

AIRSCENTING TACTICS

Some Basic Search Patterns

By Judy Graham

Search for missing persons requires fast, thorough coverage of rather extensive areas. Fast, because the subject's life may depend on a speedy find. Thorough, because the subject may be missed by a haphazard search.

Ideally, the handler will plan his search pattern to ensure that his dog works downwind and within scenting range or all points within the assigned sector. Practically, he may find he has to make trade-offs between "fast" and "thorough," depending on time allotted, difficulty of terrain and weather conditions, priority of area, etc.

It is essential, however, that he be able to estimate and report to Base the thoroughness of his coverage. This includes being able to mark his route on the base map and show any gaps in coverage and any alerts which his dog was not able to follow to their source. (These unexplained alerts may prove to be extremely valuable clues to the subject's location. Watch your dog!)

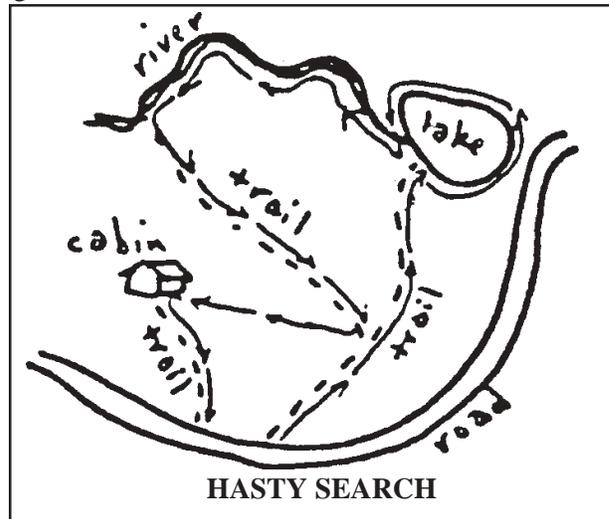
A SAR dog handler develops search techniques that fit his personal skills in land navigation, his physical ability, and his dog's mode of ranging, scent follow-up, and physical condition. Search patterns must be varied to take advantage of terrain, microclimate, vegetation; and probability of detection.

Typically, the search area (or high probability zone of the search area) that is assigned to the dog teams is divided into sectors. Each sector is defined on a map. Wherever possible, easily recognized terrain or cultural features (creeks, ridges, roads, trails, edges or fields, etc.) are used for boundaries. Sometimes in very flat terrain with little variation, or at night when features may not be recognized, boundary may be a compass azimuth from a known starting point. For example, a half-mile by quarter-mile rectangle surrounded by roads might be divided into two sectors by two dog handlers proceeding on a north (360° bearing) through the middle of the rectangle and one searching west and the other searching east. Flagging or string line may aid in establishing the common boundary.

Having once determined the sector on a map, the handler must decide how best to search it. Search patterns include

- **hasty search,**
- **grid sweeps,**
- **contour sweeps,** and
- **ridge/drainage search.**

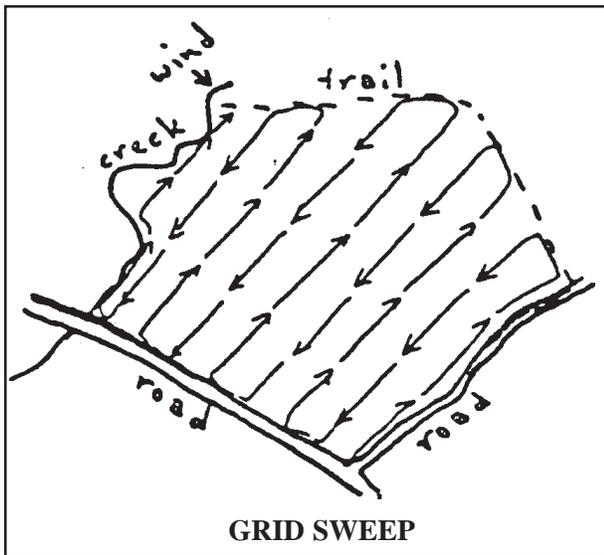
Examples of **hasty search** are running trails and logging roads, covering the perimeter of the area, and checking hazards and attractions within the area.



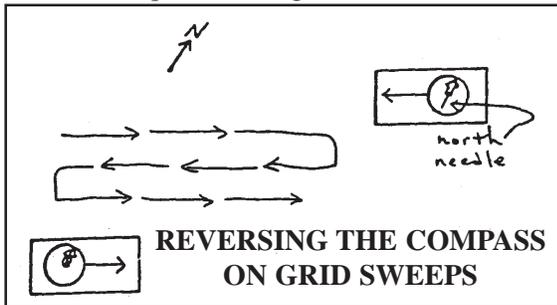
When the sector boundaries may be confusing, or if the boundaries consist of natural routes of travel possibly taken by the subject, the searcher may initially perform a **perimeter search**. That is, dog and handler follow the sector boundary from the beginning all the way around and back to the beginning. If there are confusing areas (low flat ridge in woods, breaks in fence, etc.) that might subsequently cause confusion, the handler may want to hang some crepe paper flagging or make note of the area to maintain orientation during later sweeps of the search sector. One disadvantage of a perimeter search is that, with a strong prevailing breeze, dog and handler will be upwind part of the time. On the other hand, it ensures good coverage of the sector boundary, an "area often missed."

A **grid sweep** is the typical pattern for most searches in relatively flat terrain.

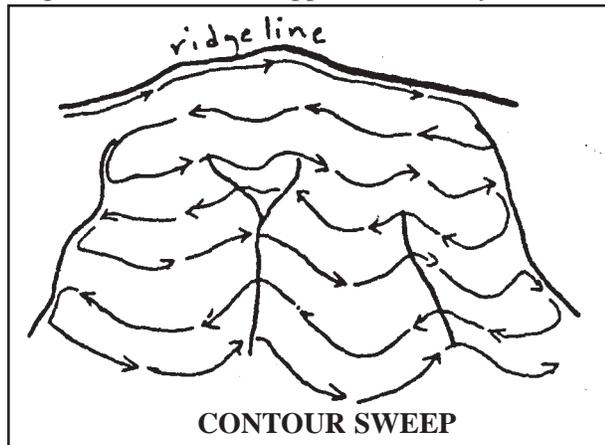
The dog team begins on the downwind boundary, working across the wind, and makes parallel passes through the entire sector. By working crosswise to the wind, the dog will have the same scenting advantage on return sweeps. Distance between sweeps will be determined by terrain and vegetation, wind speed, etc. On a cool, overcast morning in open woods, sweeps might be widely spaced. At midday in June, in dense brush or broken terrain, a victim could be *missed* at five yards.



Handlers should use their compass to ensure, that coverage is uniform and a reasonable interval between sweeps is maintained, with no gaps. Grid sweeps require only one setting of a Silva-type compass. The return sweeps are accomplished by boxing the compass needle with the south end in the north end of the box. In unfamiliar country at night, grid sweeping is probably the only search method that ensures adequate coverage.

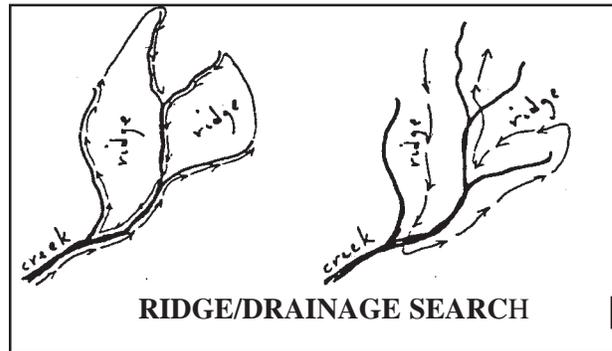


In steep country, there is a generally prevailing up-draft breeze during the day. A good search technique for this situation is **contour sweep**. The dog team climbs to the top of the sector and starts on the highest boundary, then traverses the sector by working across the slope, maintaining elevation until the opposite boundary is reached.



Dog and handler then drop down the boundary a reasonable distance and "contour" back. An advantage of this technique is that the sweeps will generally run crosswind to the upslope breeze, and "contouring" is definitely an energy-saver for the handler. At night, with downslope winds, the pattern should begin across the bottom and work upward.

As the name implies, **ridge/drainage search** is most effective in areas with a well-defined system of ridges and drainages; however, airflow on relatively flat land may follow the same pattern: downdraft at night, updraft during the day. To take advantage of this, the handler might work up drainages at night and down ridges during the day. (In Virginia and nearby states, drainages may be vir-



tually impassable because of greenbrier, etc.) A disadvantage of this method is that it may leave sizeable areas unsearched while, concentrating search activity at the confluence of drainages; thus the handler may have to back-track to fill in the gaps.

Whatever the method chosen for sector coverage, handlers must be sure to check boundaries so no gaps are left between adjacent sectors. Any search pattern will have to be adjusted to fit specific conditions. The handler may have to leave a grid sweep to check an abandoned building, a cave, or particularly dense brush. If his dog begins working a scent, he may want to deviate from his search pattern to check out the alert. He should be sure to mark the place he left the pattern so he can resume his search if the alert fails to lead to the missing person. If agency personnel accompany the handler, they may remain behind to aid the handler in returning to the same spot

Written for DOGS-East in Virginia in 1981. Sketches by the author. Included in CARDA's binder since about 1982.