

Land Nav 101

Sure-Fire Techniques To Keep Yourself Found

By Jeff Randall



Anyone who's been through our jungle survival school knows the one skill we spend a lot of time on is navigation. It's the one survival talent that takes priority over all others for most scenarios. It's also the one skill that most folks don't really understand or trust themselves with simply because most people feel it's too technical. It doesn't have to be.

Once you drop off into flat low jungle, topo maps are not that good, so relying on dead reckoning with a map and compass to find a specific point is not as easy as it is with the good 1:24K topo maps we have here in the States, nor does GPS work that well in heavy primary jungle. So, you basically have to discard the fine technical skills of map and compass and use simple nav skills, pace count and time traveled to find your way. For the most part, we use Google Earth to print aerial maps on waterproof paper then use gross navigation to reach an objective. And while a compass is still the most important tool, using a few simple nav techniques such as handrails, backstops and off-aiming are the best ways to keep you found while maintaining a safety net. These techniques also work extremely well anywhere else in the world and are worth learning if you're a hunter, hiker or adventurer.

Handrails

Although you don't hear these talked about much in navigation books and articles, they are a vital part of being able to navigate. Handrails are just as the name implies: something you can "grab" on to and assist you as you travel, in other words a visual reference. They may be mountain ranges, rivers, power line cuts, roads or any other feature that is an obvious presence in the area that you are traveling. Used properly they allow for faster or easier travel since you can follow a handrail without having to look at your compass. For example, if you were trying to navigate to a town that sits at the base of a prominent mountain range, then it may be easier to navigate by using the mountain range as a visual reference (handrail) instead of trying to use dead reckoning and walking an exact compass course to the town. An exact course may take you through the middle of a lake, over high spurs, through deep draws, or busting through other terrain that may not be friendly. By using the mountain range as a handrail you can pick the easiest course and keep yourself moving in the right direction by keeping yourself oriented via the handrail. Without realizing it, we use handrails every day of our life in just about any travel we do, otherwise we would all rely on a compass to get us to the grocery store or Aunt Nancy's house. Before you leave to explore new terrain, always look at a map and see what handrails may be used to benefit your trek or get you found should you become lost or disoriented.

Back Stops

In baseball, if the catcher misses the ball a pitcher throws then it typically hits the backstop, or wall, behind him thus stopping its forward momentum. Experienced land navigators use the same principle. If they miss their objective then they usually have a pre-determined backstop that shouts, "you've gone past your target!" A backstop can be any prominent feature that runs in a general perpendicular direction to your azimuth and is past your target location. Rivers, roads, trails, power line cuts, train tracks and mountain ranges are all excellent backstops. Backstops can also be used as safety nets should you get into trouble or get lost since they are known prominent features. Before you go into the wilds, always look at a map and determine backstops and other features that run perpendicular to your course. Even if you can't find a backstop that crosses your proposed course then it is advisable to write down a cardinal direction (N,S,E,W) that will always cross a feature such as a road, river or train track. That way you always have a route to safety and back to civilization. This one tip can save your life!

Off-Aiming

In actual practice, map and compass navigation is not an exact science due to human error. While it may look simple on paper, once you get in the woods things change. The biggest mistake I have seen over my years of teaching land navigation is the student's desire to always walk a direct bearing to their target. I don't know how many times I've seen an amateur navigator attempt to reach a target on a road (such as their vehicle left parked on the road), and then not know which way to go after they hit the road. Do we go left or right to find the vehicle? The easiest way to solve this problem is to "off-aim." This means shooting an azimuth a few degrees different from your actual target but still crossing the prominent feature your target is located on. For example, lets pretend we are standing in a forest with our map and compass and have determined that the bearing to our campsite on the river is 90 degrees from where we are. Looking at the map we can see that the river runs from a NNW to a SSE direction. The easiest way to find our campsite would be to walk a bearing just shy of 90 degrees (more northerly) that would guarantee us that we would hit the river north of our campsite. Once we found the river, we simply need to follow it south until we find our camp.

Simple. Off-aiming (also known as offset navigation) is the easiest, sure-fire method of finding a target situated along any prominent feature such as a road, river, train track, power line cut, mountain range, large lake, etc. This is our preferred method of navigating jungle terrain and finding our campsite and targets along the numerous rivers of the Amazon basin since the secondary jungle associated with river basins makes it nearly impossible to travel directly to a target. We take the easier path through the jungle until we hit the river that our camp is located on, then make a turn and follow the river to our camp, either on foot or by floating. Always remember to off-aim if your target has a feature that allows for the technique and you will save yourself a lot of misery and time.

These three techniques of land nav can be used together or separately. Many times I've traveled to a point by using a handrail as a visual indicator, a backstop as a safety net and offset navigation as my primary tool. The handrail got me to a point that I could easily find on my topo map without using a compass, then I simply shot a new azimuth (with a compass) to my target, then used offset navigation to get there (if the target was in close proximity to a feature that allowed it). The problem with most nav classes (and books) is they teach map and compass like a religion. Once the student believes there is only one way to do something, then their survivability factor goes down should they make a mistake. I like to teach students the larger picture of navigation instead of harping on the finer points of 1-degree azimuths and dead reckoning. After all, we're not teaching land surveying, we're teaching how to come back alive, and in the end that's ALL that's important.