

**Tracking vs. Trailing or How to Teach a Working Dog
to Follow One Individual's Ground Scent**
by Deborah Palman

I've trained tracking and trailing dogs using all sorts of training systems. I've used the Glen Johnson method (the USPCA national training seminar was held in Maine many, many years ago, and he was a speaker), Schutzhund methods, "police" methods and scent discrimination methods. I've come to the conclusion that the best method to find missing persons or suspects is the way traditional bloodhound trainers work, emphasizing scent discrimination and going from there. Unfortunately, many patrol dog training programs don't use these methods. They just go out and lay tracks and assume that the dog gets the picture.

Schutzhund methods cause similar problems, because, in general, contamination or scent choices are avoided or ignored for most of the dog's training. Schutzhund and other competition methods are sometimes good for starting a dog in tracking and instilling work ethic, but if the handler's goal is a high score, the handler usually ends up influencing the dog's behavior so much that the dog is no longer using its natural abilities to solve problems, and/or the precision breaks down under the stress of real world conditions of thick cover, patchy scent, etc. Unfortunately, Schutzhund and other European tracking methods emphasize sticking close to the footsteps of the tracklayer, something that is not always the best way to follow an individual utilizing scent discrimination.

Dog teams that train using scent discrimination methods are the teams that consistently trail people the best. Usually these are bloodhound or specialty trailing teams because patrol teams often don't have the time to train the way they should in tracking/trailing.

Tracking vs. Trailing

What is the difference between tracking and trailing? Really, they both attempt to accomplish the same goal - to follow the scent left on the ground by a person passing through the environment. Since the dog should follow only one person at a time, and not switch from individual to individual, both terms apply to following the scent left on the ground by a particular individual.

There has been a great deal written on what the dogs are following while ground scenting. In the past, some experts felt that dogs followed the "crushed vegetation" or mechanical environmental disturbance created by a person passing over the ground. Others pointed out that each person sheds skin cells, gasses, oils, etc., that drift on the wind and are directly deposited on the ground by contact. Experience with tracking or trailing dogs shows that there is no doubt that dogs call follow all of these factors, and that they can tell one individual's ground scent from another individual's ground scent.

More experience and scientific research has shown that dogs can tell the age of a track, and can, when properly trained, determine the direction of a track, that is, proceeding forward or backward on the track. The theory is that if the dog moves forward in the same direction as the

tracklayer, the track seems to stay the same age, whereas if the dog moves backwards against the direction of the track, the track becomes relatively "older" faster.

Given that properly trained dogs can do all these wonderful things with ground scent, why do dog trainers talk about "tracking" and "trailing" dogs as being different? Well, I can understand why the "trailing dog" camp, like bloodhound handlers, want to split away from the tracking dog camp, because the "trailing dog" handlers understand that if you want to effectively and efficiently follow the ground scent of an individual, you need to teach your dog scent discrimination. Scent discrimination is taught to narcotics and other detector dogs in a structured and progressive way. Most "tracking" dog handlers don't do this, and end up with "crushed vegetation" dogs or some other variation of ground scent. In short, if you want to get an excellent score in Schutzhund at the lower training levels, teach your dog to track using those methods. If you want to catch bad guys and find lost kids, teach your dog trailing, that is, scent discrimination. You won't score well at the competition tracking trials, but you will find people.

Recently, I was asked to make comments on FEMA terminology for tracking and trailing dogs. Since FEMA "types" dog teams by "scent discriminating" or "non-scent discriminating," I suggested avoiding the whole tracking vs. trailing terminology debate by calling them ground scenting teams and using the typing categories to sort them out. Hopefully such typing will cause tracking dog handlers to think hard about whether or not their dogs are scent discriminating.

Teaching Scent Discrimination to Ground Scenting Dogs

Teaching scent discrimination to a ground scenting dog is similar to teaching scent discrimination to any other type of detector dog. A narcotics dog is first taught to associate the scent of narcotics with a reward. A trailing dog is first taught to associate following and finding a tracklayer with a reward. Then, once the dog is doing a reasonable job at searching and finding the target odor under simple, non-discriminating circumstances, the training is changed so that the dog has choices besides the target odor. In narcotics, "distractors" like PVC, narcotics container materials, cutting materials, food, toys and other dog-attractive substances or substances that might exist in the environment are presented along with narcotics scent so that the dog has to make a choice between the distracting scent and the narcotics scent. This choice should always be made without help from the handler, so the handler does not become part of the decision making process.

In trailing, the dog should be exposed to choices between the scents of different individuals as soon as the dog becomes proficient at following easy trails and getting a reward from the tracklayer. During the first part of the training process, the dog is introduced to using a scent article to identify the target scent, and the scent article is integrated into a start routine so that the dog relates the scent on the scent article with scent on the trail.

Scent discrimination choices for trailing dogs are done with "split" trails where two people leave from the same point at the same time, so the dog has to make a choice based on scent and not the age of the track. The dog must choose the correct ground scent trail based on

the scent article introduced at the start, or it does not find the tracklayer and get a reward. Like narcotics, the choices progress until the dog chooses the correct target scent reliably in training situations with increasing difficulty. My training experience tells me that dogs innately understand the idea of individuals and following one person at a time. When an identifying scent article is used at the start, many dogs welcome the information, or they would not know who to track in a contaminated environment. Some handlers work hard at trailing, have dogs that are naturals at the work, and provide training that doesn't interfere with the dog's natural ability, so they end up with dogs that find people, even if they don't do specific scent discrimination exercises, because the dogs learn scent discrimination as part of the process.

Other training programs don't spend the necessary time needed for scent discrimination work in ground scenting. They fail to recognize that human scent persists on the ground for days, that there is a lot more contamination in our training areas than we usually acknowledge, and allow the handler to unduly influence the dog. When this happens, the dogs learn to either 1) follow the freshest track in the environment because that is what the handler usually makes the dog follow and what the dog is rewarded for, and/or 2) follow the handler's body language along with whatever ground scents are available.

To prevent these problems, scent discrimination work should progress beyond working splits to working with cross tracks and highly contaminated environments. Scent discrimination training doesn't take a great deal of time, and simple split trails are quick and easy to do as long as there are a number of people available to lay tracks. Paying attention to the scents that might be present in the area, understanding how ground scent works and how to set up training trails takes effort and experience. If you have ever watched a good trailing dog team work, you can see that the dog acts as if there is only one track in the area, even if the trail is laid through a crowded shopping center.

Teaching "tracking" dogs to scent discriminate will greatly enhance their ability to find people in actual deployments. There are a number of trailing references that outline how to work split tracks and scent discrimination. I can't begin to cover all the fundamentals of scent discrimination trailing in one article, but I would like to mention one component that most tracking and some trailing dog handlers neglect.

Negatives - The Often Overlooked Exercise in Ground Scenting Training

An important aspect of detector dog training is working negatives. A "negative" means deploying the dog to search in an area or environment where there is no target scent available. The beginning work with detector dogs emphasizes rewards for successful detection of the target scent, so initial training has many repetitions with the target scent available. Dogs will develop a "time clock" or effort clock in their heads, expecting to encounter the target scent within a particular amount of time or after a certain amount of searching. If they don't find the target scent when their previous training has always allowed for this, dogs often don't know what to do. They may shut down or stop searching, or they may give a "false" indication because they feel an expectation from the handler or the situation that they should be finding something and/or giving

an indication. When this happens in tracking, the dog may overshoot corners, or lead the handler on in an extended search, “fake” tracking or follow what some call “ghost trails.” An important part of detector dog training has to be showing the dog that it is OK and proper NOT to find the target scent in every search. In trailing, the dog needs to go a step further and should stop searching for or following the target scent if it is not present.

This is extremely important in ground scenting work, because the handler follows the dog, who leads the team along the trail. As soon as the dog loses the scent, it must stop and turn back or indicate to the handler it has lost the scent, or the team will continue forward off the trail. All narcotics dogs have to do is to not give false indications when there is no scent. They “search” for scent all the time and then indicate when they detect scent. Tracking or trailing dogs need to go a step further with negatives – they need to indicate the “loss of scent” or the handler will continue to follow them as they move off the trail. In a sense, the dog on a trail “indicates” the presence of the target scent by following the trail, and needs to stop “indicating,” or following when the target scent is absent.

Most narcotics and other specialty detector dog handlers and trainers regularly search environments with no target scent and give the dog praise or a reward for the dog's effort, even if the dog doesn't find something. Unlike narcotics, explosives and other detector dogs that spend 95% of their search time outside of target scent and maybe 5% of their time working target scent, we want ground scenting dogs to spend 95% of their time on the target scent and to minimize their time out of scent. To make things worse, ground scenting dogs encounter all sorts of similar contaminating trails or ground scents in areas they work. Yet tracking dog handlers rarely incorporate negatives into their structured tracking training. Not doing "negatives" in tracking leads to a number of problems: 1) The dog feels obligated to track something, so they take the wrong person's track, or an animal track, and/or 2) The dog continues to search and pull as if it was tracking when it loses the scent, because this sometimes leads to a successful re-acquisition of the track, or because the dog doesn't know to stop moving forward when the scent is absent, in other words, indicate the “negative” to the handler.

Along with teaching a dog to follow a ground scent, part of trailing work includes teaching the dog to search for a trail in a large area. Often a trailing dog team does not have a specific “point last seen” to start with, so the team has to search for the trail or a start. Once a dog with good hunt drive is introduced to the concept of searching areas for the target ground scent, it can be hard to get them to stop hunting when they lose the trail because they naturally switch from following the trail to searching for it. It can be difficult for handlers to tell “following the track or trail” behavior from the “searching for the track or trail” behavior, if the dog does not communicate a negative well.

The solution to this problem is to teach the dog to stop moving forward when it loses the trail scent, rather than to continue forward searching for it. A further refinement is to teach the dog to give a specific indication behavior when the dog runs out of the target scent. Bloodhounds traditionally are taught to jump on their handler when the target scent is not present. I taught my current dog to come back to me and sit when she cannot find the target

scent within the area I have asked her to search. This is simply part of teaching the dog “negatives.”

Teaching negatives can start with teaching a negative start. In this exercise, the handler goes to an area where there are either no tracks at all (this can be hard to know in some environments, unless it is after a fresh snowfall), or an area where the target tracklayer has never been within the last week or two. In this area, the handler does his trail starting routine just like there is a trail present for the dog to follow. After being started as if it was going to track, the dog is allowed to cast around the area and the handler can observe the dog’s behaviors, which will represent “searching for a trail” behaviors rather than following a trail behaviors. This can be very revealing as high drive dogs that haven’t been taught negatives often pull and search very hard, just like they were trailing, with some notable exceptions in behavior. Each dog is different, but dogs on trail usually work at a moderate pace and do recognizable, flowing, “nose surfing” or “scent following” behaviors, where as dogs that are searching for a trail just pull hard without the same body language.

In the negative start, the handler needs to restrict the dog’s range of searching, or lead the dog on a short lead in a systematic search through the designated area. This is done with a dog that has learned to follow ground scent proficiently, and after scent discrimination training. Usually, after the dog has searched the circle or area, found no tracks and may have tried to pull out of the area to another area, the dog will look back at the handler. Some dogs will just quickly glance at the handler and keep trying to search, like they just can’t believe there is no track, and others will come back and look hard at the handler like they are thinking: “WTF? No track?”

As soon as the dog looks back and gives the handler the “what is going on?” look, the handler should praise the dog, take off the harness and end the exercise. After several negative starts, the handler should be sure to do a short positive start where the target scent and tracklayer are available to the dog. Be sure that the same starting ritual is used on for both negative and positive starts so the handler is not giving any information to the dog.

Some handlers just read their dog, and when the dog stops trying to search, they know that the target scent is not available. Others teach their dogs a specific “no target scent available” behavior, like a jump on the handler or a sit in front of the handler. This comes in very useful when a scent specific dog is used to check locations for a scent, like on recent public “sightings” of a missing person, or of a suspect. The dog can then be used to help confirm or dismiss these sightings.

The no target scent available behavior can be very useful while trailing, like when the dog comes to where someone has been picked up by a vehicle, or when the dog loses the trail and tells the handler this with the negative indication rather than just wandering off or continuing to search.

Once the handler has done negative starts in “known” exercises, they should recruit a friend to set up several locations where there is no target scent and one with a short positive track. The starts should be presented to the handler as unknowns or blind problems. If the team does these successfully, with the dog showing a negative on the negatives and successfully doing the short positive, then the handler’s body language is not influencing the dog.

Another version of “negatives” while tracking is to lay back tracks. In a back track, the tracklayer retraces their steps exactly, and then turns off the track at an equal to or greater than 90 degree angle. When doing this pattern, start small, retracing 10 or 20 steps, then make the problem harder with more length to the retracing. When first presented with this problem, many trailing dogs act as if they can’t believe that the trail does not go forward and search aggressively beyond the end of the back track. This is because, in training, most trails and corners are laid such that, if the dog searches 180 degrees forward of the handler, the dog will be able to find the trail. Unfortunately, in real life, trails have acute corners and back tracks. In these situations and in different wind and cover combinations, dogs will overshoot corners and have to learn to search behind the handler to re-acquire the track. If the dog’s training has included too many straight or “forward direction” tracks, or the handler helps, pressures or influences the dog too much, the dog will become accustomed to searching ahead of the handler and will not search behind the handler. Doing back tracks can help dogs to learn to search 360 degrees around the handler when they lose the trail. Back tracks are common on real deployments but are rarely practiced in training.

If a dog can’t search backward on the track and solve back track training problems, or gets too hectic and stressed, the handler should help the dog by slowly directing its casting back towards where the tracklayer left the back track. When teaching the dog back tracks, the handler should know exactly where the tracklayer went, so he or she can assist the dog if needed and learn to read the dog. The best way to work back tracks is to do them before the dog gets too committed to always going forward. Handlers need to use great patience and repetition when teaching back tracks to dogs that are highly committed to searching in front of the handler. Like all of trailing training, the handler should help or influence the dog as little as possible. I find that doing back tracks on a regular basis really tightens up the dogs’ ability to make corners, as the dogs learn to stop moving forward immediately when they lose scent.

Once a dog is following trails well, practice trails need to be laid in patterns that vary. Doing any one type of trail, like a big loop, a trail that is generally straight, or one with corners that always occur at some physical change in cover, etc., too many times will create a searching habit in the dog that may keep it from being able to solve more complex trails. This is why mixing up your tracklayers and trailing venues can help to keep training from becoming repetitive. Some of the best advanced tracklayers are people who don’t know about trailing, because they lay tracks like real people, back tracking, turning, loitering, etc. Recording these tracks with a GPS and following them with the GPS or a coach for help can reveal weaknesses in the team’s training. When a problem is encountered, the team should work on that one problem in short and fresh tracks before adding the problem back to longer and older tracks.

In Summary

We all develop training habits based on how we were taught and what we get used to doing. Trailing or scent discriminating ground scenting is one of the hardest training areas for police and SAR dog handlers because it involves the dog following a target scent for long

periods of time and having the dog indicate a loss of scent quickly when the dog loses the target scent in an environment that contains many distractions and contamination. Scent discriminating ground scenting should be approached like any other type of scent detection training: teaching a target scent, practicing scent discrimination (split trails), training with distractions and training negatives. Negatives are probably the most neglected area in trailing work, leading to dogs that overshoot corners and take their handlers on “ghost trails.” Handlers and trainers need to plan trails carefully when training, as they are dealing with ground scent that is invisible to the human eye. When working with scent discrimination, careful attention has to be paid to where the tracklayer has been in the last few days, as well as to the integrity of scent articles used to target the dog. Training tracks or trails have to be varied and include negative problems so that the dog does not develop fixed habits in training but is able to follow a variety of track patterns in a variety of terrains with different distractions and difficulties.