

Equipment Needed For Tracking

Tracking, essentially requires very little equipment. A pair of eyes which aided or not, provide nearly 20/20 vision is the only real prerequisite. Other helpful items might include:

- Clothing - Should be appropriate for the terrain and weather, and durable enough to withstand ventures into dense brush and rugged terrain. A broad brim hat may be handy for protecting the eyes from sun, or shading track when the sun is high in the sky. Above all a tracker must be able to work comfortably in whatever environment their in.
- A Walking / Tracking Stick - Is a must, especially for novice trackers. A light durable stick, approximately 40 inches long is best but longer might be preferred. It should have at least two "O" rings or rubber bands on it for measuring distance and stride.
- A measuring device - Such as a tape measure can be valuable when measuring print size or stride. (used as a reference scale in pictures) Small metal carpenters type or fabric / cloth tailor type.
- Small Note Pad and Pencil - to record measurements and fill out track reports. a good drawing of the print will be indispensable.
- Trail Tape - Used to cordon-off evidence or sign, or to prevent trampling of a good track. Plastic surveyors' tape works well, but care must be taken to see that it is retrieved after it has served its' purpose.
- Flashlight - Flashlight can be important when light is not at its optimum. Since light plays such an important role in seeing, it is easy to appreciate how artificial light source can be helpful.
- Mirror - To redirect natural light low across sign when the sun is high in the sky.

Tracking is not an equipment-intensive pursuit, Sight, Patience, Perseverance, and Determination are what are required to be a tracker. The above mention equipment is helpful, but the brain and body are the primary tools of the trade.

Track Identification

As soon as a track is seen, a detailed sketch should be drawn. Since you may have to describe the track to another team, identify it in a court room, or describe it over the radio. The sketch should be detailed and described in such a way that other people can draw the same sketch from your description. Shoe treads and any special markings or deformities of the track should be noted. With the proliferation of modern footwear, it may be impossible to verbally describe the sole pattern in a reasonable amount of time. Many patterns are comprised of a combination of basic patterns.

You must consider the following:

Right or Left - Are the tracks mirror images?
 Basic Type - Are they flat (no heel) or heel and toe.
 Shape: Toe - Pointed, Rounded, Box square

Heel - Leading Edge - straight / curved

Instep - high or low

Size -

Take measurements like in the picture.

Sole Pattern -

- General - Boarder, nails, stitching, labels, trademarks, numbers.
- Pattern Type -
 Plain (no pattern)
 Regular
 Irregular
 Mixed
- Regular - Bars, Broken Bars, Ripple, Tire Tread, Herringbone, Diamond, Fish Scale, Honeycomb.
- Irregular - Concentric or Suction Cup Circles, Semi Circles, Arcs, Straight, or Curved Bars, Direction of Bars, (Diagonal) Chevrons, Crossed Bars, (90 Degrees) Lugs, Stars.
- Mixed - Regular or Irregular

Heel Patterns:

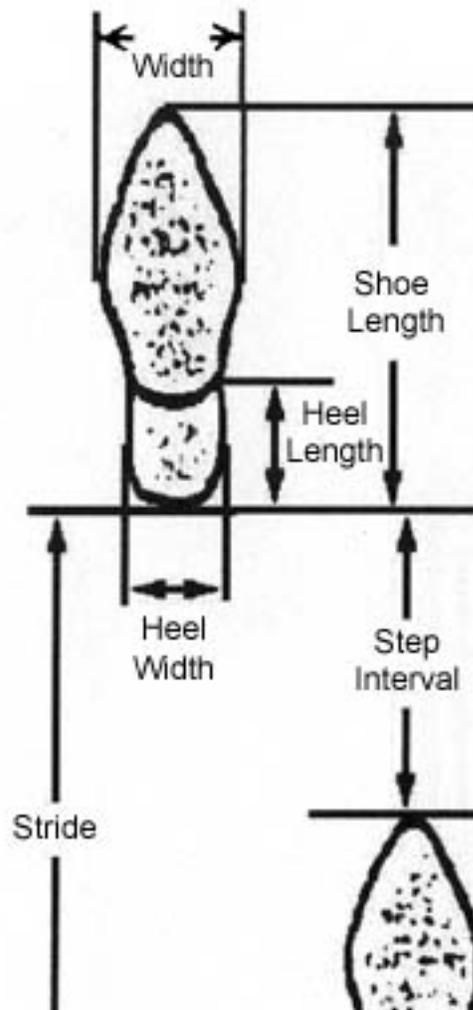
Distinct?

Nail Holes?

Slanting?

Rounded Edges?

Unique Features - Cuts, Worn Spots, Heel Plates, Anything that would make it different.



Gait: Toes in or out, heel dig, possible limp.

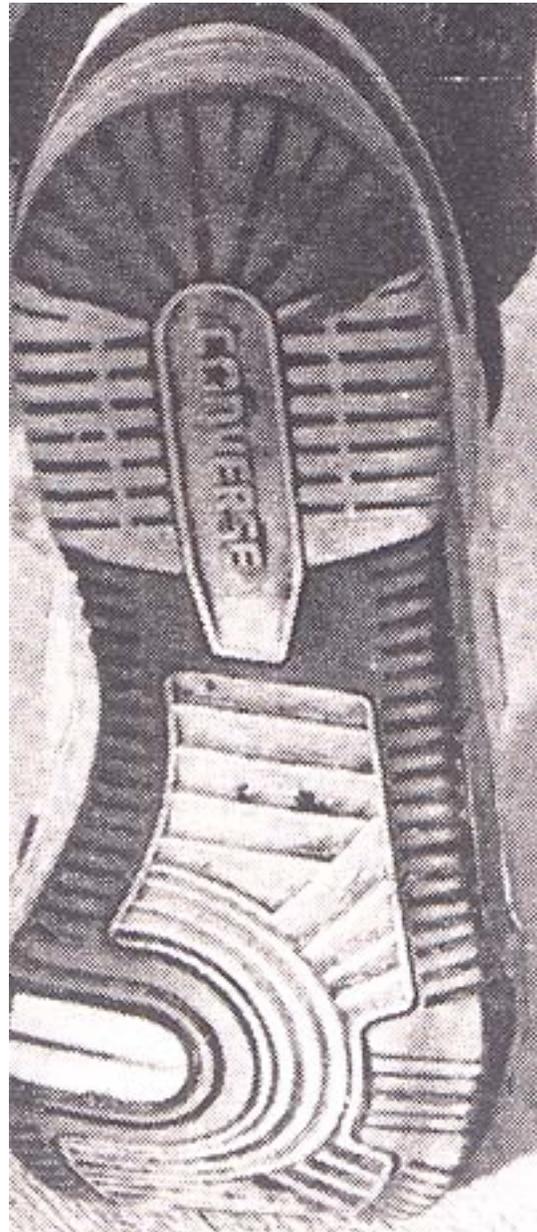
The Following are common types or track:

Sneaker - Molded heel and toe, usually plain or fine pattern that doesn't show or no pattern border.

Gym Shoe: Flat (no heel) coarse pattern, usually irreg. geometric shapes with define border.

Lug Boot: Separate heel and toe, coarse lug and star pattern.

(Montagna Vibram, Security Vibram, Klettersshuh)

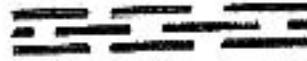


[Track Identification Form](#)

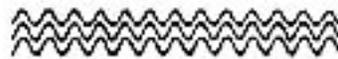
Solid Bars



Broken Bars



Wavy Ripple



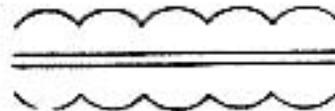
Herringbone



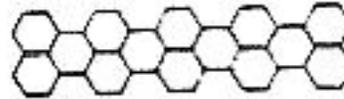
Diamond/Checkered



Tire Tread



Honeycomb



Fish Scale



Your sketch should also include:

- Date
- Time

- Location (GPS)
- Heading (North, South, East, West)
- Uphill / Downhill
- Ground Description (Clay, Sand, Grass, Leaves, Mud)
- Weather (Foggy, Windy, Rainy, Sunny)
- Right or Left Print
- Trackers Name (Who ever did the original drawing)

Some basic patterns are shown in the figure above . Also the terms medial, lateral, "Along the length" or "Along the width" should be used to accurately describe positions of patterns on the sole.

The track depth may also give a clue that the track belongs to the missing subject. Multiple similar tracks could be present on the trail. If the missing subject is known to be heavy or light the difference in tracks could be the track depth.

The searcher must compare the compression left by themselves to gauge the relative depth of the found track. Variances in depth may indicate that the subject is favoring one leg, has changed their load, or is changing their speed. Note: changes in ground pack will also create depth variances. Running accentuates the heel and the toe depression and tends to elongate the track. Frequent stops along the trail with prints facing the opposite whereabouts indicate that the subject was uncertain of their direction and the trackers should be on extra alert for a deviation from the main trail to cross-country travel.

Rarely can parents or relatives describe the sole pattern of the missing person's boots or shoes. They may however know the size, type, manufacturer, or the place where the footwear was purchased. If necessary the sheriff's department will contact the distributor to gain print information. The table below shows the correlation between adult male shoe sizes and tennis shoe prints is given as reference information.

Shoe Size	Overall Length	Ball Width	Heel Width
7	10.75	3.625	2.625
8	11.125	3.750	2.750
9	11.500	3.875	2.875
10	11.750	3.875	2.875
11	12.000	3.875	2.875
12	12.375	4.000	3.000

Identifying the barefoot track requires slightly different measurements. Although there is no tread pattern to report, irregularities may help to identify the track. Barefoot tracking may be applicable to children that walk away from campsites, travelers who venture out in unstable footwear and lose their shoes while tumbling down hills or crossing streams, or for criminal investigations.

When describing and measuring the footprint one should report the overall length, width at the ball, the heel width if these are available. In addition one should note where the three middle toes reach on the toe line. The toe line is created by drawing a line from the outer most tip of the big toe to the outer most tip of the little toe. The three middle toes are each described with their relative position with respect to the toe line. For example the three inner toes can be described as all lying forward of the toe line having the base of each toe rest on the toe line as is shown in the figure to the right. Also one should report the location of the instep along a line drawn from the center of the big toe to the center of the heel.



Human Strides and Paces

The stride created by a person will be unintentionally fairly consistent normally keeping the same stride unless there is a change in grade or direction. The toes of the feet are normally pointed outward. Wandering indicates that the subject does not have a destination in mind and is wandering in hopes of recognizing something familiar. Many prints in a given section traveling in different directions may confuse the trackers. If the tracks become confusing it may be best to travel in a circle around the area in an attempt to locate the exit path rather than to attempt step by step tracking through the maze of available prints.

Running will cause a person to have a greater stride and to travel with the toes pointed straighter than in a walking mode. If the person is running in a "heel to toe" fashion as is the case with long distance runners, the heel mark and the toe mark will be more pronounced. If the subject is running as a sprinter would, only the ball of the foot will be visible and the toe will be accentuated. Flatfooted runners would present a complete track with a deeper toe depression. If the heels are abnormally deep without toe depression accentuation, the person may be traveling backwards. (More probable in criminal investigations.)

If the subject is running and is bleeding, any blood drops would splash in the direction of travel. This could be useful in an accident scene if a person panics, leaves the scene in an attempt to locate help, and becomes lost.

Limping will cause one leg to create a deeper depression than the other. In addition the stride will be different stepping right to left foot than the stride stepping left to right. Serious leg injuries or becoming extremely tired may cause the drag one or both legs as would be presented as unclear tracks with a dragging disturbance connecting tracks. A decreasing stride is expected whenever someone travels up or down hill.

Any track or sign is considered evidence until proven otherwise. Treat all track and sign as if it positively identified as being that of the person being sought. One track or sign has been destroyed it cannot be reconstituted. It is lost FOREVER! The destruction of track, clue or any sign not only chips away at finite body of information, it reduces your chances of meeting your objective. If that objective is finding a lost person, destroying tracks, clues, or any sign can literally mean the difference between life and death.

Beyond Simply finding track and interpreting sign, a tracker is obligated to protect it. Remember, any clue is important, no matter how small or seemingly insignificant. Do Not Move from one place to another without being track aware. An Untrained person stepping on a good sign or track is unfortunate. A Tracker or Searcher doing the same is Inexcusable.