frozen rock hard, you just untie the string and pull it out, leaving the stick buried. If you TIE the string to the stick, you'll need to dig up the stick to untie the string. This will require a shovel or an ice axe and a few minutes of time. Sadly, digging with a metal shovel usually means trashing the string. Spectra cords shine in this use, because they're so slick.

## Fresh Snow

Fresh snow in a high altitude mountain environment makes for dreamy skiing; it's sparkly and soft. However, the same lovely properties that make a skier cry big fat tears of joy can create a little extra work when setting up the tarp. A deadperson won't stay put in the fluffy powder. Fortunately, snow is a malleable surface, and it can easily be changed into a construction medium that'll be plenty stout. You'll need to WORK HARDEN the snow. That means compressing it to create a harder, more compacted material. When you make a snowball from fluffy snow, you instinctively work harden it before throwing, right? Same thing here. Simply tromping with your boots AFTER the deadperson is buried is plenty, but you'll need to wait a few minutes before flossing the string to get the appropriate tension. On a warm day in fresh snow, three minutes might be plenty. On a cold night with old snow, you might need a book to pass the time before flossing.

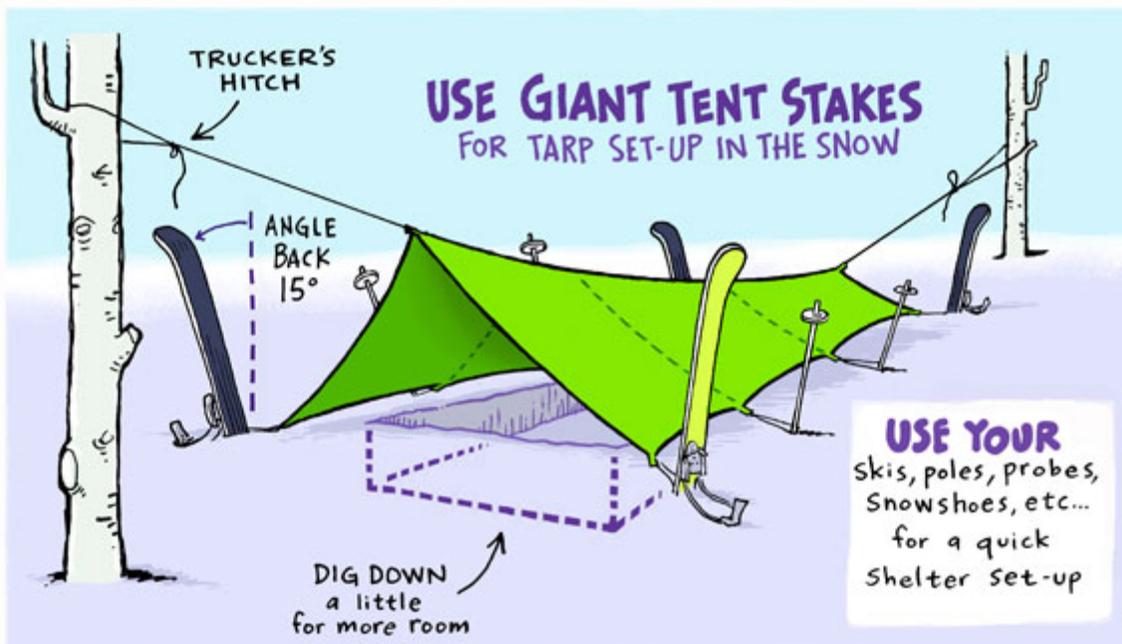


Illustration 6.

If you are setting up the shelter and your plans are to get up early the next morning and keep traveling, you (and your teammates) will have plenty of gear on hand. Use skis, ski poles, avalanche probes, and shovels. (See Illustration 6.) Just jam 'em in the snow like giant tent stakes. It's fast and super-efficient. Also, adjustable ski poles come apart, so two poles make four giant stakes, though you should be aware that they might get snow jammed in 'em, so they might need cleaning the next morning.

One problem, though. Imagine base camping near cool ski terrain. If you set up the shelter and then you want to go skiing, you'll need that gear. Don't worry, go ahead and do the initial set-up using your gear. Use the huge length of skis and poles to fine-tune the perfect shape to the shelter. Make sure it looks beautiful enough for a cover shot on the gear catalog. Then, one by one, replace each pole and ski with a more permanent deadperson.

Alas, if you start your tarp set-up with deadpeople, it's really hard to achieve that perfect aesthetic shape - especially in deep powdery snow. It truly makes for a better set-up if you start with the GIANT tent stakes (the skis or poles) as the first step. Using the GIANT tent stakes as an initial tool allows for fiddling with the shape and the tensions to create the absolutely PERFECT shelter shape - and it's quick.

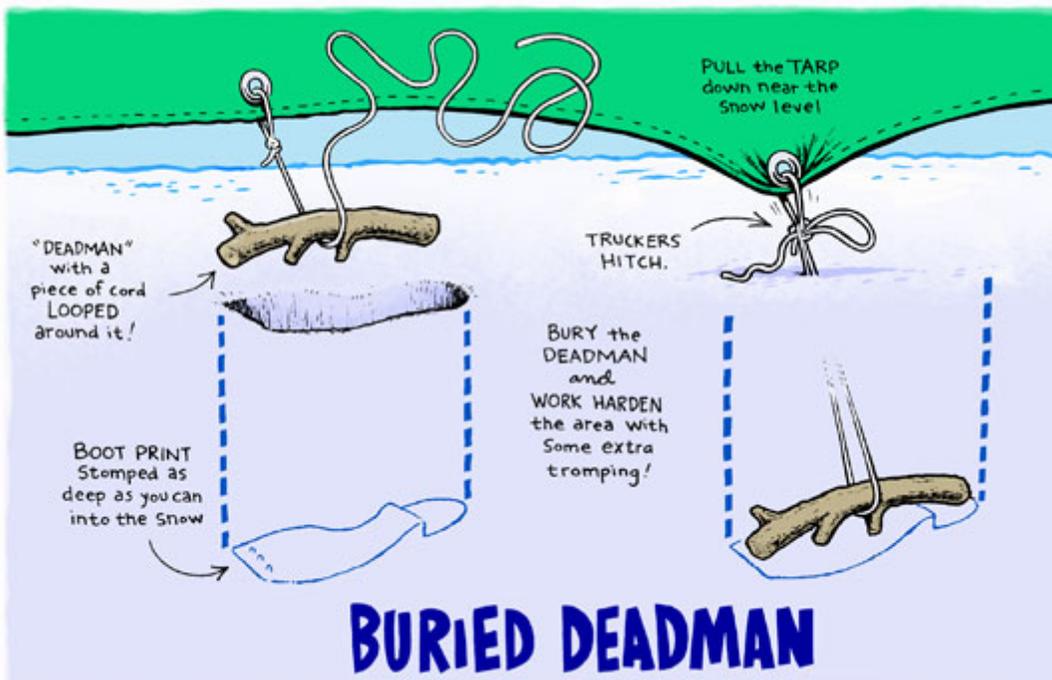


Illustration 7.

There's usually no need to dig down in fresh snow, just one stout TROMP with your boot should make a hole about two feet deep. Carefully position your stick and string in floss mode and cover it with snow. Then, step on it, but be careful not to dislodge the string from the stick. (See Illustration 7.) Add some more snow on top and stomp some more. This will work harden the snow crystals into something super-strong, but remember to give it some time before fully cranking on the string.

## Dense Snow

Summer snow in the Pacific Northwest is the premier medium for a bombproof deadperson, but you might need a shovel to dig a hole in the cement. What to do if you are going light and don't have a shovel?

I've spent a lot of time in the big peaks of the North Cascades during the summer. The terrain will usually hold snow into August, which might make it seem impossible to camp. Sadly, at the higher elevations, any open ground will be too steep, too rocky, or too lumpy to sleep comfortably. The only option is to hike down or sleep on snow. Don't be intimidated by the false belief that you can't camp on snow. Snow is flat, quick to prep for sleeping, and surprisingly comfy. It doesn't need to be a big spot, just enough for tarp set-up. If it isn't flat, make it flat! It's just snow, after all. That said, it is nice to camp NEAR a little patch of dry ground, to use as your rock quarry.

To anchor the tarp, grab some big rocks and set them in the snow in the shape of the tarp. Each rock needs to be big enough that you have to use two hands to pick them up, and if you need to grunt when you pick them up, all the better. Don't be lazy. Use BIG rocks. I'll add that a flat shape seems to work best.



Illustration 8.

Simply set the big flat rock in the snow, pass the string under the rock, and tie it back to the tarp in the little hole. The knot never needs adjusting, because if you need to fine-tune the tension on some part of the tarp, just bend over and slide the rock in the snow. (See Illustration 8.)

The next morning, just pull the string out, and you're done. Well, not quite. If the circle of rocks looks like an ancient astrological clock, it's recommended that you move the rocks off the snow. You don't want to have some other backcountry user see your tarp site just because you are lazy. Seriously, the rock circle can have a negative impact on the next visitors. They came to the mountains to experience the wilderness too. Never be a buzz-kill to someone else's sense of backcountry grooviness!

## Anchors for a Glacier Camp

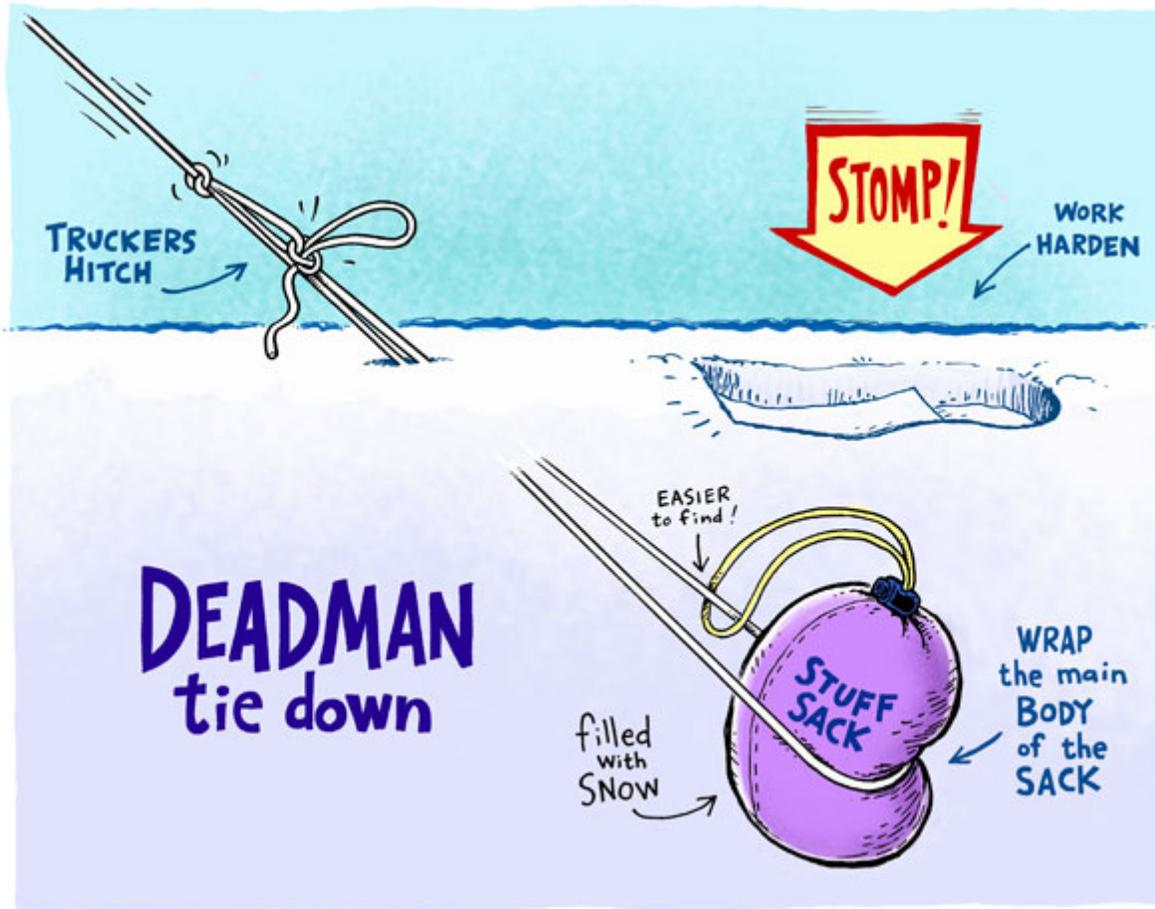


Illustration 9.

If you are expeditioning on a big Alaskan glacier, you sure won't be finding any sticks. What do you use? Here's where a store-bought snow anchor may be appropriate, or simply bring some small stuff sacks and use these as deadpeople. (See Illustration 9.) Put a snowball in the stuff sack and go through the same deadperson process described above. Be careful in the morning when you take your tent down, as you can shred the fabric digging these out.

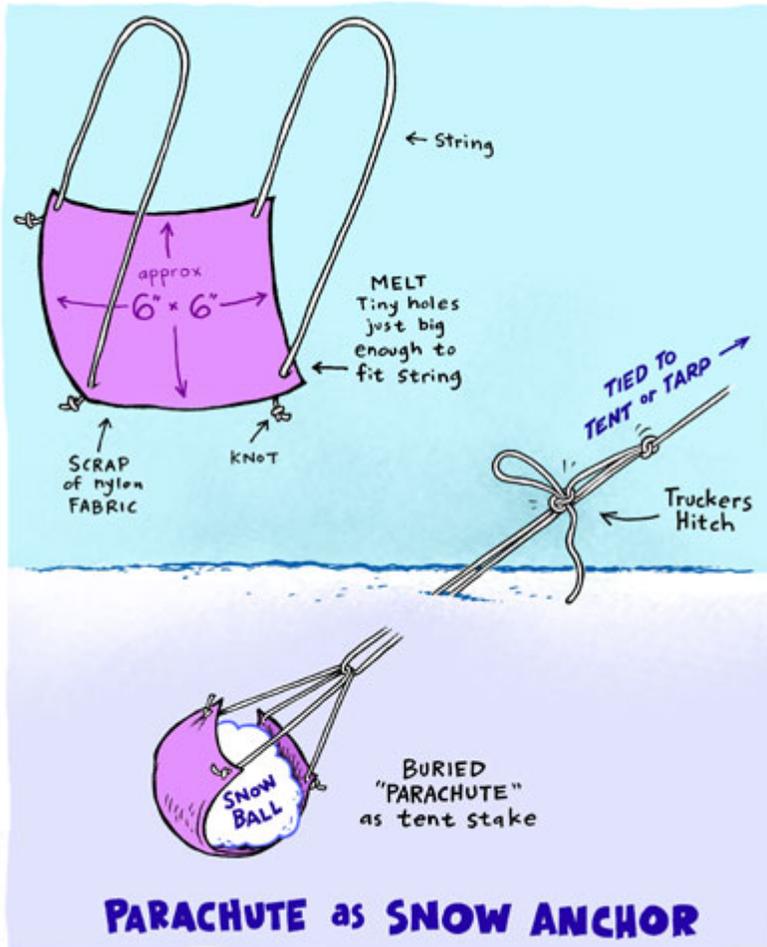


Illustration 10.

Other options are homemade or store bought "parachutes" (See Illustration 10.). These are nice, but they aren't a multi-use tool like a stuff sack. Another option is a plastic bag of trash. Just make sure to be super-mindful NOT to damage the bag when you dig it up. While not ultralight, let it be known that one-gallon fuel cans make perfect anchors.

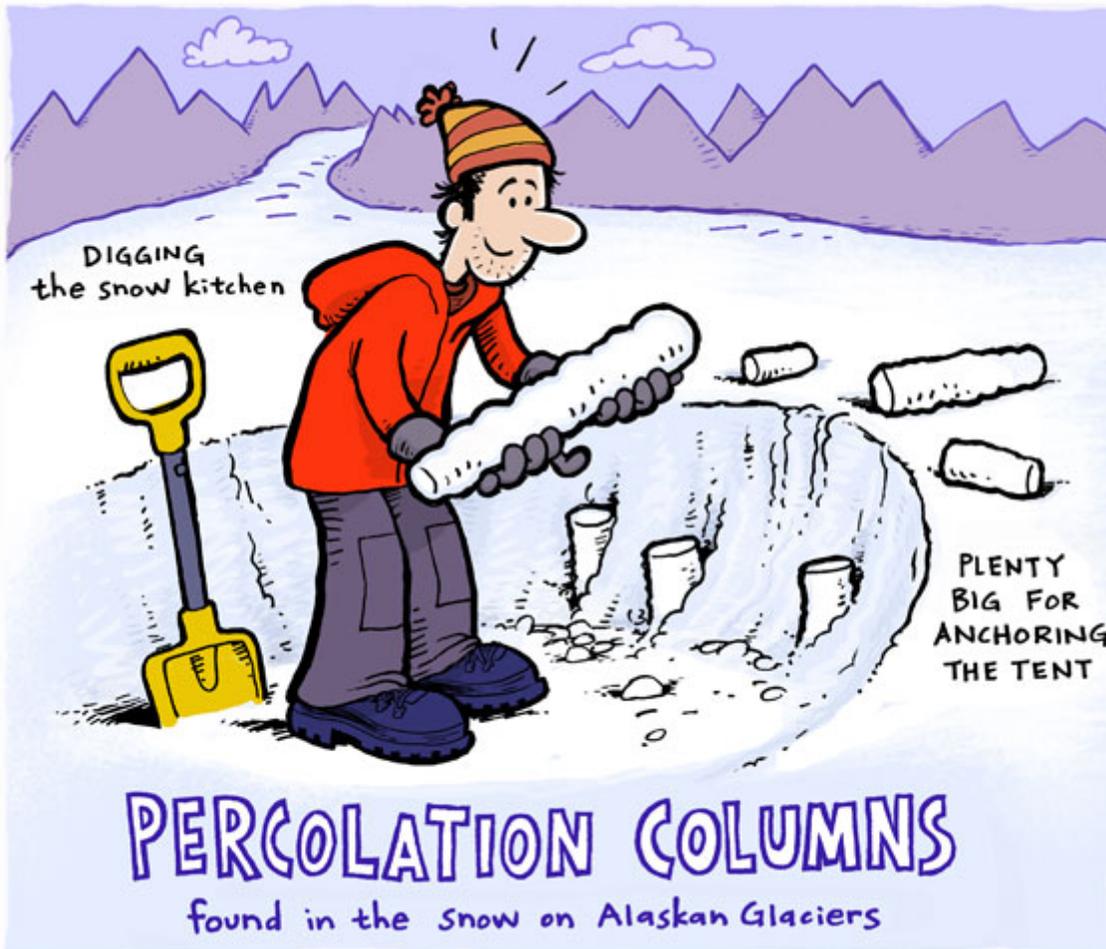


Illustration 11.

One thing that you might find on a glacier is ice! Yes, there is potentially a lot of it under the snow, but it might be WAY down there and not easy to access. However, sometimes you can find these weird clots of ice near the surface of the snow. There is a curious natural formation called a PERCOLATION COLUMN that's created by melting snow turning to liquid water, then dripping down into the snow pack. It freezes into tall candlestick shapes, and they can get to be pretty big. If you find some of these, you are set! Just smash the ice into sections about the size of a hot-dog bun, and bury 'em like a standard deadperson. (See Illustration 11.) And believe me, flossing the ice deadperson is a velvety smooth dream come true.

Alas, if you plan to base camp for more than a couple of nights, the ice chunks won't last. The twenty-four-hour sunlight of the northern latitudes will eventually melt them out. Plus, elementary physics: pressure from the string on the ice lowers the melting point, so the string will eventually cut through the ice. The Pinky Test is an invaluable technique to determine the soundness of the anchor point. An easy solution to extend their reliability is to toss a few shovel loads of snow over each buried hunk of ice. This adds some extra insulation from the oppressive sunlight.

## Bare Ice

If you ever find yourself camping on the bare ice of a big glacier, you sure don't want a tarp! Even with a tent, if you are on a mountaineering expedition in glaciated terrain, sometimes you just have to camp on bare ice. You can actually stake out a four-person double-walled tent using just a ratty hunk of wire and ONE ice screw! Yup, it's true.

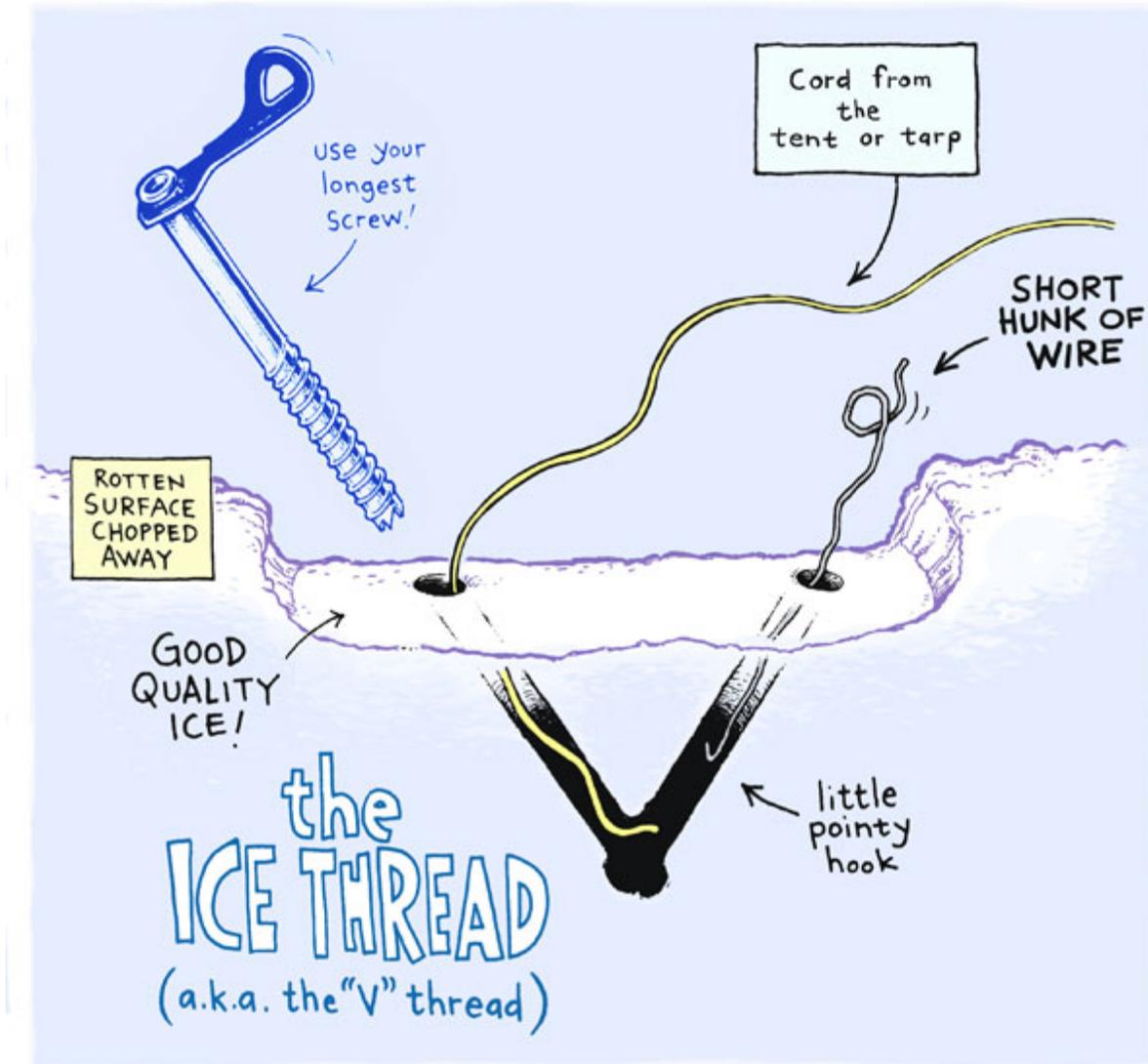


Illustration 12.

The trick is an Abalacav Thread, or a "V" thread. Make a hole with one screw at about a forty degree angle to the ice, pull out the screw, and you now have a hole. Aim well, use the same screw, and put another hole in, aiming for the bottom points to meet, which you'll feel. Thread this needle eye with the cord, and you're done. (See Illustration 12.)

## Gravel Bars and Slickrock

Gravel bars along rivers can be delightful places to camp. The slight breeze that occurs naturally next to rivers can be a way to minimize oppressive mosquitoes, and you get LOTS of rocks.

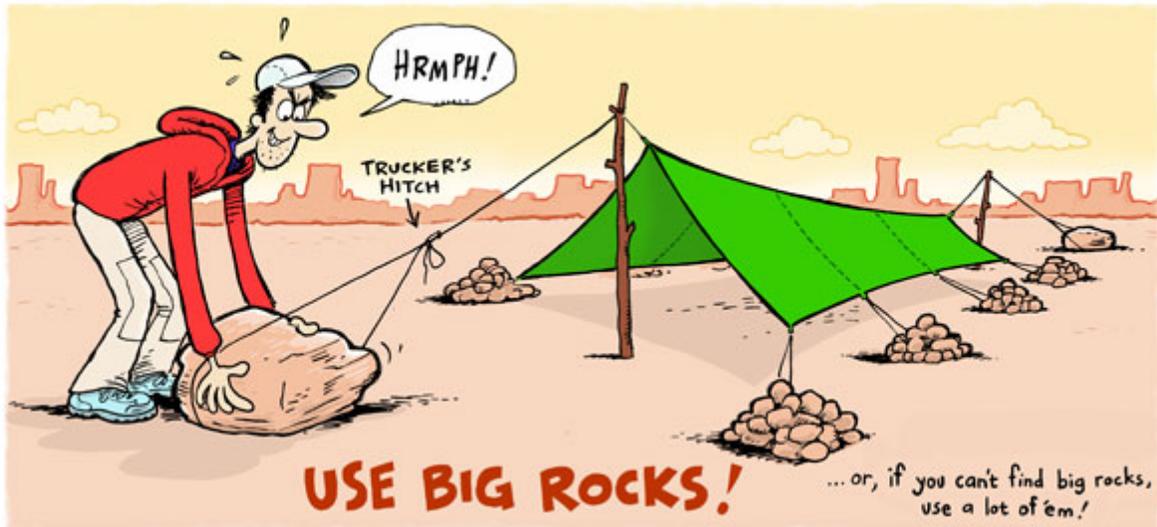


Illustration 13.

You can stake out a tarp using only rocks, but they need to be BIG rocks. (See Illustration 13.) Once again, for them to count, you'll need to use two hands and grunt when you pick 'em up. The Pinky Test is an invaluable tool; it'll tell you if the rocks are too small. Same rules apply when camping on snow: clean up after yourself in the morning. All of the same rules can be used for slickrock in the desert Southwest.

## STICK STACK

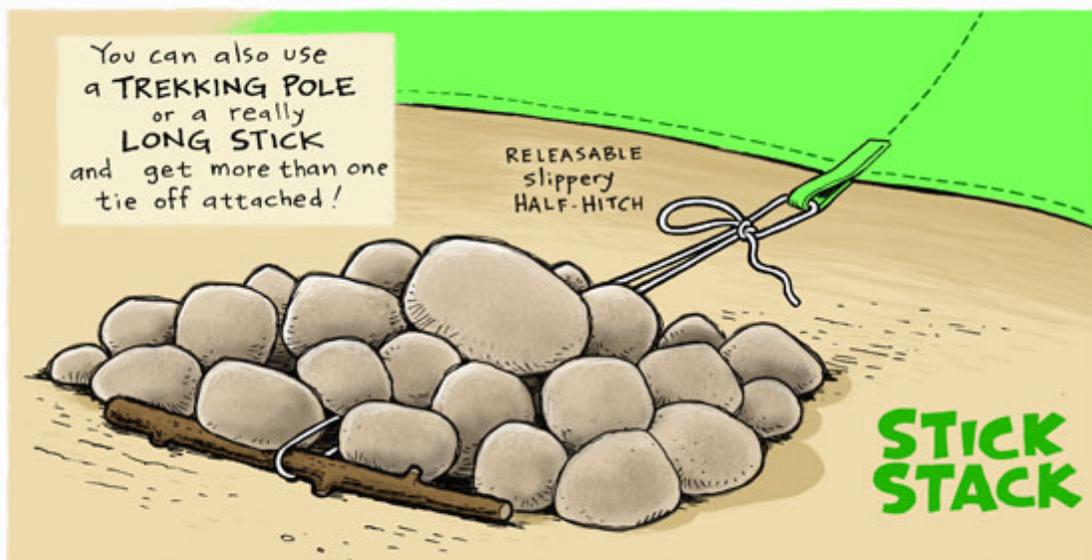


Illustration 14.

This technique is for when you can't find enough BIG rocks. Start with a stick, set it up floss style, and then stack rocks on top. (See illustration 14.) Also, with long trekking poles instead of sticks, you can secure more than one of the side tie-outs with a single stick stack.

Here's the bottom line: Tent stakes are nice, but if you don't have 'em, don't worry, because you'll be just fine. Creativity and a little brainpower can replace a lot of stakes - and they weigh less!