

Three-Stick Method:

Primitive Conditions Distance Estimation

How to estimate unknown, unpaceable distance very accurately. . .

By Lenny Hoover

IN a survival situation it can often be very important for a person to be able to measure distance.

Some people, when measuring distance for hunting purposes, may imagine a football field between themselves and their quarry. If the distance

is farther than 100 yards, the next 100 yards would appear to be about half of a football field. The next 100 yards about 1/4 of a football field and so on.

If you want a more accurate estimation you might pace it off. My normal stride is about one yard, but I am larger than most people.

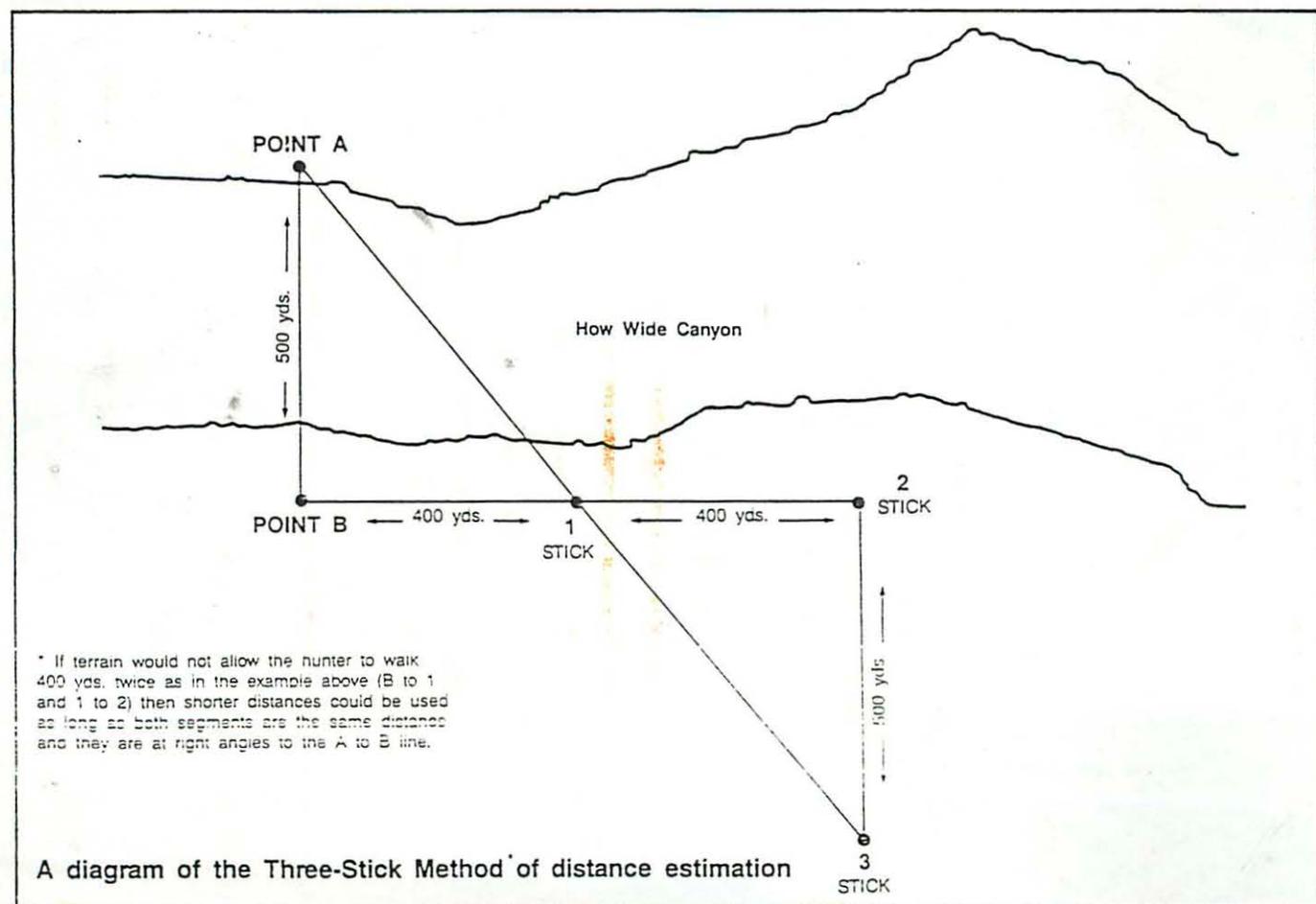
Land navigators often count a pace only when their left or right foot hits the earth. This would give you an effective pace of six feet or two yards. Count how many "long" paces you have and multiply by two, or six (in

my case), depending on which measurement you wish — feet or yards.

Really advanced land navigators can measure distance by time elapsed. For example I know that at a certain pace I can cover so many miles or kilometers per hour. I simply have to look at a watch to tell how much distance I have covered. This is a very good way to measure distance because it can be made to allow for varying terrain and you can look at a map, study terrain difficulty and project Estimated Time of Arrivals. Others can by keeping track of how long you have been gone plot or chart on a map where you are at any given time.

All this is fine but what do you do if you need to know how far a distance is and you cannot walk across it and you do not have a map or surveying instruments?

This happens all too frequently. Examples might include, how much rope do I need to string a three-rope bridge across a small canyon? How far must I swim to get across this part of the Mississippi River? Or this is the 5th time I have seen that deer across this gorge. How far would that shot be next Friday when hunting season opens? In all three examples you cannot actually walk across the distance you are trying to estimate.



An instructor of mine once taught me a method to estimate unknown, unpaceable distance very accurately. This fellow named Will, told me he had learned this method from the Kalahari Bushmen of Southern Africa. Since I have caught Will in an exaggeration or two let us just believe that he learned it in a high school or college geometry class. The method is called the three-stick method of distance estimation and you do not have to go to school or Africa to learn it. Here is how it's done.

Let us say that you have seen a deer almost every morning across a wide canyon. You want to shoot him come hunting season. You are standing in a place that provides a rest and concealment for the shot with a good view of where the deer always appears. You can, with some effort, cross the canyon and get the deer if you shoot him but how far is the shot? Open air is tough to estimate using the football field method described earlier.

Let us call the spot on the opposite canyon wall point A. The spot from which you want to shoot from is point B. Collect three sticks or any other item that you can see at some distance. From point B (the spot you wish

to shoot from) walk at a 90-degree angle from the line between point B and point A. How far? It really does not matter but I use the distance that I had estimated the shot to be in the first place, or the estimated distance between point A and B.

After walking this distance at a 90-degree angle, place your first stick or marker. This is stick 1. In the same direction as you were walking pace off the same distance that you just stepped off between point B and stick 1. After pacing it off place stick 2 there. Remember that the two line segments that you just paced off should form a straight line and the line should be at a 90-degree angle to the imaginary line from the shooting spot (B) to the buck (A).

After placing stick 2, once again start walking at a 90-degree angle in a straight line this time away from the canyon or whatever obstacle you are trying to measure. How far? This is the key! Walk until you are in a direct line with Stick 1 and point A (the place you spotted the buck). When point A, stick 1 and yourself are all lined up, place stick 3 there. Now pace from stick 3 back to stick 2. The distance you arrive at will be the same distance

as the shot you will have to make across the canyon.

Obviously this system has its faults. Thick cover, side canyons, etc., can all hamper your pacing. Still it is very accurate and based on sound geometric principles. You can use it to measure a small creek or the Grand Canyon.

This distance estimation system if done precisely can give you extremely long distances. Remember that you can make the base leg distances anything you want as long as they are the same and at a 90-degree angle to the A to B line. The base leg distances are B to 1 and 1 to 2.

A longer base leg distance makes it easier to come up with more accurate distance estimations. This formula, once practiced (say in a parking lot) across short distances, can easily be committed to memory and due to its simplicity, never forgotten.

As always, it is important to remember knowledge, not equipment or money, is the most important single ingredient in your continued survival and well being. The mind is your most important and in many cases your only survival tool. Keep it honed and sharp! •

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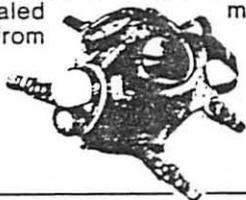
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