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US ARMY

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FIELD MANUAL

**COMBAT TRACKER
AND TRACKER DOG TRAINING
AND EMPLOYMENT**

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MOS ADDITIONAL SKILL IDENTIFIERS

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The MOS additional skill identifier for an 11B infantryman employed as a tracker dog handler is Q2. The MOS 00C, Dog Trainer, designates a primary skill for an instructor in military dog training. The MOS additional skill identifier for 00C tracker dog training is Q2.

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COMBAT TRACKER AND TRACKER DOG TRAINING AND EMPLOYMENT

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PART ONE
VISUAL TRACKER TRAINING

CHAPTER 1
INTRODUCTION

1. General

This manual deals with a highly specialized skill whereby a group of five soldiers are trained to track an "enemy," being able to "read" the "signs" where he has traveled over the terrain. These five-man teams consist of a visual tracker, a team leader, radiotelephone operator, a coverman, and a tracker dog handler and tracker dog. Although all team members have knowledge of visual tracking techniques and procedures (except the tracker dog handler) the visual tracker, or "scout," has the primary mission of tracking the enemy, determining his direction of travel, number of personnel, and other facts. Should the visual tracker lose the track, the visual tracker will go through the lost track drill to pick up the

enemy's sign and thereby resume the track. The other three team members have the responsibility of protecting the tracking elements, e.g., from ambush or other types of surprise encounter. The mission of the combat tracker team is to reestablish contact with and to collect information about enemy forces; the team avoids contact with the enemy whenever possible.

2. Purpose and Scope

The manual is divided into two parts: the first part explains how the visual tracker is trained; the second part deals with training the tracker dog and employment of combat tracker teams.

Note. FM 20-20 is a prerequisite to this manual relative to dog training.

CHAPTER 2

INTRODUCTION TO TRACKING

3. Introduction

a. Visual tracking is the art of being able to follow a person or animal along a path by the signs they leave. When a man or beast moves across an area they alter, to a varying degree, the visual appearance of the ground and/or vegetation. It is by these unusual appearances that a visual tracker is able to follow and track his quarry. Animals do not try to conceal their tracks and have set characteristics, which when known, make tracking them comparatively easy. The enemy, however, may be keen and skillful and will generally try to conceal his tracks.

b. Tracking is a very precise art and all trackers, if they are going to achieve and maintain a high standard of tracking ability, require a considerable amount of practice. There is a great need to be able to interpret signs left by an enemy, as this will disclose important information about him. It should be remembered that it is most difficult even for small groups to move across any terrain without leaving some sort of sign noticeable to the trained eye.

c. When locally enlisted civilians are used as visual trackers, it should be remembered that they will have little or no military knowledge, are skilled only in tracking humans, and may not know the counterdeception drill whereby the friendly tracker team avoids leaving signs the enemy may use against them.

4. Tracking

Tracking is the ability of an individual to perform certain tasks.

a. Locate and identify; to find the track and determine if this is the enemy's track to be followed.

b. Follow human or animal; to be able to follow humans or animals by the signs they leave.

c. Interpret. This, by far, is the most important factor in being able to track. First the sign(s)

must be studied carefully. Then the tracker must—

(1) Be able to recognize the same sign(s) among many others.

(2) Identify the type of person being followed, whether he is lazy, tired, alert, confident; these are indications of the morale and discipline of the unit.

(3) Notice any slight change, no matter how small, in his "sign," and investigate it thoroughly.

(4) Through the "sign," be able to determine and anticipate enemy movement, direction, and deceptive tactics, well beforehand.

(5) Have a complete knowledge of all available signs.

(6) Continuously study the ground and country in relation to the direction and movement of the enemy.

d. Types of tracking. The two methods of tracking by which sign(s) can be followed are:

(1) Visual tracking.

(2) Scent tracking.

These two methods of tracking indicate that the senses of *sight* and *smell* are used. In addition, the senses of *hearing* and *feeling* are used, the latter only to a slight degree.

e. In all parts of the world there are many different areas or locations. There are, in Southeast Asia, for example: rubber plantations, palm oil plantations, pineapple plantations, beluka (tall grass), fern, primary jungle, secondary jungle, bamboo patches (these can cover areas measured in square miles), small rocky areas, mangrove swamps, fresh water swamps, paddy fields, and the scattered squatter and kampong (village) areas.

f. A closer look at rubber plantations will show just how much the tracker will have to know about the areas in which he will be required to track. A tracker in rubber plantations must know

the tracking signs for each type of rubber plantation, and under the following conditions: clean rubber, dirty rubber, untapped rubber, disused old rubber. He would have to know that his dominant tracking signs would differ from morning to afternoon, and before, during, and after rain. But the answer is still the same. He could be tracking signs common to the locality, and to follow them, he would first of all need to know the *before* and *after* visual tracking signs.

5. Factors That Influence Tracking

a. Climate.

- (1) Sun.
- (2) Rain.
- (3) Temperature.

b. *Terrain.* Different types of terrain produce different signs and some terrain is more difficult to track over than others.

(1) *Beluka and secondary jungle.* These are most probably the easiest tracking terrains. Any movement through it is bound to leave considerable *top sign*, especially if cutting is involved. The sign will last a considerable time.

(2) *Primary jungle.* A wide variety of signs will be evident, these include—

(a) Disturbed dry leaves. The damp underside will have a distinctive, darker color (fig 1).

(b) Broken twigs and branches (both green and dead) (fig 2).

(c) Boot impressions in soft ground and rotting matter (fig 3).

(d) Vegetation pushed aside will be in an unnatural position and probably show the light underside of the leaves.

(e) Scratch marks on trees and logs (fig 4).

(f) Broken cobwebs.

(g) Twigs, lying on the ground, although not disturbed themselves, may be pushed into the ground and thus leave an impression.

(3) *Grasslands.* Tracking in high grass is relatively easy. It will be bent and pushed in the direction of travel. A color contrast will be evident also. In shorter grass, the same color contrast will be present, but not so evident (lawnmower effect). Footprints may be found by lifting the crushed grass. Wind and rain will quickly obliterate the track, however.

(4) *Rocky country.* This can be difficult terrain to track in; however—

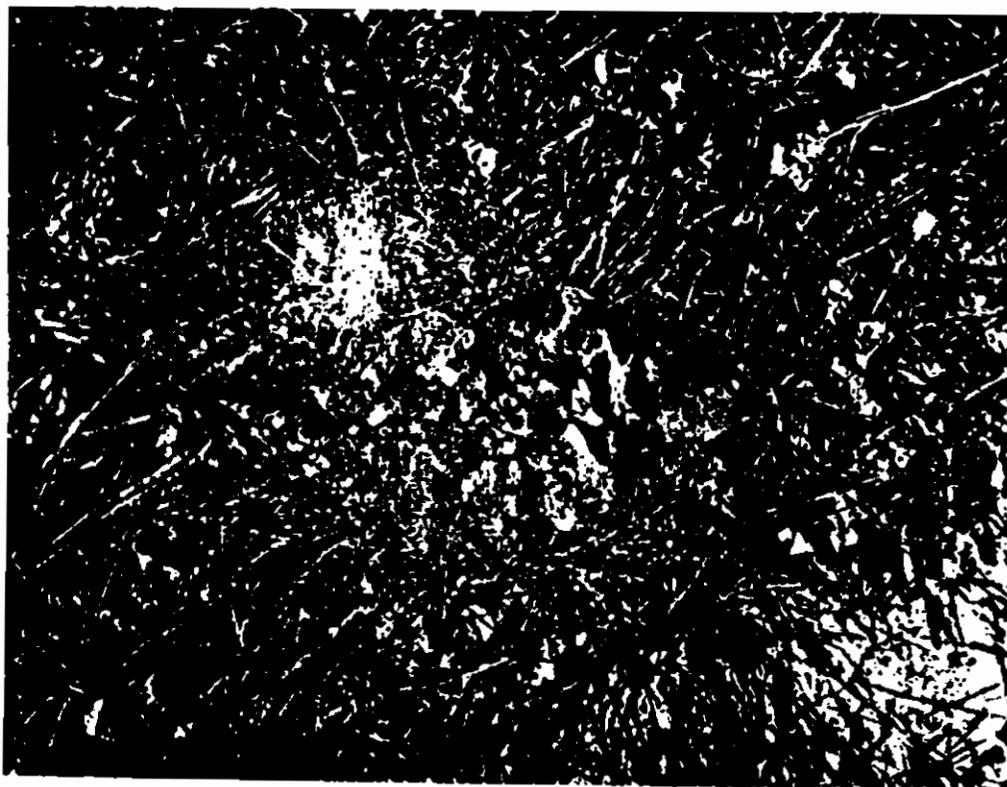


Figure 1. Disturbed, dry leaves.



Figure 2. Broken twigs and branches.

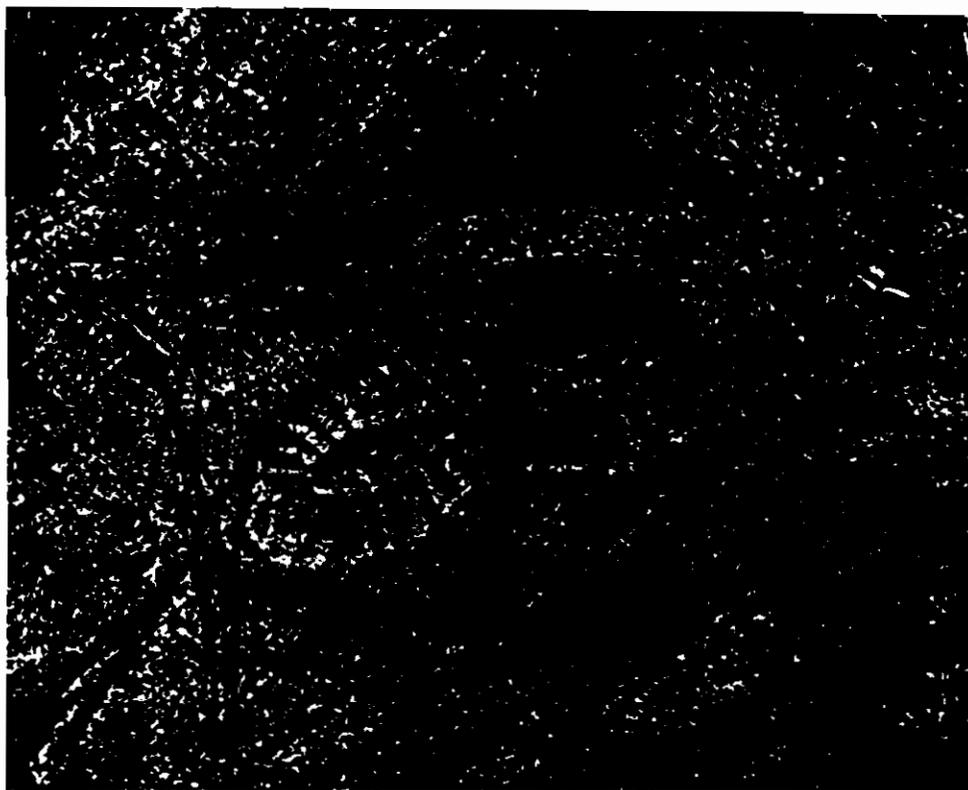


Figure 3. Book impression in soft ground.



Figure 4. Scratch mark on trees and logs.

(a) Smaller stones or rocks will be knocked out of their resting places or pressed into the ground. (The underside is usually dirty while the upper side is clean). The exposed soil is usually obvious.

(b) Nailed boots may leave rock scratches, and rubber soled boots may leave black marks on rocks.

(c) Moss growing on rocks will be disturbed.

(d) Crushed insects may be seen.

(e) Sign(s) may be found in the soft area of ground near large rocks.

(f) Enemy movement may be channeled by terrain contours.

(5) *Sand.* Sand is relatively easy to track in; the biggest problem to the tracker is wind. It may obliterate marks and impressions made a few minutes before. The main points to be considered are—

(a) If the surface tends to be hard, the footprint is very clear.

(b) If the surface is soft, the footprint will be quite deep. In the early morning and late afternoon, the walls of the impression may cast a shadow.

(6) *Rivers, streams, marsh, bog, and swamp.* Contrary to general belief, tracking is possible in these areas. In most cases it is made relatively

easy by the marks left behind. Types of signs are—

- (a) Footprints on the banks.
- (b) Footprints in shallow water.
- (c) Mud stirred up, discoloring the water.
- (d) Rocks splashed with water in a quiet running stream.

(e) Water on ground at point of exit.

(f) Boots may have been taken off to wade the stream; look for spots on the banks where this was done and where they were put on again. Normally, there will be signs where the person sat down to remove or replace his boots.

(g) In mangrove and fresh water swamps, mud will be stirred up. Also, branches will be bent where persons have held onto them to prevent themselves from tripping over roots.

(7) *Rain forest.* When in rain forest or jungle, the tracker will find many ways by which he can track, since it includes undergrowth, live or dead leaves, and live or dead trees. There are also streams with muddy or sandy banks, moss on the forest floor, and rocks. Tracking will be helped by remembering the following details:

(a) Leaves on the forest floor will show up a darker color than those that are undisturbed.

(b) Dry leaves, when disturbed, show a distinct dark brown underneath in contrast to the biscuit color of the bleached upper surface.

(c) Dead leaves also become brittle and crack, or break under pressure of a person walking on them. The same applies for small, dry twigs.

(d) Where the undergrowth is thick, especially on the edges of a forest, the green leaves of bushes that have been pushed aside and probably twisted will show the underside of some of the leaves which will be lighter in shade than the top side. When looking for this sort of sign, the tracker must look *through* the forest, not at it.

(e) Broken twigs will aid the tracker in determining the age of the track. Freshly broken twigs, green or dead, generally are a lighter interior color than the color at the broken edge. This color darkens in time, but if the tracker breaks the twig again he will be able to compare the colors and assess the amount of time since the twig was broken. Only by experiment will the tracker be able to determine the age of the track. Freshly broken green twigs usually retain the smell of sap for 3 or 4 hours.

(f) Boot impressions may be left on fallen, rotting logs.

(g) Marks are usually left on the sides of logs across a path.

(h) Roots across a path or direction of travel may have scrapes or marks on them.

(i) Broken cobwebs across a path may indicate the passage of a human or animal.

(8) *Vegetation.* Different types of vegetation leave different types of signs. Some types of vegetation are—

(a) Large and small trees.

(b) Scrubs.

(c) Clean rubber plantation.

(d) Dirty rubber plantation.

(e) Palm plantation.

(f) Pineapple plantation.

(g) Beluka (tall grass).

(h) Fern.

(i) Bamboo patch.

(j) Mangrove swamp.

(k) Fresh water swamp.

(l) Pine forest.

(m) Hardwood forest.

6. Information To Be Found From a Track

Ideally, a considerable amount of information can be derived from observation of sign(s). A tracker should be able to deduce the following information from a track:

a. Direction the enemy is traveling.

b. *Number of Persons Being Tracked.* This may be estimated by the presence of different types of footprints or by counting the number of prints in one pace. This should be checked frequently for deception. When tracking a small party, the tracker should take a normal pace and then count the number of prints within the pace and divide by two. This will give a fairly accurate answer. Large parties can be counted only by judgment. The tracker may also find conditions where the enemy spent the night or took a break. The tracker then can count the number of positions and thus the number in the party.

c. *Load Being Carried.* This can be determined by the depth and spacing of footprints, and scrapes on trees. At resting and halting places examine the ground for pack and/or haversack imprints, and marks where weapons were set down (bipods, tripods, and rifle butts).

d. *Speed.* This may be gaged by the depth of the print. The deeper the imprint, the greater the speed. Also the length of the stride is im-

portant. The longer the stride the faster the movement of the person.

e. Sex. This can be determined under favorable conditions.

f. Age. This is perhaps the most important information obtainable from the track. The fresher the track, the closer you are. Age is determined by comparison and is difficult for the inexperienced. To determine the age of sign and/or track one must have a good knowledge of local weather conditions and its effect on soil and foliage. In order to gage the age of a sign and/or track these factors must be kept in mind:

(1) *Rain.* If a track was found at midday and there was a heavy downpour at 0300 hours, and the track is clear, the track was made after the rain, and putting it into a 9-hour time bracket. Conversely, if the tracks are pock marked they were made before or during the rain. If the track is pock marked by mist dropping from the trees, an estimate of their age can be made.

(2) *Foliage.* Some foliage will begin to die in a matter of minutes once exposed to the sun after being broken or bruised.

(3) *Sap.* Various types of sap stop flowing and seal up at different times.

(4) *Worm casts.* In the early hours of the morning these are soft. If exposed to the sun for some time it will dry them out. If stepped on they will powder. Therefore, if powdered worm casts are found within the track and it is midday, it is safe to say that they were made at any time from 1 hour after sunrise. This gives a time bracket of 6 hours. Should the worm cast appear as a button, i.e., flat, circular, and hard, it is safe to assume that the track was made after the rain but prior to 1 hour of sunshine. Assuming that sunrise is 0500 hours, the time bracket is cut down to 2 hours.

(5) *Vegetation.* The state and position of disturbed vegetation must be noted. Various grasses and bushes have different degrees of resilience. Only practice and experience teach the tracker to use this as a factor in knowing the age of the track.

(6) *Prints in mud.* The state of dryness of a track in mud or soft ground must be noted. If the track is very fresh, water will not have run back into the depression made by the foot. Later, the water runs back into the depression and the mud which has been pushed up around the print and kicked forward of the print will begin to dry out.

(7) *Game tracks superimposed.* Most wild animals lie up during the day and move at night. If human prints have animal tracks superimposed on them, and the tracks show that the animals have moved in both directions, the human prints are at least one night old. If the tracks have prints only in one direction, then the human tracks were made during the night, after the animal moved down to water and before it has moved back.

(8) *Leaves covering tracks.* The number of leaves that fall onto a track depends on the amount of rain or wind that has been in the area in the past few days. This helps indicate the age of the track.

7. Adverse Factors in Tracking

a. Direct Sunlight. This causes the sign to return to normal quicker than is usual.

b. Strong Winds. Encourages disturbed vegetation to return to normal and may conceal some ground sign.

c. Heavy Rain. This will wash out signs very quickly, especially a ground sign, and can be described as the tracker's worst obstacle.

d. Time. The "colder" the track the more difficult it is to follow. It is the most important factor of all in visual tracking.

8. Methods of Tracking

a. Upon finding a track the following actions should be carried out:

(1) Mark the sign.

(2) Put a competent tracker on it as soon as possible.

(3) Do not attempt to follow it if you are not an experienced visual tracker.

(4) Do not allow anyone to search around the area until the tracker arrives. People moving around may destroy or alter important signs.

b. The visual tracker requires a coverman while on track.

c. Visual tracking is a slow process. The tracker may examine every sign he finds. He may pass some, but he can see others ahead.

9. Deception Tactics

Deception of a good visual tracker is not easy, though he can be delayed. The tracker must be constantly alert for signs of deception on his

track. Such actions as walking backwards or brushing over the track are no real deception. Some methods of deception are—

a. *Walking in a Stream.* Entry and exit points can normally be found. Overhanging branches should be studied carefully.

b. *Fade Out (Jumping Off Track).* Individuals or pairs jump or leave the side of the track as carefully as possible. Careful watching of the sides of the track and constant checking of the number of people being followed should counter this move.

c. *Scatter.* If the enemy scatters, the procedure is to follow the largest group and the easiest track.

d. *Dead End or False Trail.* A search is made back down the trail for the turn off.

e. *Walking Backwards.* Toe and ball of the foot are more pronounced. Loose dirt and leaves will be dragged in the direction of movement. The feet are placed wider apart, although the pace is shorter.

f. *Brushing Over Tracks.* This identifies the track more than it conceals it. Other leaves and dirt are disturbed in the process.

g. *Splitting Up.* Visual trackers working in pairs should detect this procedure.

h. *Tiptoeing.* The length of pace is shorter and toe is more pronounced.

i. *Rock Hopping.* This is extremely difficult to follow if used for a great distance.

j. *Fan.* These tracks will usually meet later on. Follow the easiest track.

10. Searches

When the track is lost there are various methods that can be used to find it; these include the following:

a. *Personnel Search.* The last visible sign is marked and the visual tracker searches in a clockwise direction for a radius of 10 to 20 meters.

b. *Retrace.* The visual tracker checks back

along the track, looking for sign of where the enemy has cut off.

c. *Extended Personnel Search.* This search involves both the tracker and the coverman. The coverman uses a compass to maintain direction. The first visual tracker and coverman move forward for 50 meters, turn 90 degrees right for 50 meters, and then turn 90 degrees right for 50 meters until the track is met. The second team of visual tracker and coverman complete the same procedure, but move 50 meters to the rear before starting. If this search fails, it is repeated using larger distances or a cross-grain search is used.

d. *Cross-Grain Search.* This is searching across the grain of the country.

11. Conclusion

a. To be a competent visual tracker one needs a combination of natural aptitude, good local knowledge, good memory and intelligence, and physical fitness. It is not a subject that one becomes proficient in overnight.

b. Although patience and experience can make the average soldier a tracker, only those with special aptitude and skills will attain or approach the standards of the expert tracker.

c. Visual tracking is a precise art that requires constant practice. It is a slow process but it can yield a considerable amount of information.

d. Patience, persistence, and acute observation form the basis of good visual tracking.

e. The coverman should NOT try to help the visual tracker look for signs. The best way to help him is to be on the alert for the enemy. The coverman must try to see the enemy before the enemy sees the visual tracker. The tracker's life is in the coverman's hands.

f. Remember, as you follow the signs left by the enemy, he can follow you as well. Don't unnecessarily break branches or kick stones or leave your refuse lying about.

g. All soldiers should be taught fundamental tracking. This will teach them to be alert and observant and better able to detect the enemy before the enemy detects them.

CHAPTER 3

TRACKING SIGNS

12. Introduction to Signs

It is fairly easy to identify the difference between animal and human signs, regardless of the type of terrain over which the track is laid. First, there is the shape of the print, and second, the majority of animals make a distinctive "chop" as they move along; whereas the human does not put his feet down or lift them up cleanly. To some, this seems to be elementary; but when you consider tracking across ground that does not permit a clear print, such as rocky or hard ground, it is important to keep this in mind.

13. What Are "Signs"

a. Signs are the telltale marks made on the ground and disturbances of the vegetation made by an animal, man, or group of persons as they pass through an area. There are two kinds of signs: *ground signs* and *top signs*. The dividing line between the two is a line at knee level. Any sign below the knees is a *ground sign*. Any sign above the knees is considered to be a *top sign*.

b. Signs are the essence of visual tracking. The important factors that influence sign and the tracker's ability to follow are—

- (1) Country (terrain, types of vegetation).
- (2) Climate (weather, seasons, rainy, dry).
- (3) Weather (amount of rain, sunlight, wind, since the sign was made).
- (4) Age (how long it has been since the sign was made).
- (5) Visual tracker's ability (is the tracker skilled or a learner).

14. Ground Signs

Ground signs occur where vegetation from knee height down to the ground has been disturbed by passage through the area. Young plants and tree seedlings stepped on or bent over, bruised and scraped vegetation, are considered ground signs. Also, footprints, bootmarks, broken twigs or disturbed leaves, stones or twigs; bruised or bleeding

roots; mud, sand or dirt from boots on leaves or ground vegetation; and water dropped on track are ground signs. Ground signs have two classifications: *large ground signs* and *small ground signs*.

a. *Large Ground Signs*. Large ground signs are found where a large party of 20 or more have passed through any area. The signs are even greater if they are carrying loads. Such marks as kicking or scuffing the ground are usually present. Skid and slide marks up or down hill are also large ground signs.

b. *Small Ground Signs*. Small ground signs are found where a lightly laden group of five to nine have moved through the area. Very often these groups will try to make as little track as possible by placing their feet carefully and disturbing the surrounding vegetation as little as possible. An alert visual tracker would be accustomed to following this type of track. When tracking over flat, bare ground concentration should be centered on such signs as sand on leaves, disturbed grains of sand, and crumpled earth. The tracker should also watch for small stones or rocks kicked or scuffed out of place or pressed into the earth, powdered worm casts, and broken dirt seals.

15. Top Signs

Top signs are found in vegetation that is above knee height. As humans walk through undergrowth which is of varying heights, they must either pass through it or brush past it thus altering its natural position. The most frequent and usually seen top signs are: broken twigs or leaves, scratches on tree trunks or branches, bruised moss, changes in color or natural position of vegetation, wilted and dying vegetation, and cut vegetation. Top signs have two classifications: *large top signs* and *small top signs*.

a. *Large Top Signs*. Large top signs are found where a party of 20 or more persons have passed through an area and leave behind large disturbances to vegetation, even to the extent of breaking off the tops of shoulder-high trees to clear



Figure 5. Top of pine sapling broken off.

a path for members of the party in the rear or those carrying equipment (fig 5).

b. Small Top Signs. Small top signs are found where a party of five to 10 has passed through the area, deliberately avoiding unnecessary disturbances to the vegetation. Certainly, under no circumstances, is there any cutting or breaking of trees or bushes, though leaves may be turned over (fig 6).

16. Temporary and Permanent Top and Ground Signs

a. Temporary signs are the unavoidable marks left behind on the route of travel. Such things as disturbances of the earth, leaf and stick covering, growing vegetation, and disturbed insect and/or animal life alerted by the presence of humans. These signs are termed "temporary" because after a rain the ground and top signs will eventually return to normal and after a lapse of time the insect and animal life will settle down.

b. Permanent signs are signs of a man-made nature that will last indefinitely. These are such things as cutting or breaking vegetation, especially the larger plants, and rearranging the vegetation into unnatural positions, i.e., transplanting vegetation with leaves close to the ground for camouflage of caches or ambushes.

17. Factors Affecting Sign

a. Direct sunlight will adversely affect signs by drying out ground sign and providing the natural element to bring vegetation back to its normal position.

b. Rain will wash away most damage and generally obliterate ground signs. As with the sun, rain will also return vegetation to its normal state.

c. Wind encourages vegetation to return to normal and covers up some signs.

18. Where to Look for Sign

a. Near banks of rivers and streams (fig 7).

b. Roads, paths, and game trails (fig 8).

c. Muddy patches, soft ground, and steep slopes (fig 9).

d. At the edges of clearings, plantations, and flat ground.

e. Thick under growth (fig 10).

f. Where an obstacle has been crossed or channeled the route.

19. Effect of Terrain on Signs

This may or may not assist the visual tracker. The result depends on the type of country he is



Figure 6. Upturned leaves on low hanging tree branch.

in, which may be any of a combination of the following:

a. Grasslands. If the grass is high, that is, above 3 feet, trails are easy to follow due to the fact that the grass is knocked down and stays down for some time. If it is short the grass springs back more easily into its original position and in a shorter length of time. The following points will aid when tracking in this sort of terrain:

(1) Grass is normally trodden down and pointing in the direction that the person is traveling.

(2) It shows a contrast in color with the surrounding undergrowth when pressed down.

(3) If the grass is wet with dew from the night before the dew will be rubbed off.

(4) Mud or soil from footgear may appear on some of the grass.

(5) If dry grass is broken and crushed, blades and stems will be found. Footprints can normally be found in dry grass areas.

(6) If new vegetation is showing through, it indicates that it is an old track.

(7) In very short grass, i.e., up to 12 inches, a boot will damage the grass near the ground and invariably a footprint or impression will be found.

b. Rocky Ground. Tracking through this type



Figure 7. Footprints on near and far sides of streams.

of country is not as difficult as some think. This is due to the fact that rocks are easily disturbed and, generally speaking, easily marked. The following are some points to remember about tracking in this type of terrain:

(1) Unless very large, stones or rocks are either moved aside or rolled over. This will also disturb the soil, leaving a distinct variation in color and an impression. If wet, the underside of the stone will be much darker in color; if dry, it will be much lighter in color.

(2) If moving over large stones, the hobnails and plates on boots will tend to scratch the surface of the rocks.

(3) On sandstone, boot marks tend to be darker in color; on lava, the mark is a shade of white.

(4) If the stone is brittle, it will chip and crumble when walked on. A light patch also appears. The chips can be seen nearby.

(5) Stones or rocks on the sides of hills move slightly or roll away when stepped on, whether the track leads up or down the slope.

(6) Stones on a loose or soft surface are normally pressed into the ground when walked upon, leaving either a ridge around the edge of the stone where it has forced the dirt out, or a



Figure 8. Animal, or game, path leading into dense vegetation.

hole where the stone has been pushed below the surface of the ground.

(7) Particles of stone sometimes catch on the sole of the boot and are deposited farther up the trail and show up against a different background.

(8) Where moss is growing on rocks or stones, a boot or hand may scrape off some of the moss.

c. Rain Forest. Within rain forests, or jungle, trackers will find many ways to track since this terrain includes undergrowth, live or dead leaves and trees, streams with muddy or sandy banks,

and moss on the forest floor and on rocks. Tracking will be made easier by remembering the following details:

(1) Leaves on the forest floor, when wet, show up a distinct darker color than those undisturbed.

(2) Dead leaves also become brittle and crack or break under pressure of a person walking on them. The same may be said of dry twigs.

(3) Dry leaves, when disturbed, show a distinctive dark brown underneath in comparison with the lighter colored upper surface.

(4) Where the undergrowth is thick, espe-



1 On side of low embankment

Figure 9. Foot signs.

cially on the edges of the forest, the green leaves of the bushes that have been pushed aside and probably twisted, will show the underside of the leaf that is lighter in color than the upper surface. When looking for this sort of trail, the tracker must look through the forest instead of at it.

(5) Broken twigs can be used to deduce the age of the track. Freshly broken twigs, green or dead, will generally be a lighter color on the interior than at the broken edge. This color gets darker with time so that if the tracker breaks the twig again he will be able to compare colors and thus be able to gage the amount of time that has

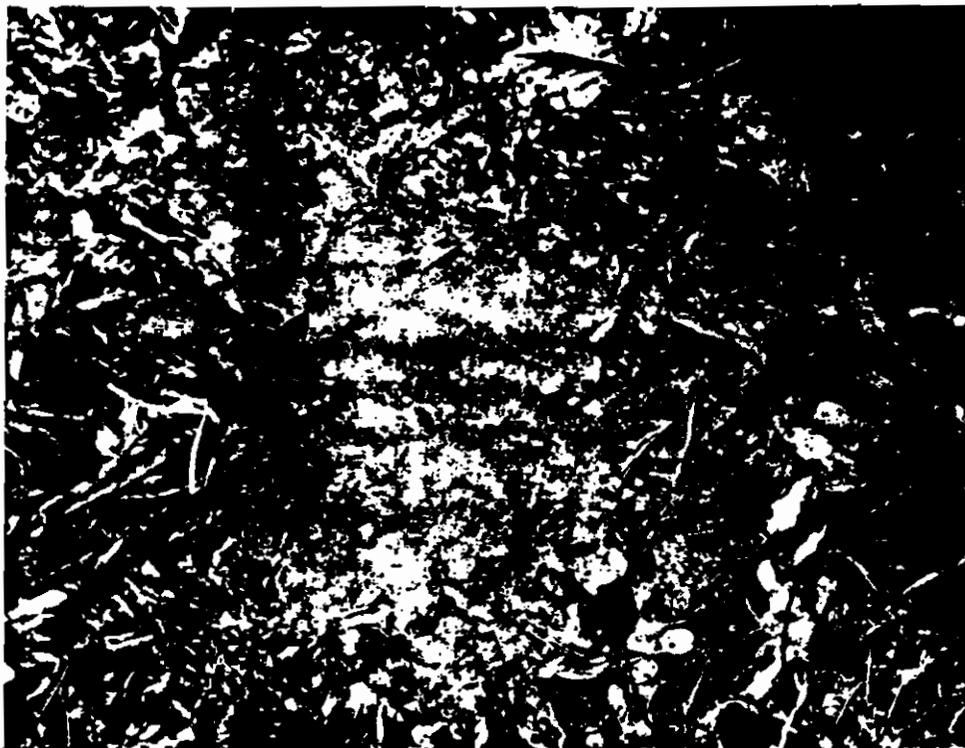
elapsed since the original break occurred. Only with experience and experimentation will the tracker be able to accurately determine the age of the break. Freshly broken twigs will retain the smell of sap for 3 or 4 hours.

(6) Boot impressions may be left on fallen and/or rotting trees.

(7) Marks may be left on the sides of logs which lie across the path.

(8) Where roots run across a path they will show signs of where they have been stepped on.

(9) Broken cobwebs across the path indicate that an animal or human has moved through the area.



2 Disturbed water in wet area

Figure 8—Continued.

d. Scrub (Secondary Forest). This is the type of country where the primary growth has been cleared away and the secondary growth has started. It is usually very thick and hard to penetrate. To do so the individual is sometimes forced to make his way through by crawling along at ground level. When tracking in this type of country the main points to watch for are—

- (1) Broken branches and twigs.
- (2) Leaves knocked off.
- (3) Branches facing the direction that the person has gone.
- (4) Footprints on the ground that show up clearly since little or no grass grows underneath.
- (5) Tunnels (through vegetation) made very low to the ground.
- (6) Broken cobwebs.
- (7) Pieces of clothing caught on the sharp edge of vines and bushes.

e. Rivers, Streams, Marshes, Swamps, and Bogs. Contrary to popular belief, tracking is possible in these areas. In most cases it is made fairly easy by the marks left behind. Signs that the tracker should look for are—

- (1) Footprints on the banks and in shallow water.
- (2) Mud stirred up and discoloring the water.
- (3) Rocks splashed with water in a quietly running stream.
- (4) Water on the ground at the point of exit.
- (5) Mud on grass or other vegetation near the edge of the water.

f. Sand. Sand is relatively easy to track in. The biggest problem is the wind which can obscure or obliterate marks and impressions in a matter of minutes. When tracking on sandy ground the tracker should keep in mind that—

- (1) If the surface is inclined to be hard, the footprint is very clear.
- (2) If the surface is soft, the footprint will be quite deep and in the early morning or late afternoon hours the walls of the impression will cast a shadow.

20. Sun, Rain, and Wind

These are factors that will adversely affect the signs and marks of a track. The degree that the



Figure 10. Type of dense foliage and undergrowth.

track is affected depends on the strength and duration of these elements. Generally speaking, tracks or signs sheltered from rain, wind, and direct sunlight can still be readable up to 30 hours after they were made.

21. Time

To be able to assess the time between when a sign was made and when it is found is the hardest task of the visual tracker. Only experience and practice will help to overcome the difficulty of this task.

22. Conclusion

In any one country there will be different areas or

localities where one type of vegetation will be predominant. In any one locality, whether it be primary jungle, secondary jungle, scrub, swamp, sand, or rock, the visual tracker will have up to 30 signs. When following a track through a specific area or locality, the visual tracker will be using the 30 signs at once. He will in fact be following a combination of three to five signs at one time; and these for only a distance of up to 40 meters. Then, because of the nature of the ground or vegetation, the sign may change. So for the next 30 to 40 meters the combination of signs will be different. Obviously, some signs are common to all areas, such as the footprint. Again, when tracking through different localities, one

would see all the area tracking signs, but not all at one time. The visual tracker should always be conscious of climate, season, and local weather

conditions, all of which will greatly influence the amount and kind of sign left in the area.

CHAPTER 4

THE TRACK FOLLOWING DRILL

23. Introduction

This chapter explains the necessity of a track following drill and also explains why it is divided into seven steps. Anyone who has taken part in a tree trunk cut blazed trail, or other hushcraft exercises, is often a potential visual tracker. The big difference here is that the quarry is not an armed enemy whose main task is to maim or kill the tracker. There are many competent and proficient game trackers and hunters; but here again, animals don't shoot back.

24. Military Tracker

The military visual tracker is faced with a far greater degree of risk and danger. The military visual tracker will be following and hunting an armed enemy who may be well versed in jungle or hushcraft. This enemy can lie in ambush for the tracker, can practice deception tactics, and will often move much quicker than the visual tracker can follow. Therefore, to enable the tracker to follow, regain contact, and report the enemy's position, a track following drill has been developed.

25. The Seven-Step Drill

There are seven steps to this drill. Each step has been included for a special purpose and it is mandatory that every potential visual tracker learn, and at all times follow, this drill. A detailed, step-by-step explanation of this drill follows:

a. Step 1. Assessment of general direction (look ahead 30 to 40 meters for general direction of track).

b. Step 2. Eliminate openings and finalize general direction. If two or more openings appear, by comparing age, eliminate the older track.

c. Step 3. Visually connect the track with your present position. This is to insure that there is not a split track or that no other form of deception has been used by the enemy and that the visual tracker is still on the same track.

d. Step 4. Look through the vegetation to max-

imum visibility for signs of enemy presence. This important step is also carried out before beginning step 1, and the visual tracker is sensitive to the possibility of enemy in the area. Its significance is amplified by including it as a separate step halfway through the track following drill.

e. Step 5. Check areas to the left and right for deception tactics. There are many ways that the enemy can confuse or mislead the tracker. This step is to insure that the visual tracker is not being led astray.

f. Step 6. Memorize footsteps, and mentally note sound-making vegetation. It is important to note that except for step 4, the visual tracker has not moved, that his head is held up with only the eyes carrying out the drills. He must be alert to all sounds, smells, movement, and vegetation in an unnatural state.

g. Step 7. Move forward, not as a tracker, but as a lead scout. When the visual tracker moves, he is most vulnerable. This is when he is in danger of being shot at or walking into a bobbytrap. He must have the track established in his mind and be alert to all areas of danger ahead. When the visual tracker arrives at his next forward sign, he should visually check the area to the front and sides for enemy presence before starting again at step 1 of the track following drill.

h. This track following drill will apply to all areas where there is growing vegetation. (For tracking in desert areas such as found in the Middle East and Australia, the basic principles of this drill will apply; but because of the open ground and dry terrain the drill will have to be modified.)

26. The Steps of the Track Following Drill

a. Start tracking from a definite point where the signs are those made by the enemy. If this is not possible, and the area is where friendly troops have been milling about, or the area is where the enemy was last seen, the first step

will be to "cast" about until the enemy track is engaged. This drill is explained below.

b. Once the start point has been confirmed, look carefully at the signs and estimate the age of the track. This can be checked with the information from friendly forces in the area or those in the ambush or contact position. If the track is 2 days old and contact took place 2 hours ago, the wrong track has been located and casting drill must be repeated.

c. Next, estimate the number of the enemy. By estimating the age of the track and the number of the enemy at the beginning of the track it is possible to recognize any of the following:

(1) Where the enemy has rested and departed, leaving fresher sign (i.e., withdrawing after an ambush to a prearranged location, having a debriefing of an action and a body count of the ambush party). It is probably from this location that the enemy would split up into smaller groups. This would indicate that the ambush was set by locals and they are returning to their respective hamlets or villages. There could possibly be a hardcore element of enemy (or guerrillas) that would be returning to their base camp.

(2) Where another enemy group has joined with the first enemy party, after the first party has departed from the contact or ambush location; fresh tracks will be on top of the first enemy party's tracks. This would indicate that the ambush consisted of several groups in separate parties, and that all were withdrawing to rejoin at a central location for a debriefing conference. This is most probable when the enemy ambush has been successful. If the ambush was unsuccessful, it is more probable that the group split up and went in different directions; but do not overlook the possibility of the enemy having a reorganization and debriefing meeting.

(3) Where civilians have crossed over or converged on the tracks of the enemy may mean that the inhabitants of nearby villages or hamlets are being used to confuse the tracker. This is a definite deception tactic. It may be purely coincidental. However, it opens up the possibility of sympathizers in the area.

(4) By estimating numbers at the start of the track, and even if the deception tactic of individuals dropping off is missed, the tracker will soon notice that the number of enemy on the track has decreased. This is where the enemy had converged from their hamlets to stage the

ambush and during withdrawal split up or returned to their respective hamlets without converging on a prearranged rally point for a debriefing conference.

(5) Step 2 of the track following drill. Take each opening in turn and carry out the following drill:

(a) Look forward (maximum visibility) for top and ground signs.

(b) Remember the age of the track and do not be drawn forward by signs that are older than the track being followed.

(c) Eliminate openings which do not coincide with the age of the track being followed.

(d) Endeavor to end with one opening. This is now the "general direction" of the track. If there is more than one opening, remember: the possibility of a split track; the possibility of a deception and a false track; and that now there are two general directions and one of them will be eliminated upon closer inspection.

(e) Now stand over this definite sign facing in the direction of the enemy withdrawal and look ahead 30 to 40 meters for "general direction." Look for man-sized openings in the undergrowth. These openings are recognized by eliminating areas where humans could not have possibly moved through, that is, where there has been no breaking of the undergrowth or disruption of the vegetation. It is probable that two or three openings will be noted. These openings should be large enough to allow a man to pass through. Insure that you have checked the complete area to the front and also that you are looking as far ahead as possible *THROUGH* and not *AT* the undergrowth.

(f) Step 3 of the track following drill. It has been established that there are visual tracking signs to the front that coincide in age to the track being pursued. It has also been established that in the area ahead the "opening" in the vegetation is such that humans could have moved forward through the area. Step 3 is to confirm that the track being followed is the same track spotted to the front. Step 3 is carried out as follows:

1. Taking the furthest sign, back-track with the eyes and note signs that link the furthest sign with your present position.

2. A visual tracker must not get into the habit of connecting the track from the nearest point to the next sign ahead.

3. During the early training period, the visual tracker will stand over the last definite

sign while carrying out the drill. The only movement that is permissible will be a slight sideways movement of the head. A visual tracker's eyes must do the work.

4. A visual tracker will never turn his head down to look at the ground in front of him while in a standing position.

5. If at any time the visual tracker wishes to make a closer examination of a sign, he must go down on one knee. He must insure that his coverman knows of his intentions.

6. Back tracking with the eyes and connecting signs will often serve to eliminate any false trails and false openings.

7. When two openings connect, the visual tracker has come across a split track and he will have to decide which one to follow.

8. The visual tracker, by looking ahead in this manner, is better able to see and identify the track, rather than following the individual signs.

9. When in doubt, the individual tracking signs, that is, the signs peculiar to the track (e.g., one man wearing hobnail boots) will confirm the track picture.

(g) Step 4 of the track following drill. Carry out a visual check of the area. Look through the area to maximum visibility for signs of the enemy presence. The track for the next 20 to 30 meters has been established and confirmed. The visual tracker has not moved up to this point. During step 4 he must visually clear the area to the front. This was done before the commencement of step 1 but is included here as a separate step because of the following:

1. During the intervening period an enemy could have moved into the area.

2. To emphasize the importance of attuning himself (tracker) to danger and becoming aware of enemy presence.

3. The visual tracker's concentration will be directed toward looking for possible enemy locations either underground, at ground level, or in the trees overhead. He will be looking for vegetation used as camouflage or an unnatural position.

4. The visual tracker can now move. He will, if necessary, kneel to check at ground level for tunnel-type fire lanes.

(a) He must move from side to side when looking through undergrowth, to see areas behind trees in the immediate foreground.

(b) Finally, by coordinating with the coverman, he will thoroughly (visually) check the track for signs of boobytraps.

5. The visual tracker must become ambush and boobytrap conscious. With this in mind he will be thinking as the enemy would and whenever he would approach a likely ambush site or ideal boobytrap location, he will make a greater effort to visually clear the area before proceeding.

(h) Step 5 of the track following drill. Before step 5 is taken the areas to the left and right have been checked for deception tactics, the track has been established and confirmed, and the area to the front has been checked for ambush positions and boobytraps.

1. In step 5, the visual tracker must now switch his concentration to the possibility that deception tactics have been employed.

2. The visual tracker will look along the confirmed track, concentrating on the area to the left and right to check for signs of "drop off" tracks.

3. There are many ways of confusing a followup party by laying down a false track and employing deception tactics that could lead an unsuspecting visual tracker astray.

4. To combat this, the visual tracker must have complete knowledge of all deception tactics and be aware of the possibility of them whenever tracking.

5. On occasion, the visual tracker may want to followup a deception tactic in order to gain a greater understanding of his foe. The cunning and cleverness, the degree of alertness, and stealth by which deception was executed will help the visual tracker understand the thinking of the enemy. By following through a deception tactic the visual tracker can learn the enemy's degree of alertness, morale, aggressiveness, and possibly his intentions.

6. Learning to understand the enemy will aid the visual tracker in making an intelligent assumption about the enemy's intentions if ever the track is lost. The visual tracker will be in a good position to make recommendations to the patrol commander in identifying locations for patrols to search as likely areas of enemy activity.

7. The visual tracker, with this understanding of the enemy being tracked, may even be able to anticipate possible moves.

(i) Step 6 of the track following drill. Track has already been located and confirmed. Also the area has been visually cleared of ambushes, boobytraps, and deception tactics.

1. For step 6, the visual tracker must

now look at the ground, eyes only, and memorize where he is going to place his next 10 to 15 steps.

2. Vines across the track should be noted carefully as they may catch on boots and cause noise and movement to the surrounding vegetation.

3. Dry sticks on the track can break and create noise.

4. In fact, any sort of vegetation or loose rocks that can make noise must be carefully negotiated.

5. Plants, trees, and other vegetation do not move by themselves. Therefore the visual tracker will note any disturbed vegetation to his front that could move and telegraph his presence in the area.

6. Up to now the visual tracker has not moved one step forward. During step 4 he has moved from side to side, and up and down.

7. For steps 1, 2, 3, 5, and 6, he has remained still, with his head up and looking to the front, so that he could catch any movement or hear the slightest sound made to his front.

(j) Step 7 of the track following drill. At this point the track has been confirmed, the area has been checked for ambushes, boobytraps, and deception tactics, and the visual tracker has memorized where he is going to place each step.

1. The visual tracker now becomes a lead scout and moves forward to the limit of the confirmed track.

2. When moving forward, the visual tracker will be opening new areas to his front which have not been checked.

3. As a moving target he will be obvious to a stationary enemy.

4. When the visual tracker moves forward he must never look at the ground. To check out the ground or confirm possible deceptions, he must go down on one knee and await his coverman's readiness. He will carry out this same drill whenever he wishes to check out a suspected boobytrap area.

5. While moving forward he will insure that any sound he will make does not travel farther than he can see.

6. While moving forward, he will insure that the vegetation does not telegraph his position.

7. He will carry his weapon in an alert and ready position at all times.

8. During this step he is trying to spot the enemy before he is seen (if there are enemy in the area).

9. If he locates a stationary enemy, then he has successfully completed his task and will report the enemy.

10. If he locates and identifies a moving enemy, then he will be guided by his initial briefing as to whether he will shoot or not.

11. If he locates and identifies the enemy at the same time that the enemy sees him, he will shoot to kill.

12. If the enemy shoots first he will return fire and carry prescribed drills.

13. If no enemy is sighted (*and this is the most common occurrence*) and when the visual tracker arrives at his furthestmost sign, before beginning step 1 of the track following drill, he will visually check all areas to his front for signs of the enemy.

27. Points to Remember While Tracking

During the early learning periods the tracker will follow each step of the drill, committing it to memory. Eventually, as competence and experience improve, the visual tracker will be able to combine the steps, performing several steps with one quick glance. Moving with stealth will soon become natural and the periods spent between movement bounds will soon become a short pause. He is always aware of becoming too confident. This will result in the realization that he has passed the last sign and there is no more track or when the enemy has spotted him, either because he has made noises or been negligent in checking the area to the front.

a. A visual tracker will realize that he has overshot the area when—

(1) There are no more tracking signs.

(2) Each step, by falling on fresh ground, will cause leaves to crumble or crack and small twigs to break. Worm casts will be crushed and the general feeling underfoot will be different. The visual tracker may also find cobwebs across the track.

(3) Depending on the time of day, he may be brushing the dew off of leaves and making his own track through the undergrowth.

b. Finally, the visual tracker must ask himself the following questions:

(1) How many enemy am I following?

(2) How heavy and what sort of loads are they carrying?

(3) What is the enemy's morale, task, and aggressiveness?

(4) Does the enemy know that he is being followed?

28. Precautions

a. When track becomes difficult and the visual tracker is tiring, it is easy to see signs where there are none. The visual tracker must beware of this tendency and not "bluff" himself into following a false track.

b. He must remember that sound travels in all directions. Visibility in close country may be as little as 10 to 15 meters. He must also insure that any sound he makes will not travel farther than he can see, thereby alerting the enemy.

c. Vegetation moved in isolation of surrounding vegetation will alert the enemy of the visual tracker's presence. He must not grab small trees for extra leverage or allow himself to become entangled in vines or overhead creepers.

d. The visual tracker, when moving forward, is the leading man in the patrol and will normally be the first to sight the enemy. *He must never look at the ground when on the move.*

e. He must not go on if exhausted. He should stop and rest. The above points must be remembered to avoid tracking into a bullet or a booby-trap.

CHAPTER 5

TRACKER SCOUT

29. Introduction

A lead scout's responsibility is to follow the signs and pass back the information he gains from the enemy's signs. The lead scout is also the frontal security for the patrol. His job is to insure that his patrol or team is not led into an ambush or a boobytrap.

30. Objective

A lead scout should be able to move silently through an area, be alert, and be able to read the signs that the enemy leaves behind. A good lead scout should keep the following points in mind:

a. When moving through an area, try to leave as few signs behind as possible. The enemy can follow signs also.

b. A lead scout is physically fit and keeps his weapon clean and equipment ready at all times.

c. Always move silently and never at such a speed that your presence in the area is detected.

d. The visual tracker's life and the lives of others will depend on the intelligence and information that he gains and passes on as clearly as possible. The more he knows about the enemy, the less are his chances of becoming a casualty.

e. Even a fit and alert scout can become tired. Never push too hard. Fatigue cuts down on alertness and response.

f. Do not look down while moving. It may cost you your life or one of the others on your team).

g. When faced with thick undergrowth, if possible, go around. If going through, weave over or under the vegetation.

h. Never cut, or allow the pack, body, or equipment to get caught in branches or vines causing movement in the tops of young trees.

i. Remember that sound made by the rattle of poorly packed equipment, unnecessary talking above a whisper, coughing, or a broken twig or stick could alert the enemy.

j. While acting as a lead scout, make sure that the coverman is an adequate distance away, consistent with the tactical situation.

k. The visual tracker never forgets his own signs: make as few of them as possible and consider deception tactics.

l. Always vary the route and the time of returning from and going on patrols; avoid being ambushed.

m. Notice and become familiar with the natural sights and sounds of the insect world for they may help give warning of the presence of the enemy.

n. Once on a patrol, stay alert. Move silently and remain a good distance apart.

o. Be familiar with and practice all rally point drills and procedures.

p. Well disciplined reactions during contact or under fire will result in a beaten and routed enemy.

q. Always be aware of the patrol's mission. Be familiar with all contact drills.

r. On occasion, it is better to let the enemy go by and then report his movement. This is especially true if a much larger group is encountered.

s. On all suspicious sights and sounds, stop and remain still. If the enemy appears and moves across your front, there is a good chance that he will not see you. If the sound is coming towards you, drop slowly to one knee and at the same time raise your weapon to your shoulder and aim at the sound. Always make positive identification before you fire.

t. If possible, always let the first members of an enemy patrol pass by and shoot the third or fourth man. Remember that with the automatic weapon, the tendency is to shoot high; so aim low and shoot to kill.

u. When working with a reconnaissance pa-

trol, keep moving until just before dark, then find a safe place to sleep. Be packed and ready to move at first light.

v. When camping at night, make it hard for the enemy to effect a surprise attack. Select a thick area where the enemy will have to make a lot of noise to get close enough to attack.

w. Reconnaissance patrols try to avoid contact in any way. Try to leave no track or signs behind.

x. Decisions will be required that will affect

the lives of the patrol members. Learn to make the correct ones. Have confidence in your decisions.

y. Remember that a lead scout must always be alert and physically fit.

(1) Once a lead scout, always a lead scout. The visual tracker will always be the lead scout on a patrol or in a combat tracker team.

(2) Always play it safe, make sure never to fire at anything without being positive that it is the enemy.

CHAPTER 6

TRACKER REGONDO PATROL

31. Introduction

What is a tracker regondo* patrol? A tracker regondo patrol is a detachment from a unit sent out to perform an assigned mission of reconnaissance or combat, or a combination of both. This type of patrol is always "tailored" to the mission it is to execute.

32. Formulation of Patrol Missions

The S2 formulates missions for reconnaissance patrols. The S3 formulates missions for combat patrols. They consider the capabilities of each type of patrol in relation to the mission at hand.

a. Reconnaissance patrols are capable of—

- (1) Point reconnaissance and surveillance.
- (2) Area reconnaissance and surveillance.
- (3) Route reconnaissance and surveillance.

b. Combat patrol are capable of—

(1) Raids to destroy or capture personnel or equipment, destroy installations, or liberate personnel.

(2) Ambush of such targets as patrols, carrying parties, wire repair teams, convoys, food and equipment teams, and foot columns.

(3) Target-of-opportunity missions, especially in counterinsurgency operations.

(4) Economy of force missions, to seize features such as bridges, hills, road junctions, etc.

(5) Contact missions, to establish and/or maintain contact with either friendly or enemy forces.

(6) Security missions, especially local security to detect and prevent infiltration and to prevent surprise ambush.

*The term regondo was coined from the words reconnaissance and comando. During World War II the term reconnaissance action implied the seeking of information, while comando referred to a special type unit assigned to perform hit-and-run actions.

33. Assignment of Patrol Missions

a. A patrol can be assigned only one mission. The essential task of a patrol is accomplished by the elements and teams within the patrol.

b. The mission may be specific: for example, "destroy the enemy OP," or it may be general. A search and attack patrol may be assigned to locate, and within its capability, destroy any guerrilla force in a certain area.

c. Whether specific or general, the mission must be clearly stated, thoroughly understood, and within the capabilities of the patrol.

34. Control

The commander's degree of control over the patrol is limited once it has been dispatched, and what means of control he has are included in the orders issued to the patrol leader.

a. Time of departure and/or return may be stated in general terms, such as departure or return before daylight or after dark. Specific times may be given to prevent congestion in an area, thus reducing contact between friendly patrols and providing stricter control. Information secured by a patrol may lose its value if it does not reach the commander in time. Future operations may hinge on the results of a patrol. Similarly, a patrol may be required to accomplish its mission on or before a certain time. For example, a patrol may have to destroy a communications center at a certain time to aid a planned attack. When there is a reasonable chance that the patrol may not accomplish its mission in time, the order must state the priority. Accomplishment of the mission has first priority and is the commander's responsibility.

b. Checkpoints may be used as a control measure by requiring the patrol to report upon reaching each one.

c. The route used may be generally defined or specifically prescribed.

- (1) A general route may be defined by a

series of checkpoints over or near where the patrol is to pass.

(2) An exact route is seldom prescribed except in route reconnaissance or where close control of movement is required.

d. Point of re-entry into friendly areas may be prescribed. Re-entry at the point of departure may be directed or, to reduce the danger of ambush, re-entry at a different point may be specified.

e. Point of departure from friendly areas may be prescribed.

35. Communication

The communication plan specifies reports and type of transmission to be employed. Radio is usually the best means. The type of radio used is determined by the distance to be traveled, availability of radios, field expedient antennas, qualified operators, and method of movement.

a. Simple prearranged codes and code words are used to reduce transmission time and decrease the possibility of compromising the mission.

b. Pyrotechnics (fires or smoke) may be used but increase the possibility of detection.

c. Prearranged code words or pyrotechnics may be used to indicate departures from friendly areas, arrival at checkpoints, accomplishment of mission, or other desired information.

36. Support

a. The S3 makes rehearsal areas available and assists in coordination of all areas.

b. The S4 provides equipment not available within the patrol.

c. The fire support coordinator assists the patrol leader in planning effective fire support for the patrol.

d. Upon return, patrols are debriefed by the S2 or representative. Techniques used in debriefing vary. One effective method is for the patrol leader to give a narrative account of the patrol from departure to return. Each patrol member is then asked for additional information. The debriefer asks questions to secure information not covered. Each patrol member is given the opportunity to contribute to the information reported.

37. Importance of a Tracker Recondo Patrol

a. A tracker recondo patrol is limited only by the ingenuity with which it is employed and the skill and aggressiveness of its members. For this reason this type patrol is one of the most valuable tools of the commander.

b. Tracker recondo patrols are especially effective in counter guerrilla operations. Aggressive patrolling in an area greatly reduces the guerrilla's freedom of movement, hinders their operations, and reduces their influence on the local population.

38. Organization

A tracker recondo patrol is a small highly trained team. It is flexible enough to be applied with as few as four or as many as six men; however, it is based on a five-man concept.

a. The first man is the visual tracker.

b. The second man is a coverman.

c. The third man is the team leader.

d. The fourth man is the radio telephone operator.

e. The fifth man is the rear security and/or tracker dog handler.

f. All members of a tracker recondo patrol are cross trained in all of the patrol positions.

39. Equipment

a. All members of a tracker recondo patrol should wear the same kind of dress: camouflage jungle fatigues, jungle boots, camouflage jungle flop hats, belt order (required equipment placed on the belt in a specific arrangement), rucksack, and tote weapons; the reason being—

(1) The camouflage jungle fatigues break the outline of the body.

(2) Jungle boots are light and make walking easier over most types of ground.

(3) The camouflage flop hat breaks the outline of the head and shades the face.

(4) The belt order is there to carry the most important items close at hand.

(5) The rucksack is light and can hold extra food, ammunition, bedding, and equipment that is needed on the patrol.

b. Selection of equipment and weapons and ammunition is based on the question: "What is needed to do the job?" The difficulty of trans-

porting some weapons, because of bulk or weight, must be considered, but is seldom a deciding factor. The value of equipment and weapons in accomplishing the mission is weighed against the difficulty. No weapon is taken unless the personnel who are to use it are proficient in its use. Aerial supply of ammunition is considered for patrols that will be out for an extended distance or time.

c. Routine equipment is normally carried by all patrols. It includes the uniform to be worn and the individual equipment to be carried. Normally, every man should carry his poncho and an extra pair of socks as required by conditions of weather and terrain. Gloves are included, even in warm weather, to protect hands against thorns, rocks, and barbed wire. A patrol SOP prescribing routine uniform and equipment will save the patrol leader time in planning and preparation. In the objective area some of the equipment used includes such items as demolitions, binoculars, rope to bind prisoners, and flashlights. En route equipment that is helpful in reaching the objective quicker and easier includes items such as maps, boats, stream crossing ropes, compasses, and wire cutters.

d. Control-type equipment includes whistles, pyrotechnics, radios, flashlights, and luminous tape to assist in control en route and at the objective.

e. Water and food are also necessary items, and every man on a tracker recondo patrol should carry two or more canteens of water. Only necessary rations are carried. The missing of a single meal or its late consumption is not a hardship and does not reduce combat effectiveness. Aerial resupply of food and water is considered.

40. Types of Missions

The mission, or primary mission, of a tracker recondo patrol is either reconnaissance or combat. It has the ability to operate without close support and away from secure areas or bases for long periods of time.

a. *Reconnaissance.* A tracker recondo patrol has the ability to investigate areas of enemy activity and counterguerrilla operations and follow any tracks found in those areas. In carrying out this sort of mission, the patrol must avoid contact. However, at times it must get very close to the enemy in order to obtain detailed information. Recondo techniques and tac-

tics are designed to allow a tracker recondo patrol to do this.

b. *Combat.* A tracker recondo patrol on a combat mission will provide security and harass, destroy, or capture enemy personnel, equipment, and installations. The patrol also collects information whether related to the mission or not. Combat missions are further classified as—

- (1) Raid patrols.
- (2) Ambush patrols.
- (3) Security, contact, and economy-of-force patrols.

41. Tactics and Techniques

Every tracker recondo patrol has been trained in the same techniques, and their success has been proven by afteraction reports. The success of any organization depends on its personnel being well-trained. The object of tactics and techniques is to keep the team alive and functioning when in contact with the enemy. A system of "contact drills" is used to do this. During a contact drill each member of the team has a specific task directed towards a common objective. This maintains control over the patrol by eliminating the confusion caused by having the patrol leader trying to shout directions over the noise of gunfire.

a. *Action at Danger Areas.*

(1) A patrol's actions at a danger area should be planned in advance, whenever possible, by the patrol leader. He should identify these areas in advance and make general plans for danger areas that may have to be crossed if they show up unexpected. The following are considered and applied as appropriate: the near side and flanks are first investigated. Then the far side is reconnoitered. After determining that the area is clear, the patrol crosses as a group if the area is small. If the area to be crossed is large enough to expose the group for more than a short period of time, then the group will cross either in small elements or one man at a time.

(2) Gaps in wire or minefields are usually avoided since these areas are usually covered by observation and fire. The patrol will make its own gap and send security through before passing.

(3) When crossing a river or a stream, the near bank is cleared, then the far bank. Then the remainder of the patrol crosses one man at a time. Cover is maintained by the rest of the group during the crossing.

(4) Proper security and reconnaissance are the means to avoid an ambush. The patrol must always be alert and suspicious of all areas. Certain areas are more suitable for ambush than others: roads, trails, narrow gullies, villages, and open areas are examples. All of these areas are approached with caution. Also, routes used by other patrols are avoided.

b. Halts.

(1) The patrol is halted occasionally to observe and listen for enemy activity. This is a security halt. When the patrol leader signals for a security halt, every man moves off the track and maintains absolute quiet and looks and listens for enemy activity. Security halts are called whenever the patrol enters a danger area and periodically en route. A security halt is appropriate upon departing friendly areas or before re-entering. When the patrol moves off the track during a halt, each man will either go down on one knee or into the prone position.

(2) The patrol may halt occasionally to check direction or communications. When the patrol leader signals for a direction or communication check, the patrol will also move off the track and maintain silence and assume a kneeling or prone position.

(3) The patrol may halt for rest or food. An area is selected which provides concealment. If possible, cover and defense are secured. All-round security is established and care is taken to insure that everyone moves when the patrol resumes movement.

c. Infiltration and Exfiltration. There may be times when the enemy situation prevents a patrol from entering or leaving an area as a unit; however, parts or small groups may be able to sneak into or out of the area without being detected. Movement in this manner into an area is called *infiltration*. Movement out of an area is called *exfiltration*.

(1) *Infiltration.* In this type of movement, the patrol splits up as it leaves the friendly area or at a later specified time. Small groups infiltrate at varying times, each using a different route. After slipping into the enemy area, the groups reassemble at a predetermined location. This rendezvous point must be free of enemy activity and provide concealment and be easily recognizable. An alternate rendezvous point should be indicated in case the first one cannot be used. If all the members of a patrol have not reached the rendezvous point within a reason-

able period of time, the senior man present will decide a course of action.

(2) *Exfiltration.* The same procedure is followed to return to the friendly area. The patrol splits up and returns, reassembling near or within the friendly area. Movement by infiltration or exfiltration breaks up the tactical integrity of a patrol. It is used only when movement as a patrol is not feasible.

d. Jungle and/or Bush Craft.

(1) Jungle or bush craft is the art of living tactically and comfortably in that type area. For example, how can you sleep at night and feel reasonably secure? Don't camp on high ground or near rivers. Get on the thickly vegetated side of a hill; this makes it difficult for the enemy to approach your position quietly.

(2) Move silently. Twist or turn your body to keep out of the way of the vegetation. Go around small trees instead of between them so that your body or equipment will not catch on them and make noise.

(3) Detect enemy ambushes (spot the enemy first).

(4) Gain information from signs left by the enemy. The mission is to track the enemy, find him, collect information about him, and destroy him. These techniques are not hard to learn. All it takes is practice along with the basic factors of good tracking, patience, persistence, and acute observation.

(5) Tactical movement is slow. Each man is stepping carefully, checking his arc of observation with his weapon following the same arc as his eyes and head. No one talks. Hand and arm signals direct the group. There should be a signal SOP within the patrol. All signals should be passed back to the rear security. During halts, the members of the patrol move off of the track. A track laid by the enemy can be considered an "avenue of approach" and may be covered by an automatic weapon.

42. Duties Within the Patrol

The duties of each member of a tracker reconno patrol are as follows (fig 11):

a. The duties of the *visual tracker* (VT) are to keep the patrol on the right track and to warn the patrol of any obstacles or danger areas. He will relay all the information he gathers back to the patrol leader. His observation area is 180 degrees to the front.

b. The duty of the *coverman* (CM) is to protect the visual tracker. He is a trained visual tracker and is prepared to assume the duties of primary visual tracker. His observation is 180 degrees to the front.

c. The *team leader* (TL) is responsible for the patrol and the mission of the patrol. He makes all decisions, navigates, and selects routes for the patrol. He is a trained visual tracker which enables him to make decisions about the track and take over as a visual tracker if necessary. His observation is 180 degrees to the front, and to the left and right.

d. The *radio telephone operator* (RTO) is responsible for maintaining communications with the main force. He is a trained visual tracker and is ready to assume the function of a visual tracker. His observation is 180 degrees to the front and to the left and right.

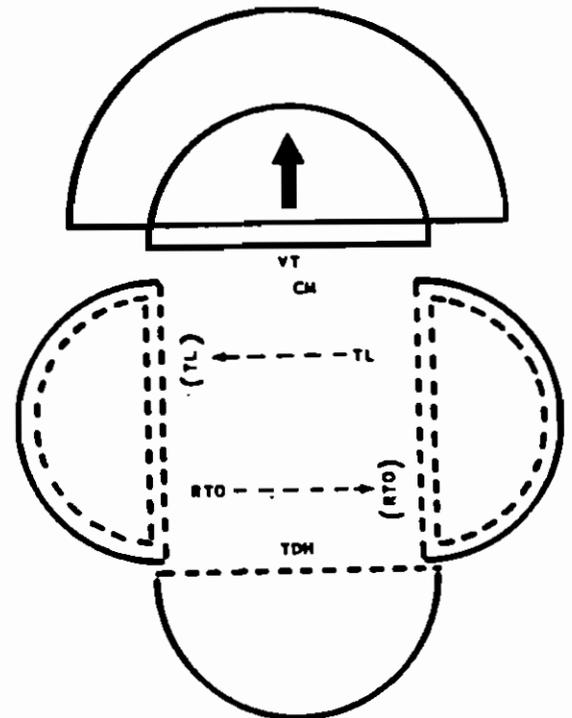
e. The duty of the rear security and/or *tracker dog handler* (TDH) is to cover the area that is behind the patrol. His observation is 180 degrees to the rear of the patrol. (If the rear security is not a dog handler then he will be a trained visual tracker capable of taking over that task should the need arise.)

43. Daily Routine and Movement

Equipment should be arranged and worn so that it is quiet at all times and all loose ends are taped.

a. The belt order is worn at all times, unless the soldier is asleep or told to remove it. All items carried on the belt should be secured so that if at any time the patrol is attacked while at rest the belt can be grabbed without anything falling off. The most important items are carried on the belt: ammunition, first aid kit, emergency rations (one pack), emergency kit, two canteens of water, and purification tablets.

b. The rucksack is never taken off unless the soldier is directed to do so. It should be packed in such a manner that when a particular item is



VT - VISUAL TRACKER
RTO - RADIO TELEPHONE OPERATOR
CM - COVER MAN
TDH - TRACKER DOG HANDLER
TL - TEAM LEADER

Figure 11. Area(s) covered by team members when on patrol.

taken out, it is the only item taken out, and that you will not have to unpack everything else to get at one item.

(1) Each night take out a day's rations and put it in an outside pocket.

(2) Mess kit and stove should also be carried in an outside pocket.

(3) Extra ammunition is always in an outside pocket.

(4) Pack the shelter half, hammock, dry clothes, blanket, and extra food inside the rucksack.

CHAPTER 7

SILENT SIGNALS

44. Introduction

Silent signals are a method of communicating within a patrol by utilizing signals that are eye catching and allow the patrol to operate and communicate. The signals listed below are different from the standard hand signals and are designed to facilitate communication between trackers and team members.

45. Signals and Meanings

See Figure 12 for illustration of signals.

- | | |
|---|--|
| 1—Clenched fist, thumb up | On track. |
| 2—Clenched fist, thumb down | Enemy, or danger. |
| 3—Hand extended, two fingers crossed | Obstacle. |
| 4—Open hand, fingers together | Halt. |
| 5—Open hand, fingers together, moving from rear to front | Advance. |
| 6—Two fingers on opposite shoulder | Signal for team leader to approach person signaling. |
| or, three fingers on opposite upper arm | Signal for team's second-in-charge to approach person signaling. |
| 7—Two fingers patting lips | Smoke halt. |
| 8—One finger pointing toward throat | Meal halt. |
| 9—Clenched fist, held against ear like handset | Communication halt. |
| 10—Open hand, fingers together, back of hand against opposite ear | Bivouac halt. |
| 11—Cupped hand, fingers apart, thumb on outside | Boobytrap. |
| 12—Two fingers in inverted V
(Any number of fingers opened from clenched fist
(Any) number) | Reference point. |
| 13—Open hand, fingers together on top of head | Cover me. |
| 14—One finger on tip of nose
(Spread hand on top of head) | Tracker dog wanted by person signaling.
Scout dog wanted.) |
| 15—Two fingers extended pointing to eyes | Visual tracker wanted by person signaling. |
| 16—Hand cupped around ear | Listening. |

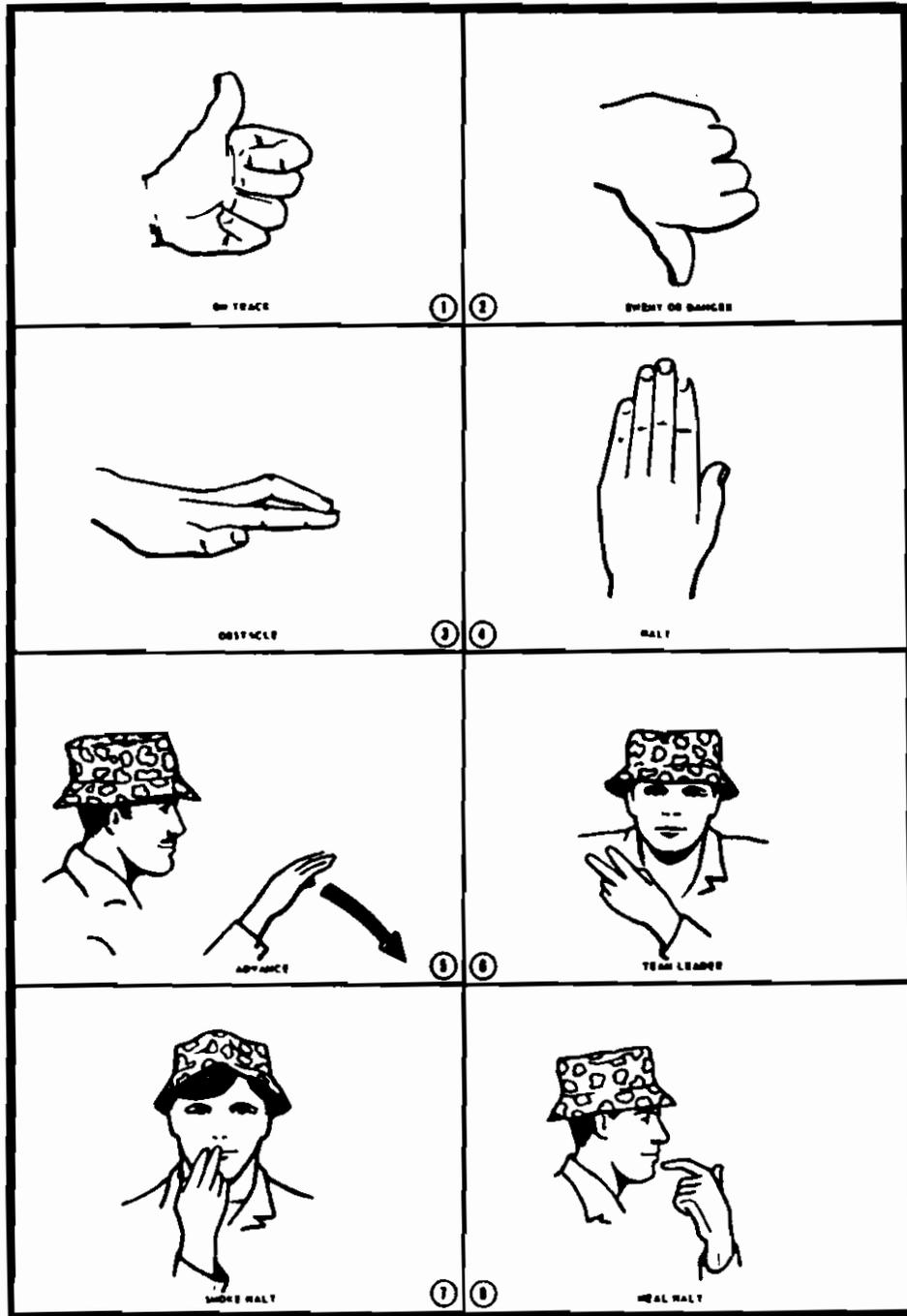


Figure 12. Hand signals used by tracker team.



Figure 12—Continued.

CHAPTER 8

COMBAT REACTION DRILLS

46. Making Contact

a. When contact is made with the enemy, the team will fire one magazine of ammunition in the direction of the contact. The first two or three rounds of ammunition and the last two or three rounds in the magazine should be tracer ammunition. This will aid the members of the patrol or team in seeing where the rounds are going and know when the magazine is empty. This should be done while falling to the prone position. Getting into the prone position is done only one way. The men will hit the ground as fast and as low as possible. They will lie flat on their stomachs.

b. When the team makes contact and hits the ground, the man nearest the enemy should hit the ground and try to reach cover. The rest of the team to his front and/or rear should hit the ground to the right and left in a staggered pattern.

c. This provides a lane for the men pulling back to move through, and provides the men delivering covering fire with some concealment and/or cover.

47. Breaking Contact—Attack From Front

a. Breaking contact, the team leader gives the command MOVE OUT, MOVE BACK, or the direction he wants the team to move. The team leader will decide which one of the members moves first.

b. If the visual tracker is being used in front of the patrol or team and is fired on from the front, left front, or right front, the team leader will tell the visual tracker to move back. The visual tracker will move back through the team (or patrol) as fast and as low as possible, making sure he is not in the field of fire of any member of the team. The visual tracker will move past the rear security 50 to 75 meters, taking up a position facing to the rear. The rear security will then turn and face the contact area.

c. After the visual tracker is in position the team leader will tell the coverman to move back. The coverman will move back through the team and go through the same process as the visual tracker. The visual tracker will then turn and face the contact area.

d. After the coverman is in position the team leader will move back through the team, going through the same process as the visual tracker and coverman. The coverman will then turn and face the contact area.

e. After the team leader is in position, he will tell the radio-telephone operator to move back through the team, going through the same process as the visual tracker and team leader. The team leader will then turn and face the contact area.

f. After the radiotelephone operator is in position, the team leader will tell the rear security to move back. The rear security will move back through the team going through the same process as the visual tracker, team leader, and radiotelephone operator. The radiotelephone operator will then turn and face the contact area.

g. If the tracker dog handler and dog are being used in front of the team they will go through the same process as the visual tracker. If the tracker dog and handler are not in front of the team, they will be the rear security and go through the same process as the rear security. If the visual tracker is not being used in front of the team, he will be the rear security.

48. Breaking Contact—Attack From Rear

a. When hit from the rear, the team leader will decide who moves out first. He will tell the rear security to move out. The rear security will move through the team, making sure he does not move in front of anyone's field of fire. He will move past and 50 to 75 meters to the right or left front of the visual tracker, depending on where the enemy is located. The rear security will take up a position facing to the front.

b. Once the rear security is in position the team leader will tell the radiotelephone operator to move out. The radiotelephone operator will move through the team, going through the same process as the rear security. The rear security will then turn and face the contact area.

c. Once the radiotelephone operator is in position the team leader will move through the team going through the same process as the rear security, and the radiotelephone operator will turn and face the contact area.

d. Once the team leader is in position, he will tell the coverman to move out. The coverman will move through the team going through the same process as the rear security, radiotelephone operator and team leader. The team leader will turn and face the contact area.

e. Once the coverman is in position, the team leader will tell the visual tracker to move out. The visual tracker will move through the team going through the same process as the rear security, radiotelephone operator, team leader, and coverman. The coverman will turn and face the contact area.

f. The team or patrol will go through the reaction drill until the team leader decides they are out of the danger area or killing zone.

49. Immediate Action Drills

a. When a member of the team sees the enemy and the enemy does not see the team, the one who

sees the enemy will halt the team or patrol, will assume a kneeling position, and wait for orders from the team leader; whether to move, and how to move. They will not take the enemy under fire unless the enemy sees them or their orders are to make contact with the enemy.

b. When the enemy and the team see each other at the same time, the team will take the enemy under fire.

c. When a member of the team is hit by enemy fire or wounded by some other means, the man who is closest to the wounded man will apply first aid and move him. The rest of the team or patrol will take up security while the wounded man is being attended. In some cases it may not be possible to get to the wounded man; never endanger the team unnecessarily trying to get the wounded man out.

d. At anytime a member of the team hears a noise that does not come from the rear, *immediate action* should be taken. First the team should stop; then try and determine what the noise was and where it came from.

e. Remember that the team members cannot break contact until they get supporting fire by way of the reaction drill.

f. If time permits when contact is made, the two or three men closest to the enemy should use fragmentation grenades to break contact. A hand grenade is not effective as a killing weapon, but it can cause the enemy to take cover and thus break contact.

CHAPTER 9

READING THE TRACK

50. Gaining Information

Basic tracker terminology includes the following:

a. Tracking signs—ground and vegetation indications of the enemy's presence and movement.

b. Tracking distance—a distance of 15 to 20 meters as in track following drill.

c. Tracking leg—an uphill, downhill, or other terrain distance of 100 to 500 meters.

d. Tracking area—an area or locality 1,000 meters in distance.

e. Track picture—sufficient information about the enemy to know his direction of travel, number of personnel, and possible mission. This is the picture of all track signs built up over a considerable amount of time and distance. To obtain the complete tracking picture, the visual tracker has to follow the track until he can answer questions about the enemy and state with accuracy the nature of the enemy party. The track picture builds up continually with each new piece of information gained. A visual tracker should be able to deduce part of the picture after a short distance; but he will have to follow through with a complete tracking leg before he can have any real confidence in the information from the track. The farther a track is followed, the more accurate is the information from the track.

51. How to Determine Direction From a Track

To estimate the direction the enemy is traveling is fairly easy. As with all aspects of visual tracking, it is a process whereby small bits of information are pieced together by the visual tracker to form a larger picture. Knowing what items to look for, how to identify them, and what each item indicates, is where practice and experience will prevent errors on the part of the visual tracker. The following list will explain what the visual tracker should look for.

52. Ground Signs

a. On flat, dry ground, broken twigs or sticks will sometimes show the two broken ends separated and at an angle to each other. The apex of this angle points in the direction of travel.

b. Sticks that have been caught by a passing boot may point in the direction of travel.

c. Rotten logs and sticks when stepped on will crumble and break in a downward direction. The downward direction and the angle of the break may show the direction. Also, there may be bits and pieces of the log or branch that will stick to the boot and then be wiped off on low vegetation farther along the track, thus indicating direction.

d. Bark that has been rubbed off logs and branches at a level approximately 3/4 of an inch above the ground and down to ground level will usually be knocked forward in the direction of travel. If a log, branch, or root is 6 inches to 3 feet above the ground the bark will be knocked to the rear of the log or branch away from the direction of travel.

e. Stepping over (not on) logs or branches leaves footprints closer to the object the higher it is. The rear side of the obstruction will clearly show the forward part of the print while the forward side will show the heel or the full print clearly. Very often the forward print will be deeper than the rear print.

f. In leaf carpeted areas, by tracking in the direction of movement, shadow will become more evident. Each stepped-on leaf which has been displaced, bent, broken or tilted will have more distance between it and the ground than an undisturbed leaf and will cast a shadow. By looking behind and along the track, the shadow will contrast with the shine on the leaves and give the direction of movement.

g. In places where the leaf carpet is deep, place a hand in the print impression and feel for heel and toe depressions.

h. Tilted leaves will most often be turned in the direction of travel.

i. In tropical areas, where there are no seasons, young, growing plants can be encountered all year long. In areas where there are seasons, spring will be the time for young plants. When this young, tender vegetation is stepped on, it will be squashed, broken, bruised, or bent and expose the white underside of the leaf. These small plants will be bent over in the direction of travel.

j. In soft ground, the footprint can be used to guide the visual tracker into an ambush. Deception may be employed by walking backwards. Note where the toe print is seen; the enemy, if walking forward, will carry dirt forward of the print. If it is suspected that the enemy is walking backwards, look at the heel of the print. If the enemy is walking backwards, dirt will be dragged backward from the heel of the print.

k. Skid and slide marks when going up or down a hill will indicate the direction of travel (chap 2).

l. Small stones and rocks will all be moved slightly if not completely overturned when stepped on. With overturned stones, find the original position and the stone should be forward of this spot. Rocks when stepped on will tilt slightly forward and then return to their original position. This leaves a slight gap between the stone and the dirt in the direction of travel.

m. In tropical monsoon countries, small exposed roots and twigs, branches, and vines on the ground have a ridge of earth, a dirt seal, beneath them. The dirt seal will be crushed when the twig or branch is stepped on. In the case of roots, upon being stepped on, the root pushes the dirt ridge away from itself and in the direction of travel, and then returns to its original position. When encountering this sign, by recreating the original root disturbance, the direction of travel may be ascertained.

n. Ant hills are found in most of the tropical areas of bush and jungle around the world. They differ in size and construction. Some have elaborate domes varying in height from 3 inches to 3 feet, while others are open cast holes where earth has been deposited around the entrance to the nest, creating a volcano-like mound. Some are made of sand and some are made of clay. In all cases they are made with earth brought up from below. Being familiar with ant hills in the area

will aid in tracking by noting any damage to them.

o. Worm casts are useful in determining direction. Once the visual tracker is familiar with worm casts, damp, wet or dry, he will find that they too can help determine the direction the enemy is taking.

53. Top Signs

a. Where the vegetation crosses a path, the enemy will have opened the vegetation in the form of the gate. Though this vegetation will often swing back across the path, the visual tracker will be able to discover direction by opening the vegetation up in the path of least resistance.

b. Often in moving through vegetation the enemy will brush up against leaf-covered branches. These leaves will be slightly tilted, showing the lighter underside of the leaf. The degree of tilt, bruising, and damage will depend on the number of the enemy that passed through the area and the loads that they were carrying. After a heavy rain, the leaves will fall back into position provided that the branches have not been broken.

c. In all forested, wooded, or jungle areas the natural phenomenon of falling leaves and branches produces dead branches and leaves hanging in the vegetation. When the enemy passes through such an area, this dead vegetation will be broken or knocked to the ground, showing his direction.

d. The openings caused by the passage of the enemy through the vegetation will contain many signs in both the growing and dead vegetation. As a visual tracker, do not accept one or even two of the above items as confirmation of a track. Use each individual sign to confirm an opinion. Of the 10 different signs given, a visual tracker would be able to accurately determine the direction of the enemy after seeing and confirming 5 to 7 of the signs. Each separate sign should confirm the previous signs found.

54. How to Gage the Speed of Movement

a. The visual tracker must be aware of the body size of the enemy that he is following. He must be familiar with the distance between steps of this enemy traveling at a normal walking rate. The normal distance of a 6-foot man's stride will be greater than that of a 4-foot man. If

the track shows prints that are a greater distance apart than the normal walking step, then the enemy is moving faster than a normal walk.

b. Next confirm the prints. If the ball and forward portion of the print is very pronounced this is noted and recorded before any further assessment is made. If there is scuffed earth to the rear as well as to the front, then the probability of a rapidly moving group is increased.

c. Finally, a close examination of both top and ground signs is made. The visual tracker is now looking for greater disturbances of the vegetation. Broken sticks that have been vigorously broken, torn and jagged vegetation, branches that have been roughly thrust aside and an increase in the amount and size of broken branches indicate that the enemy is moving very rapidly. There is a possibility of finding clothing threads on the vegetation. Young ground vegetation will have been thoroughly crushed and flattened.

55. How to Estimate Numbers From a Track

a. Estimating the enemy strength can be quite simple for numbers up to 15. Enemy groups of 15 will leave such a large track that following it will present no difficulty at all. Getting an accurate estimation of numbers of a group this large can be done only after finding a campsite or resting place and the individual resting places counted. Experience will help a great deal in the estimation of large numbers of the enemy by looking at the track.

b. Follow the track to soft ground. Then take what would be an extra large step for the enemy. (A 6-foot European's extra large step would probably equal two steps of an Asian.) Bear in mind that the enemy may be heavily or lightly laden, or be moving fast or slow. Now count every boot, or part of a boot impression visible within the gap of the extra large step. Divide by two. This will give you a fairly accurate estimate of the number of enemy personnel. The difficult part of the task comes when you are counting the boot imprints. One must realize that if the person who was first was lighter in weight than those following him, his footprints may be wiped out by others in the party. This can be overcome by repetition whenever soft ground appears. Remember that the enemy uses scouts also, and that he may go ahead of the main group and then return. Watch for this sort of a track and have a good

look at the prints of any person detaching himself from the main body.

c. A simplified version of estimating numbers (fig 13) with parallel prints is: by counting from a 30- to 36-inch step, 8 boot (or parts of boots) impressions are obtained. Dividing by two indicates 4 people on the track. Or, when 9 foot marks or parts of boot impressions are counted within the same distance, take the next largest number, 5 people.

56. How to Gage Load Carried From Track Sign

The visual tracker needs to know the average unladen weight of the enemy he is tracking. A 90-pound Asian living and operating as a guerrilla has been known to carry a 90-pound load and leave no more trail than a 180-pound Western soldier with no load at all. This load, if it consists of something like rice and fish, could provide food for quite some time.

a. Follow the track to soft ground, then, adjacent to the print, make another print alongside to the same depth. By estimating the weight required to produce the same depth of print and deducting estimated body weight, the visual tracker will have the estimated weight of the load being carried.

b. The heavier the load the less spring in the step. The distance between steps will be less than normal. There will be a tendency for all of the prints to be made with regular intervals between them.

c. The visual tracker will now see a greater number of full prints. The heel will be very obvious.

d. Visual trackers will notice that the enemy will be crossing obstacles with much more care. Often overhanging and side vegetation will have been cleared. When approaching and stepping over logs, note the care being taken.

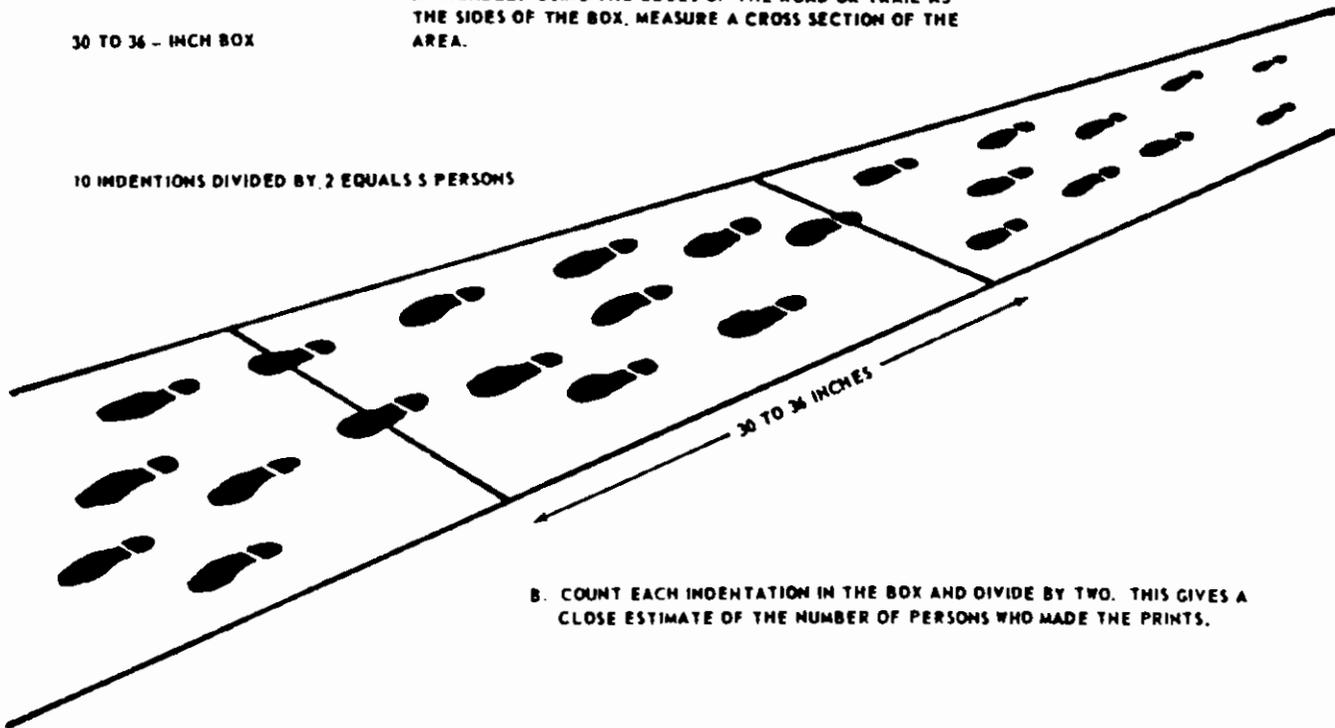
e. When the track leads either up or down hill the visual tracker will be able to see how much care has been used in placing the feet to keep balance.

f. The openings in the undergrowth must be made large enough to let the load through. The width and degree of shoulder high disturbance to the vegetation will aid the visual tracker. A load with awkward protrusions will catch on and strip the leaves from the branches. Height of load

A. 30 TO 36 - INCH METHOD IS USED WHEN NO KEY PRINT IS AVAILABLE. USING THE EDGES OF THE ROAD OR TRAIL AS THE SIDES OF THE BOX, MEASURE A CROSS SECTION OF THE AREA.

30 TO 36 - INCH BOX

10 INDENTIONS DIVIDED BY 2 EQUALS 5 PERSONS



B. COUNT EACH INDENTATION IN THE BOX AND DIVIDE BY TWO. THIS GIVES A CLOSE ESTIMATE OF THE NUMBER OF PERSONS WHO MADE THE PRINTS.

Figure 13. Estimating numbers of persons from footprints.

can be estimated by checking the underside of branches, creepers, or vines.

g. The best places to get an idea of how heavy and what type of loads are being carried is at rest places.

(1) At a standing rest location the visual tracker will be looking for scratches, scrapes, or rub marks on the trunks of trees. This could indicate that the load is not in a pack but on a frame (tools, heavy weapon parts, round of ammunition). With this type of load it is quite probable that the load may be removed from the back and rested on the ground. The visual tracker should look at the ground to guess the type of load being carried by the enemy.

(2) At a sitting rest location, the visual tracker will have much more information available. Packs or loads will be removed and set down. Large objects will most probably be placed against trees. The visual tracker should look for ground impressions and scraped bark. Any dropped or forgotten articles or packing can help in identifying what is being carried.

57. How to Estimate Age of Track

Judging the age of a track is the most difficult part of visual tracking and can only be done after much practice and experience. The three important factors to be kept in mind are: weather, exposure, and type of object from which the estimate is being made.

a. *Weather.* Rain, wind, and sun will all have different effects on objects.

b. *Exposure.* Exposure means the amount of weather the object is subjected to. The same object will age at different rates and in different ways if it is lying in the open field or left in the middle of a jungle. The visual tracker's method of estimating age is to first look at the object and decide whether it is a quick aging or slow aging object. He then must remember what the weather has been during the last three 24-hour periods. The visual tracker must then determine what the object has been exposed to. Smell is important. Fresh sap, tobacco, wood smoke, or the smell of scented soap clinging to the waters of a stream near a camp will indicate a fresh track.

Where there is no smell the track is older. How old is gaged by further investigation.

c. Exposed Earth. Freshly scuffed or turned earth looks and smells different from surrounding, undisturbed earth. Weather and exposure will eventually remove the smell and the look of the newly exposed earth. A closer examination of the dirt will reveal two things. First, it smells different because the newly exposed earth uncovers freshly disturbed or squashed roots and insects, but more important, it contains moisture. It is this that gives off the smell. The smooth edge of the plow or shovel contributes to a different look. Upon closer examination the earth has an unnatural look. Clods and lumps of earth will be balanced on top of one another. Even small stones and grains of sand will be precariously balanced. Weather and exposure begin to take action and evaporation commences. Birds remove plant shoots and insects, while rain will begin to level the earth.

d. Weathering. The process discussed above also applies to a track that the visual tracker is examining. He will notice that fresh boot impressions will have flat surfaces with straight edges outlining the pattern of the boot sole. Both color and smell will be different. Close examination will show small particles of earth and grains of sand balanced upon one another. Weather will begin to erase the print. The sun will dry out the print making it dull in color and blending into the background. The wind will blow the balanced grains of sand down and blow away the finely powdered earth. Rain will begin to wash away the distinct outline of the print. Now the print is blurred, indistinct, and unstriking in appearance. Leaves may begin to fall and cover up the print and hide it from view altogether. Prints made 10 to 20 meters apart may age at different rates depending on the amount of exposure each is subjected to.

e. Dry Leaves and Sticks on the Ground. With a fresh track over this type of ground, the visual tracker will have to look for the following: the overall disturbance to the area will cause a different color to appear over the track. Each leaf that has been stepped on will either be cracked, broken, or crumbled. Some will be tilted. The effect that will be apparent is a greater shadow, and so a darker color. Along the edges of torn or broken leaves there is a lighter color. Also, fine fiber hairs will be seen along the fresh breaks. Sand and dirt may be found on the leaves. Tilted leaves will be in an unbalanced state. Sticks, as

with leaves, will have fine fiber hairs from the breaks. The breaks will be lighter in color than the rest of the area, and the sticks may be in an unnatural position. Often with overturned sticks and leaves, the underside will be darker in color. Dirt and sand may also be clinging to the underside. Weather and exposure will soon begin to age this picture. Rain will pat the leaves or sticks back down and wash dirt or sand off them. The exposed broken ends will begin to darken and the fiber ends will curl up and disappear. Sunshine following rain will speed up the aging process so that 24 hours later all signs of freshness will be gone.

f. Growing Vegetation. Think of a vase of flowers. With no water, and placed in direct sunlight, they will soon wither and die. When placed in water and in the shade, they will stay fresh and alive for a much longer time. Now, think of the many different kinds of flowers. Some, when given the water and shade treatment, will last 2 or 3 days, while others, such as orchids, will bloom over 7 weeks later. The visual tracker should be aware of the differences between various types of vegetation. He knows that pulpy leaves and stalks with a high water content will soon wither and die if bruised, broken, or exposed. The same plant with rain, or in the shade, will appear freshly cut 3 or 4 hours later. The tip leaves of plants are the new, tender leaves, and will be the first to die. With vegetation that is more woody and has less water content, the appearance of freshness will last a much longer time. When exposed to the sun, however, and subjected to heavy rain, it will rot at a much quicker rate. The visual tracker must also be aware of the plants' reaction to cutting, breaking, or bruising. The previous discussion considered the removed part. The growing part must also be taken into consideration. First, sap will appear and then congeal or dry. Next, when the cut end has dried, it will turn brown. The speed of browning will vary with different plants and only experience will help the visual tracker determine the age. Finally, under different exposure conditions, growth will begin again below the cut. This process can take anywhere from 3 to 9 months depending on the species of the plant and weather conditions.

g. Manmade Objects. Man, when moving through the jungle or bush must take with him many manmade objects for support. A listing of such items includes food, clothing, medical supplies, camping and sleeping equipment, weapons

and ammunition, some items of luxury, and communication equipment. When the visual tracker locates a camp he will need to know the speed of aging of the items listed above. He will automatically check the fire to estimate when the camp was last used. Generally, this should give an estimate within a 24-hour bracket. The visual tracker then moves around the camp, checking out manmade objects and the damaged vegetation in the area. He will need to know that a metal can that is made to contain a substance with a high acid content will have to be more durable than one made to hold a natural substance. For example, a can for evaporated milk will not last as long as a can for beer. A can made in the United States will be of different quality than one made in Asia. The quality of the product, purpose of the product, and origin of manufacture must be remembered when trying to estimate age for such items as writing paper and newspapers, cloth products, plastic products, food containers, and webbing. The manmade objects found by the visual tracker, either along a track, or in a camp site, will assist the visual tracker in determining the age of a track.

58. Determining the Condition of the Enemy From Track

The visual tracker will soon be able to assess the condition of the enemy that he is following. With an alert, well-trained, well-disciplined, and aggressive enemy, high in morale, he will notice the following:

- a. Whether the group is using deception tactics to cover their track.
- b. How the enemy is crossing obstacles and what sort of obstacles he is willing to negotiate.
- c. Whether the enemy gets into all-round security positions during rest breaks.
- d. If the group, after a rest halt, cleaned the area and put vegetation back into natural position.
- e. Whether the group is leaving very little trail and placing their feet carefully when in soft ground.
- f. Condition and state of overnight resting places and the position of sentry positions.
- g. Whether the group is using listening halts.
- h. Condition of track on hilly ground or in difficult terrain.

i. Action of enemy in contact.

j. The visual tracker will be able, in like manner, to determine if the enemy is exhausted, poorly trained, badly disciplined, careless, and of low morale by noting the following.

- (1) Slip, slide, or skid marks when moving up or down hill.
- (2) Clearing of track by cutting vegetation.
- (3) Leaving excessive ground signs when crossing soft ground.
- (4) Discarding items to lighten the load when crossing difficult ground.
- (5) Careless dropping of items such as cigarette butts, candy wrappers, and the like.
- (6) Crowding during rest halts, with no sentries posted.
- (7) No deception tactics.
- (8) Poorly sited and protected overnight campsites.
- (9) Lack of effort in clearing and camouflage to area of overnight campsites.

59. Weapons Carried and Sex of Party

This information is most likely to be found at rest halts and overnight campsites. These are places that will confirm information for the visual tracker. When the visual tracker wishes to assess the weapon or sex of the members of the party he should note the following:

a. Personnel or hand carried weapons and crew weapons will all leave sign when laid on the ground or placed against trees and vegetation. Expended or unexpended rounds along the track, at rest areas, and base camps will help indicate the type of enemy weapons. A thorough knowledge of enemy weapons is necessary for an accurate evaluation of the type weapon.

b. Sex of the enemy may be determined by several means. This is easiest to do in rest places and overnight positions. The following should be kept in mind when looking for sex:

- (1) Undergarments.
- (2) Items used for personal hygiene.
- (3) Cooking and sleeping arrangements.
- (4) Footprints.

c. No tracker can look at one spot and determine all of the previous items. He must track for some distance over all sorts of ground. Ideal lo-

cations for data are soft ground, up and down hill, thick undergrowth, resting places, and overnight campsites. A tracker must learn to think as the enemy does. He must always put himself in the place of the enemy. He must observe how the

enemy solves many of the problems of movement and obstacle crossing. By doing this the tracker will be in a far better position to interpret the information gained from following the track.

CHAPTER 10

DECEPTION TACTICS

60. Deception Tactics No. 1—Change of Direction, Big Tree

a. While moving along in any given direction and when moving from a thick area to a more open area, walk past a big tree (diameter 3/4 feet or larger) toward the open vegetation for three to five paces and then walk backwards to the forward side of the tree and make a 90-degree change in direction, passing the tree on its forward side. Step carefully and leave as little sign as possible. If this is not the direction that you wish to go, change direction again 50 to 100 meters farther on at a suitably placed big tree and repeat the previous steps.

b. The purpose is to draw the following party into the open area where it is harder for them to track. This will have them searching in the wrong area when they realize that they have lost the track.

c. If you are led astray and follow a big tree deception tactic, remember the track following drill. Three to five paces past the big tree you should start walking on virgin ground. You should realize this. Stop. You should remember the big tree and go back and check it and around it.

61. Deception Tactic No. 2—Change of Direction, Marked Tracks

a. This deception tactic is used when moving through a known area and upon an established jungle track going at right angles to your line of movement. Before reaching the track (approximately 100 meters) change direction and approach the track at a 45-degree angle. When arriving at the track continue forward along the track 20 to 30 meters, leaving considerable ground and top signs of your presence. Then walk backwards to the point where you joined the track, go straight across the track and leave no sign of your re-entering the jungle. Then move off for approximately 100 meters at an angle of 45 degrees, but this time on the other

side of the track and in the reverse of your approach march. Insure that the last member of your patrol is detailed to cover up all signs of your movement. When changing direction back to your original line or march, the big tree tactic can be used.

b. The purpose of this tactic is to draw the following party along the easier going jungle track. You have, by changing direction before reaching the track, indicated that this is your new line of march. If you are successful, the following party will be casting and searching even farther away in the wrong direction when they realize that they have lost your track.

c. A visual tracker should be able to read a map. He will know that he is approaching a known jungle track, and knowing about it and this type of deceptive tactic, he should automatically check the opposite side of the track for signs. If he follows along the jungle path before realizing that the track "peters out," he will automatically detail a second visual tracker to go back to where the path was first encountered and make a search in that area.

62. Deception Tactic No. 3—Change of Direction, Clearing

a. Walk backwards over soft ground to leave a reasonably clear footprint. Endeavor not to leave every footprint clear and do not leave an impression of more than a 1/4-inch deep. Continue this deception until you are on hard ground. Select the ground carefully to insure that you have at least 20 to 30 meters of this deception. This tactic will normally be used when leaving a stream.

b. The purpose here, by leaving backward footprints, is to get the following party to look in a direction opposite to your line of travel. Always use this when coming out of a river or stream. To add even further confusion to the following party, this tactic can be used several times to lay false trails before actually leaving the stream.

c. Any footprint left in soft ground by a human walking backwards will always have earth brushed over the lip of the heel. This earth will always indicate the true nature of movement. Remember that top signs and ground signs also point out the direction the enemy is moving. The distance between steps will also be shorter.

63. Deception Tactic No. 4—Use of Rivers and Streams

a. When moving through a familiar area, change direction 100 meters before approaching a known stream and approach it at a 45-degree angle. Upon entering the stream, turn in a false direction and proceed down the stream for at least 20 to 30 meters and then back track and move off into the intended direction. Changing direction before entering the stream may confuse any following party. When the following party enters the stream they should follow the false trail until the track is lost. The following party will be in a false-start position to try and relocate the track. They will begin to probe farther, and will get farther away. They will have to start examining both banks. This is time consuming and therefore a good delaying tactic that is easy to set up and does not require much time.

b. *Explanation.* When moving along a stream and using it as a deception tactic, the fact that you are in the stream will slow down anyone in pursuit. Even greater success can be achieved by entering and leaving the stream carefully. Some of the following points will also aid in eluding a following party:

- (1) Stay in the stream for 100 to 200 meters.
- (2) Keep in the center of the stream and deep water.
- (3) Watch for rocks or roots near the banks that are not covered with moss or vegetation and leave the stream at this point.
- (4) Walk out backward on soft ground.
- (5) Walk up small, vegetation-covered tributary and replace vegetation in natural position.
- (6) Walk downstream until coming to main river, then depart on log or prepositioned boat.
- (7) Enter stream, having first carried out the above tactic, then exit at the point of entry and make a large backward loop, crossing and checking it, and move off in a different direction.
- (8) Using a stream as a deception tactic is one of the most successful moves that can be

employed to slow down and lose a following party. The deception starts 100 meters from the stream and the successful completion of the tactic is to insure that the following party does not know where to exit from the stream.

c. Every visual tracker is constantly reading the track picture, gauging the "personality" of both the track and those who made it. It is hoped that he will have a good idea of the cunning, skill, and morale of the enemy before coming across a stream deception tactic. This type of tactic will slow down a tracker, but if common sense and a methodical, determined search is made, a good tracker will be back on the right track. On searching for the track on a stream deception tactic the tracker should remember the following:

(1) If it is clear water and the bottom is visible, it is still possible to track. Move along slowly, watch for boot prints, disturbed stones (practice and familiarization will enable the tracker to recognize the natural position or stance in a stream bed) and the lack of sticks and other vegetation wedged or caught by boulders and rocks.

(2) Lack of spider webs across narrow streams.

(3) Disturbed, overhanging vegetation.

(4) Most river banks are of soft soil and will mark or crumble under the weight of someone leaving or entering the stream. There will often be slide or skid marks from boots.

(5) Any person exiting from a stream leaves behind two signs: water draining from trousers and boots, and mud from the stream on rocks or grass.

(6) Parties checking up and down stream are warned to look out for overhanging branches. Because of their nearness to water, the branches may be moss covered. The overhanging branches will have a high water content and the bark will mark easily. Watch for places where the bark has been freshly scraped off.

64. Deception Tactic No. 5—Clean Orchard Leaf Covered Area

a. It is often necessary, when moving from place to place and when making contact with the local population, or when moving to a prearranged ambush position, to move through an orchard area. If possible, always select an area that has been kept free of undergrowth. If pos-

sible move through the area at night, preferably on moonlit nights. If this is not possible, the lead man, plus the remainder of the party, will be marked with luminous leaves on either the right or left shoulder. Orchards are often contour plowed and the drainage ditches are filled with leaves. A straight line through such an area will mean stumbling over the ridges of the plowed ground. Always move through the area by following a tree line. This will be a cleared area with good visibility at ground level. Be sure to clear the area by daylight. Watch the seasons, for when the trees shed their leaves, movement can be seen from the air on a moonlit night. The purpose here is obvious. It is almost impossible for a following party to determine between you and the locals.

c. If you have followed the enemy into this type of area and discovered that he is using it, then tracking can be a slow job. But careful attention to detail can bring success. When an enemy party of 3, 4, 5, 10 or more pass through

the area they will leave a lot more signs. If the track is too difficult to follow, have parties move along parallel to a center group and keep to the areas where the enemy may have been. If the track is lost, try checking the edge of the orchard where it meets adjoining fields or woods for signs of where the party re-entered and left the orchard. If this is impractical, make an intelligent guess as to where the enemy could have gone and then move forward and search around this area. Be careful when operating in an area where local workers may be sympathetic to the enemy, as they may reveal your presence in the area.

d. Predominant signs include bruised surface roots of freshly broken or disturbed sticks, fruit or nuts pressed into the ground, and disturbed, bent, unbalanced leaves. Footprints may be found in softer patches of ground. Branches, roots, and logs may have signs of scraping and bruising. In any orchard there will be worn casts. Check to see if they have been crushed.