

CONCLUSIONS AND RECOMMENDATIONS

Conclusions

General Indications of Program Needs

(U) At present an overall Army program, having a specified organizational structure and carefully delineated areas of responsibility for the utilization of dogs in military tasks, does not exist. There are a number of dog programs, which have been described in the preceding pages, but these are mostly independent of one another and uncorrelated. Many of the people interviewed during the course of this study spoke of the need for a coordinated Army Dog Program. The current fragmentation of the various dog activities ranges from long-range research and development efforts to the utilization of some 2500 dogs in the field. Many of those participating in the current dog programs cannot understand how the need for a coordinated program could continually go unnoticed, especially when they were producing a product that is so well received by those who use dog teams.

(U) The military dog team should be equated to a reconnaissance and surveillance system, and the ability of the dog programs to grow continually during wartime (see App B) is ample proof of their effectiveness. This is particularly striking in a nation with the most technologically sophisticated military hardware.

(U) The obvious conclusion is that military dog teams perform reconnaissance and surveillance missions that cannot yet be duplicated or matched in effectiveness by other devices. Until dog teams can be outperformed by other means, the requirements will continue. Thus, the Army Dog Program should be a permanent part of the Army Force Structure and the Army Concept Program.

(U) In the past, the maintenance of a dog capability, was apparently difficult to justify during peacetime. A review of the history of military dogs from World War II to the present has been one of continually increasing wartime demands, both in quantity and variety of missions. Between wars the picture is one of near total disbanding of the military dog capability, and consequent frantic but delayed buildup after fighting began again.

(U) The creation of an overall Army Dog Program as a permanent part of the force structure should provide stability and viability during peacetime and prevent dissipation of the capability. This stability is particularly important because of the short life of the system. Both components of the dog system, the handler and the dog, have short operating lives compared to a hardware system, so that a continuous production system, even at low levels, is necessary in peacetime, with a capability for rapid expansion.

(U) The expansion can be rapid for some dog types, such as sentry and on-leash scout dogs, which have relatively short training periods, assuming that facilities and trained instructors are available. Other components of the dog program, such as tracking teams, require much longer lead times,

and thus should have a greater peacetime capability to compensate for the slower expansion capability.

(U) There are devices proposed or in development that are competitive, in some ways, to the military dogs. On the other hand, the current dog R&D programs indicate that we have not yet exhausted the limits of the dog's potential. The adoption of an overall Army Dog Program should also give some stability and direction to the currently fragmentary dog research and development program. The competitiveness among dog programs (such as multipurpose dog instead of simple single-purpose dog) and the introduction of new hardware devices, will gradually increase in the future. This conclusion generates another, that it is becoming increasingly important to gather good objective data on the effectiveness and cost of these dog programs.

(U) Meanwhile, the demand for military dogs will continue to increase, at least for the near term future. Operations in Vietnam and Malaysia have shown that dogs do make a valuable contribution to counterinsurgency operations. Long-range projections show that the anticipated conflict environment of the next several decades is going to be characterized by a multiplicity of low-intensity wars brought about by so-called "wars of national liberation." Currently, the infiltration of guerrillas across the Korean DMZ has stimulated an interest in using dogs to locate the guerrillas.

(U) A potential requirement exists for dogs that can be used to help quell domestic civil disorders. Dogs are effective when used to patrol areas of high crime rates and it is reasonable to assume that they would be effective in helping to control or disperse large unruly crowds. There are some operational problems involved in using dogs against men in a civil disorder situation, but these problems can be solved through careful training and effective law support. For example, a dog being used to control mobs has to have the capability of sufficient discrimination to apprehend a person actually committing such a serious crime as arson, looting, or assault, as opposed to those who are milling in the area.

(U) There are a number of reasons why the Army should initiate action to develop a balanced dog program, responsive to worldwide requirements; these reasons are summarized below:

1. The slow, continued overall growth in the requirements for military dogs now reaching peak levels for the war in Vietnam.
2. The projected low-intensity conflict environments for several decades in the future; dogs have proved to be effective in low-intensity warfare.
3. The increasing use of Army units to restore order to riot-torn areas of the United States; dogs could make a valuable contribution to the control of such situations.
4. The need to maintain a viable operational capability and a research and development activity during peacetime.

(U) The following sections present conclusions pertinent to specific dog programs.

Sentry Dogs

(U) The following conclusions about sentry dogs have been made.

1. The monitorship of the Provost Marshal General and the contribution of the Air Force to the training of Army sentry dogs and dog handlers have produced an efficient program, which is responsive to the Army's worldwide requirement for sentry dog teams. The program, because of the shared Army-Air Force interest, does not have any problem areas that significantly degrade the overall quality of the men and dogs taking part in the program.

2. The experience being developed by the Army sentry dog teams in Vietnam needs to be closely examined for the documentation of possible contributions to the doctrinal literature. The employment of sentry dog teams in a low-intensity warfare environment has required the development of new methods and techniques of conducting physical security operations with dogs. This information should find its way into the official manuals.

3. Many comments were received as to the acceptability of the training methods and techniques that are contained in the Army's only manual that is specifically directed toward dogs, FM 20-20.

4. The dogs raised in one country are, like humans, susceptible to indigenous diseases in foreign climates. Careful medical attention is necessary to keep the dogs healthy and effective.

5. Only carefully selected volunteers should be accepted as dog handlers. Men experienced in working with dogs in combat have expressed the opinion numerous times that for the sentry dog program to accept anything less than this would be a waste of time, money, and manpower. It is more important to have volunteers, from whatever branch of the Army, than to have to use non-volunteers from only one branch of the service.

Scout Dogs

(U) The following conclusions about sentry dogs have been reached:

1. The current operations in Vietnam have brought forth a renewed enthusiastic support for the use of Army scout dog platoons. The general overall performance of men and dogs in the field has been excellent in spite of the fact that they have been the result of a crash program.

2. A permanent, functionally organized school is needed to handle the Army's requirements for scout dog platoons and replacement personnel. The creation of this school would provide the following:

- A program capable of producing the MOS needed to retain the developing expertise.
- A flexibility to meet expanding or contracting requirements adequately.

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- An ability to stabilize the instructional base by obtaining some foreign service immunity.
- A capability for receiving and evaluating the results of the training program after the men and dogs have gone into combat.

Combat Tracker Teams

(C) The following conclusions have been reached in regard to combat tracker teams:

1. The US Army combat tracker platoons are doing an extremely effective job locating enemy forces; they are a valuable asset to the using field commander. Field commanders who have been exposed to the capabilities of the tracker teams are usually very reluctant to release the teams upon completion of the assigned missions.

2. The combat tracker teams will be even more successful in future operations after the staffs and unit commanders become more familiar with the teams' limitations and capabilities.

3. The only source of training for the US Army combat tracker teams is the British Jungle Warfare School in Malaysia. Since this school may become a victim of British worldwide military retrenchment, the development of a combat tracker program in CONUS is required.

4. There is no tracker team doctrine in Army field manuals. The published doctrinal guidance that does exist is in allied documents, but it is not current with US operations in Vietnam.

5. The mission of a tracker team demands that the personnel making up the team be volunteers. Anything less than this will be a waste of money, manpower, and probably lives.

Off-leash Scout Dogs

(U) The following conclusions have been reached in regard to off-leash scout dogs:

1. The idea that a dog, working off the leash, ahead of a patrol unit, is able to provide a significant contribution to "point reconnaissance" has been demonstrated as a sound and militarily feasible concept. However, as with the regular on-leash scout dog, the off-leash scout dog should be viewed as an extension of the reconnaissance capabilities of the patrol and not as a replacement for any of these patrol capabilities.

2. The work done by the Canine Behavior Laboratory at the University of Maryland and the US Army Limited War Laboratory has shown that German Shepherds can be taught to perform off-leash reconnaissance tasks. One of the results of this research effort has been the formulation of a training guide for off-leash scout dogs.

3. This training guide will be used as Fort Benning begins to train a large number of off-leash scout dogs, but it can benefit from training innovations and feedback information from the field.

Mine and Tunnel Dogs

(U) The following conclusions have been reached in regard to mine and tunnel dogs:

1. The mine and tunnel program would add an additional specialized dog capability that the field commander could call upon to solve specific operational problems.

2. It is too early to make any judgment about this research and development program. The program must have its operational test in Vietnam before any overall conclusions can be drawn.

Recommendations

(U) The conclusions given above for the various specific dog programs lead to recommendations for action in each of the areas. These specific recommendations are stated below for each program. In addition, these specific individual recommendations can be combined into an overall action and study program.

Sentry Dogs

(U) The following recommendations concern sentry dogs:

1. The procurement of sentry dogs should remain with the Air Force; the Air Force is meeting the Army's requirements, and at less cost in money and manpower than if the Army did its own procurement.

2. The Air Force should continue to train the sentry dogs required for Army CONUS facilities.

3. The Army training program should concentrate on the Pacific Theater and its special requirements. The Army Field Manual FM 20-20 should be revised and updated to incorporate new and improved training techniques and new doctrine and utilization methods developed in the counterinsurgency environment.

Scout Dogs

(U) The following recommendations concern scout dogs:

1. A permanent, functionally organized school should be established to handle the Army's requirements for scout dog platoons and replacement personnel. This will permit Army personnel to volunteer for the program and will create a career field in Army dog training and employment. It will also create some stability in the instructional base.

2. An operational evaluation should be conducted in Vietnam to obtain objective data on the effectiveness of the on-leash scout dog team, which can then be used for comparison with that of the off-leash scout dog team. The program will also provide better doctrine and utilization information which can be incorporated into training programs and field manuals.

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Combat Tracker Teams

(C) The following recommendations concern combat tracker teams:

1. Doctrinal guidance should be developed from the British experience plus the current US experience in Vietnam, and it should be incorporated into Army field manuals. The guidance should be provided to familiarize the using unit commanders with the capabilities and limitations of combat tracker teams, as well as provide useful guidance to the team members themselves.
2. The US Army should develop a combat tracker training program and school in CONUS. It should eventually replace the British Jungle Warfare School as our source of trained personnel and instructors.
3. Only volunteers should be selected for tracker team personnel.

Off-leash Scout Dogs

(U) The following recommendations apply to the off-leash scout dog program:

1. A more thorough operational evaluation of off-leash scout dogs should be conducted in Vietnam to obtain better data on the preferred doctrine and utilization. The data can also be used in a comparison with the on-leash scout dog program with which it competes for personnel and training facilities.
2. If the off-leash scout dog is accepted as a permanent part of the dog program, the training guide developed by the Canine Behavior Laboratory and the Limited War Laboratory should be updated by the Vietnam results and incorporated in the appropriate Army field manuals.

Mine and Tunnel Dogs

(U) It is recommended that the research and development program for mine and tunnel dogs should be continued through operational evaluation to determine the feasibility of the system.

Overall Program

(U) Dog teams can be viewed as a reconnaissance and surveillance system capable of providing a highly specialized support to maneuvering infantry elements. As such, they provide specific capabilities more effectively than electromechanical devices designed to perform the same type of task. There are no quantitative data available to support the above statement, but this is the expressed opinion of many who have worked either directly or indirectly with military dogs.

(U) Any reconnaissance system needs a carefully planned program to ensure that all areas important to the development and utilization of the system receive the required attention. For the Army, this ranges from research and development to the development of doctrine for field use. The overall recommendation is that various individual dog programs be organized and integrated into one Army Dog Program with control at a sufficiently

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high level to provide continuity and stability through the various levels of war and peace that will occur in the future. To develop and justify the specifics of such a plan will require several studies and activities, which are outlined below.

(U) The first thing that needs to be done is to conduct an operational evaluation for each type of military dog currently in the Army: sentry dog, scout dog (including off-leash), combat tracker team, and mine and tunnel dog. These studies would be oriented toward the gathering of operational data on the effectiveness of various dog capabilities and their cost in terms of manpower, supply, logistics, and training. Portions of the operational evaluation for each dog capability could be oriented toward comparing various capability factors with those that exist for electromechanical devices that are able to perform comparable tasks. Such evaluation efforts should be carefully designed to obtain the maximum amount of objective quantitative data. The current Riverine and TACSIV evaluations are representative of what is recommended here. About seven or eight months of effort would be required for each type of dog evaluated, with two or three months of that data collection effort in Vietnam. The evaluations could be conducted concurrently if sufficient manpower were available.

(U) The importance of these operational studies should not be overlooked, because they would provide valuable inputs into evaluating the effectiveness of the dog under combat conditions, comparing the effectiveness of volunteer and non-volunteer handlers, determining the correctness of training time and content, evaluating the adequacy of doctrinal guidance, and assisting in the formulation of guidelines for the overall Army dog program.

(U) A detailed cost analysis should be performed to establish the cost of building a new facility to centralize the Army dog training programs compared to the cost of having these programs scattered at various points in CONUS and the Pacific Theater, as they are today. Under current arrangements, each facility requires logistical and administrative support, in addition to specialized buildings such as kennels and veterinary hospitals. All these things require money and manpower. If, in the long run, it would be more economical for the Army to establish a permanent dog training center at a location specifically designed and developed for the training of dogs, then this should be done.

(U) The facility cost analysis would be one input to a group of cost studies. These latter would address the procurement and operating costs of each dog program and would provide the cost data for cost-effectiveness studies comparing each type dog to each other type dog or to comparable electromechanical devices. These studies could be conducted concurrently with the operational evaluations.

(U) These cost and effectiveness evaluations would provide the qualitative and quantitative data necessary to develop and justify the establishment of a coordinated Army Dog Program. This study of an Army Dog Program could start before the others are completed, and would cover such things as organization, doctrine, deployment, logistical

support, and cost.

(U) The organizational aspect of the dog program should be investigated to determine the proper point of program coordination and monitorship; this part of the study should start reasonably soon. It should determine:

- The level (Department of Army, Department of Defense or other) for program coordination.
- The location of the US Army Combat Developments Command proponency for the Army Dog Program.
- The organization of the dog school system, its status, and the structure of the MOS system for the dog program.

(U) The organizational aspects of the program should be determined first and implemented as rapidly as possible. The new organization would be in a better position to apply the information developed in the evaluation and cost studies, particularly in updating the doctrinal and training manuals.

(U) The total effort required in the studies is expected to encompass about two years. The operational evaluations are governing, since it is unlikely that they could all be performed simultaneously. About 18 months should suffice for the completion of these evaluations, assuming the experimental mine and tunnel program to be ready for evaluation when scheduled. The completion of the program planning study should be accomplished within the next six months.

APPENDIX A

(U) TASK ASSIGNMENT



DEPARTMENT OF THE ARMY
HEADQUARTERS
UNITED STATES ARMY COMBAT DEVELOPMENTS COMMAND
FORT BELVOIR, VIRGINIA 22060

IN REPLY REFER TO
CDCRE-0

5 October 1967
LTC Trost/210/bln

(CORRECTED COPY)

MEMORANDUM FOR: Director, CORG

SUBJECT: Task Assignment 23-67, Review of the Military Dog Program

1. The Commanding General desires that you conduct a study under the provisions of your contract for calendar year 1967.
2. Title: Review of the Military Dog Program
3. Objectives:
 - a. To document current U.S. Army utilization of scout, sentry and tracker dogs.
 - b. To examine and analyze the overall military dog program as it impacts on U.S. Army organization capability and effectiveness.
 - c. To develop a balanced program for the utilization of sentry, scout and tracker dogs responsive to the U.S. Army's requirements.
4. Nature and Scope: The U.S. Army officially recognizes the requirement for military dogs. Expedient programs are being conducted to meet emergency requirements, but they are fragmented or makeshift. A comprehensive review and analysis of current programs for procuring, training and employment of dogs will provide a firm basis for symptom improvements.
5. Guidance:
 - a. A cursory in-house review of the Army Scout Dog Program revealed some major deficiencies in the overall program. An empirical, in-depth evaluation of the overall system is needed to determine if total effectiveness warrants major program modification and/or emphasis.
 - b. Field commanders in Vietnam overwhelmingly support the value of dogs to their operations. There are indications that in-country or

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off-shore float or back-up support is inadequate to provide the required or desired levels of operations.

c. The current system for procuring scout and sentry dogs for the Army appears inadequate. Regulations provide for the U.S. Air Force to acquire dogs for both services which they achieve through donations and direct purchase. This system cannot provide sufficient dogs for both services on a continuing basis.

6. The completed study will be presented to the Commanding General in the form of a CORG Memorandum.

7. Administration:

a. A draft memorandum is required by May 1968.

b. Project Officer, LTC W. B. Ray, extension 44440. *Outline*

c. Progress reports will be furnished as required by the project officer.

8. Correlation: to be furnished.

9. Request that you analyze your resources and provide the following:

a. Estimated technical man months by calendar year.

b. Computer time.

c. CORG Project Scientist.



JOHN T. PIERCE III
Colonel, GS
Chief, Operations Research
Support Division
Directorate of Evaluation

APPENDIX B

(U) BRIEF HISTORICAL BACKGROUND ON MILITARY DOGS

INTRODUCTION

(U) The use of dogs for tactical operations by the United States Army came about as the result of experimental programs conducted during the first few years of World War II. When it became apparent that the United States might become involved in the spreading conflict, leaders of major dog organizations and a few military men began to explore the possibilities of using dogs in modern warfare. These fanciers of dogs directed their attention toward the types of tasks that dogs might perform for a modern army and to the development of dog training techniques that would be useful for and adaptable to the military establishment.

USE OF WAR DOGS PRIOR TO WORLD WAR II

(U) These dog enthusiasts had an extremely large amount of directly applicable background information and experience upon which to base their statements and conclusions. During World War I dogs were used extensively by the German, French, and Belgian armies. Approximately 30,000 dogs were utilized by the German forces, primarily in nontactical roles as messenger and ambulance dogs. The French also used a sizable number of dogs. French canine losses during the four years of the war amounted to some 5,000 dogs killed or missing. At the end of the war, the French army disposed of some 15,000 dogs.

(U) Prior to World War I dogs were used during the Russo-Japanese War in ambulance-type tasks, by the British as sentry dogs on the Abor Expedition in the Himalayas, by the Bulgarians in the Balkan upheaval in 1910, and by the Italians in Tripoli in 1911. Going further back into history, it is interesting to note that the Greeks and the Romans used attack dogs, providing them with spiked collars and sending them against enemy forces. Among the heroes of the battle of Marathon was an Athenian with his dog. In the Middle Ages, dogs of extreme ferocity were equipped with armor and spiked collars and used against cavalry and in the defense of caravans. The Spaniards used dogs to aid them in their conquest of Mexico and Peru. "In 1544 Henry VIII is said to have sent four hundred dogs 'garnished with good iron collars' to the assistance of Charles V of Spain in his war against France" (Ref 5, p 174). The methods of employment of dogs in ages past obviously reflect tactical concepts of utilization, but the writings of and about these periods bring out very little evidence on the military employment of dogs.

(U) Before gunpowder began to control the art of warfare in the 17th Century, bold, ferocious mastiffs, capable of being used against cavalry and armed men, were the general requirements for use on the battlefield.

However, gunpowder completely changed the concept of war and along with this change evolved the requirement for a more specialized breed of dog for the newly emerging concepts of modern warfare. Thus, the 19th and early 20th Centuries saw the development of the messenger dog, the ambulance dog, courier dogs, sentry dogs, sled dogs, etc. With this kind of background information as support, various groups were working even before the US entry into World War II to develop an interest in and programs for investigating the limitations and capabilities of dogs in tactical and nontactical missions.

USE OF MILITARY DOGS IN WORLD WAR II

Development of Sentry Dog Program

(U) The bombing of Pearl Harbor suddenly brought the United States into war. The immediate build-up of industrial plants, the construction of new military installations, and the expansion of others brought about an increased interest in sentry dogs. The need for such dogs was emphasized by the German deployment of submarine forces along the Atlantic and Gulf coasts. The potential danger of enemy aliens, fascist groups, and saboteurs increased drastically after December 1941 and measures were needed to cope with these threats to internal security. "Dog fanciers were not slow to point out that the animals might be extremely valuable auxiliaries if they were attached to Coast Guard beach patrols then being organized to prevent" landings along our coasts, "and if they were used as guards at industrial plants and Army installations" (Ref 6, p 325).

(U) In January 1942, a month after Pearl Harbor, a national organization called Dogs for Defense, Inc., was established for the purpose of coordinating the attempts of various professional and amateur organizations to acquire, train, and distribute sentry dogs to wherever they might be needed in the United States. Shortly after the creation of Dogs for Defense, the American Theater Wing War Service offered to donate dogs to the Quartermaster Corps for defense purposes. This offer was approved by the Quartermaster General and the War Department early in February 1942. Since the Theater Wing was not organized to procure and train dogs, these tasks were assumed by Dogs for Defense, Inc.

(U) The Plant Protection Branch of the Inspection Division within the Office of the Quartermaster General was initially assigned overall supervision of the Army's new and rapidly expanding dog program. The original estimate was for 200 dogs which would be used to guard war industrial sites and quartermaster depots. These dogs were to be procured and trained by Dogs for Defense and then turned over to the QMC for deployment. However, this program was immediately headed for trouble because of its limited concepts and scope. It was soon discovered that the training program was unsatisfactory because it relied upon the volunteer services of dog trainers all over the United States and so lacked coordination and standardization. In addition to this, the demand for sentry dogs went far beyond the original estimate. Also, the scope of the

dog program was expanding to include a wider range of tasks for which a dog was appropriate.

(U) As a result of these considerations, major modifications of the program took place. A new training program was developed and the responsibility for training was shifted to the Remount Branch which, in addition, assumed all the supervisory duties of the dog program that were formerly assigned to the Plant Protection Branch. The Remount Branch had the experience in handling animals and the centralized facilities to accommodate the Army's dog program. The extent of participation by the OQMG was further widened in the Fall of 1942 when the task of procuring and training all dogs for the Navy and Coast Guard was assumed. The Marines maintained a separate procurement and training facility at New River, North Carolina.

(U) Under the Remount Branch, the examination, classification, and training of dogs and handler personnel, was conducted at the newly established war dog reception and training centers. In late 1942 four such centers were established: Front Royal, Virginia; Fort Robinson, Nebraska; Camp Rimini, Montana; and San Carlos, California; in early 1943 an additional center was established at Cat Island, Mississippi. These centers greatly improved the quality of the war dog program by providing standardized methods of training and, more significantly, trained the handler and dog together as a team. Most of the training conducted at these centers during the early years of the war was for sentry dogs. Out of a total of 10,425 dogs accepted by the Army for training purposes, 9,295 were trained for sentry duty.

Development of Scout Dog Programs

(U) As the threat to US internal security abated during the later years of the war, the need for sentry dogs dropped sharply. There was, however, an increase in interest in the use of dogs for tactical purposes, namely in the form of scout dogs. Experimental programs were being conducted on the development of a scout dog during the early years of the war, but it was not until 1944 that this type of dog was being trained in large numbers.

(U) Experimental work for the scout dog program was conducted at Cat Island, Mississippi. This facility offered an excellent opportunity for the training of scout dogs for tactical operations in the South Pacific. The semitropical climate and vegetation of the Mississippi facility made it possible to prepare these dogs for jungle warfare. In the spring of 1943 a detachment of six scout and two messenger dogs was sent to the South Pacific for operational evaluation. These tests, which were conducted during most of 1943 were, on the whole, extremely favorable. In those instances where the results were unfavorable, the problem could be traced to inexperienced personnel or a lack of training for the dog or handler.

Development of Mine Detection Dog Program

(U) Concurrent with the experimental work on scout dogs, exploratory work was being done on the development of a mine detection dog. The advancement of the Allied armies in North Africa was being slowed by nonmetallic mines and it was thought that dogs could be used to locate them. Experimental work for the development of such a dog was satisfactory. Toward the end of 1943, the first of two mine detection units was activated. These units were subsequently sent to North Africa for operational evaluation in typical German mine fields but the results of the tests were unsatisfactory. The mine detection units were eventually inactivated and the training of dogs for mine detection was discontinued.

Organization of War Dogs into Platoons

(U) In March 1944 the men and dogs trained in the war dog program were formally organized into TOE platoons. Organized under the Quartermaster General, each of these platoons had one officer, 26 enlisted men, twelve scout dogs, twelve messenger dogs, and one mine detection dog. On the basis of actual combat operations, platoons were reorganized to reflect the changing emphasis in the utilization of the dog for combat missions. Since the messenger dogs had a limited use, their number was reduced to six and the number of scout dogs increased to eighteen. The mine dog was eliminated and the number of enlisted personnel reduced to twenty. There were fifteen war dog platoons activated under the new TOE, seven of which saw action in Europe and eight in the Pacific.

(U) The increased combat experience of these platoons soon brought to light additional problem areas that would have to be solved. The dog handlers provided and trained by the Quartermaster Corps, brought with them certain inadvertent problem areas that compromised the combat effectiveness of the war dog platoons. Many of the handlers were physically unfit for combat operations and had no experience in infantry tactics. In addition, they were not acquainted with the Army ground force units with which they would be associated. These problem areas brought about further organizational changes in the Army war dog program.

(U) In September 1944, the responsibility for the activation, training, and overseas assignment of war dog platoons was transferred to the Army ground forces. "This meant that handlers were to be selected by the AGF from men who had been trained in infantry tactics and scouting and that the units would be given advanced instruction with infantry organizations" (Ref 6, p 333). Procurement and the basic training of the dogs remained the responsibility of the Quartermaster General. In December 1944, all the messenger dogs were eliminated from the war dog platoons with a revised TOE. The name of the units was changed to infantry scout dog platoons and each platoon had twenty-seven scout dogs. Under this new organization, the AGF activated and trained six additional scout dog platoons. However, five of these platoons did not see action overseas because their training was not completed until after V-J day. It is interesting to note that to meet the rapidly increasing demand for scout dogs,

plans were being formulated in early 1945 to train at least 1600 more of them for combat operations in the South Pacific. This would have been about sixty-five platoons.

Summary of World War II Army Dog Program

(U) A statistical summary of the number of dogs accepted and trained by the United States Army is shown in Table VII. To obtain the total number of dogs shown below, approximately 20,000 dogs had to be examined.

TABLE VII (U). SUMMARY OF WORLD WAR II
ARMY DOG PROGRAM

Type of Dog	Total Trained	Issued in ZI	Shipped Overseas
Sentry	9,295	8,396	899
Scout	571	135	436
Sled and Pack	268	0	268
Messenger	151	0	151
Mine Detection	140	0	140
Total	10,425	8,531	1,894

(Source: Ref 6)

POST-WORLD WAR II ARMY DOG ACTIVITY

Planning for Infantry Dog Requirements

(U) After World War II, the continued use of scout dog platoons by the post-war military establishment was planned by the War Department. In June 1946, the Committee on Organization, whose chairman was Brigadier General Frederick McCabe, held a conference at Fort Benning, Georgia, for the purpose of determining the future infantry requirements for war dogs. The committee, after studying the performance record and contributions that dogs made to the war effort, recommended that (1) "Infantry War Dog Platoons be retained and be attached to Infantry units for training and operations, and, (2) Experimentation be continued with dog units along all lines, especially breeding, improving techniques of training, and extending the scope of usefulness of the dogs." Ref 4, p 8). Some platoons were retained within the zone of the interior, but through fiscal cuts, manpower reductions, and a general lack of interest, all sentry dog platoons except the 26th, disappeared before the Korean

war. The recommendation to continue development of a breed for military use and training techniques was almost completely forgotten.

European Theater Military Dog Activity

(U) Overseas, The General Board, United States Forces, European Theater, recommended that war dog teams be provided each field army or guarding large ordnance installations, depots, and posts. As a result of this recommendation, a dog training school was eventually established at Darmstadt, Germany.

(U) In 1950 the US Army dog training detachment moved to Lenggries, Germany as a part of the US Army School, where it remained until August 1967, when it was moved to Wiesbaden and consolidated with the Air Force dog training program.

Use of Military Dogs in Korea

(U) Within the United States, the center of activity for the Army's dog program, up until the Korean War, was at Fort Robinson, Nebraska. The way in which dogs were brought into the Korean War was, in many ways, similar to the development of the dog program during the Second World War. Initially, tactical dogs were not used; after the battle lines became relatively stable, however, and heavy patrolling was being conducted by both sides scout dogs were introduced to the war. It was soon discovered that the scout dog teams from the 26th Infantry Scout Dog Platoon were extremely effective, reducing the patrol casualty rate by as much as 65 percent.

(U) As a result of these outstanding results, a crash dog training program was initiated at Fort Carson, Colorado, to train a scout dog platoon for each infantry division. However, the war ended before any additional platoons arrived in Korea.

(U) As a result of its outstanding performance in Korea, the 26th Infantry Scout Dog Platoon was rewarded with the Meritorious Unit Citation, the Korean Presidential Citation, 3 Silver Stars, 6 Bronze Stars for valor, and 35 Bronze Stars. Such recognition of the contribution of men and dogs to modern warfare testifies to the foresight of General McCabe and his committee in trying to maintain a dog unit capability in peacetime.

Post-Korea Military Dog Posture

(U) After the Korean War, the training of dogs for tactical employment dropped off sharply. In 1957 the Quartermaster Corps closed the war dog school at Fort Carson and all scout dog platoons, including those in Germany, were deactivated with the exception of the 26th Infantry Scout Dog Platoon. Since Air Force sentry dog training was also affected by this closing, the Air Force started its own school at Lackland Air Force Base in Texas. Shortly after the dog training school at Fort Carson was closed, the Army Air Defense Command, after completing a study,

approved the use of dogs for NIKE missile sites. Almost immediately, the Army needed hundreds of trained sentry dogs. To meet this growing need for sentry dogs, the Army detached its own dog trainers to Lackland to assist in the training of sentry dogs and handler personnel. At present, Army personnel are still at Lackland Air Base training sentry dogs and dog handlers for the Army and the Air Force.

■ Food and Nourishment

a. A supply of fresh water carried on patrol is more vital than food.

b. If fresh water is not available then locally procured water should be either boiled or treated with purification tablets.

c. Just prior to going on patrol a scout dog should not be fed, as this has the same effect as a man working right after eating a big meal. However, a plentiful supply of field rations should be taken by the handler to feed the dog during operations. While the dog may be able to go a couple of days without food, it cannot go for long without water. This is particularly true in Southeast Asia due to the heat and humidity which will cause a dog to dehydrate faster than in cooler climates.

■ Veterinary Support

Veterinary support is essential to the continued effectiveness of dogs on a tactical operation. In counter-insurgency operations there are many things that can happen to limit or render a dog ineffective. There is always the possibility of a dog drinking disease-ridden water, stepping in a mantrap, or suffering from heat exhaustion. In most instances where a veterinary technician is present, minor illnesses and injuries can be treated on the spot thus permitting the dog to continue its mission. If the opposite is true, then there is usually no other alternative but to evacuate the dog to the rear to stave off infection or to prevent aggravating the illness. One "vet tech" is assigned to a scout dog platoon.

■ Need and Purpose of Waterborne Training

If scout dogs are to be successful in support of infantry operations in delta regions they must be conditioned to operate from small watercraft when clearing canal banks and other water areas of ambush or other concealed sites (FM 21-50).

a. Delta regions are a network of canals, rivers, and flooded marshlands. To effectively carry the war to the enemy in these regions patrols must often travel by boat; there is usually no other way of negotiating this terrain. Under these circumstances a patrol is extremely vulnerable to enemy ambush due to their precarious position in the water and the reduced visibility caused by the high wall of reeds and foliage bordering these waterways. But with a highly trained scout dog aboard the risk to patrols is greatly diminished. The dog can screen the area to the front, around blind bends, and to the flanks and the rear. The only difference in this type of employment being that the dog is on a floating outpost instead of on land.

b. Recognizing this capability, scout dogs can be used effectively to screen waterways to and from the objective area, as well as support patrols originating from the objective area. In effect, a scout dog team is capable of carrying out any mission on water that it is suited for on land.

■ Actions of Handler on Alert

a. The handler should be able to recognize by the dog's actions, the type of alert (scent, sound, or sight), the general direction of the alert, the approximate distance of the enemy, and the general size of the hostile force.

b. Following the dog alerting, the handler should notify the patrol leader (who should be in the same boat as the team) by the most expeditious and silent means available. Ordinarily this can be done by arm-and-hand signals due to their close proximity to one another.

c. If the patrol leader directs that contact be made with the enemy, or that the alert be investigated, the boat should be beached and all members required to disembark. Then the team should take whatever action is dictated by the situation; e. g., follow up the alert, or if contact is imminent, remain back at the shore with a bodyguard, but not in the boat. This position in the landing area the team has a better chance of survival on land.

■ Scout Dogs

Inasmuch as any visual tracker relies on sight he is unable to track at night and his efficiency is reduced by some types of vegetation or ground conditions. In these instances the scout dog becomes extremely valuable for scouting in jungle. The employment of infantry scout dogs is described in detail in paragraph 102. The intent here is to discuss only those aspects of jungle that can be expected to affect the dog's scouting efficiency in the wet tropics.

a. Water. As scent is soluble in water a dog's performance will be poor in heavy rain. Although a scent is constantly being produced it does not remain but a short time and the dog's range of air scent detection may be reduced to as little as 5 yards. Ground scent may be completely dispelled by heavy rain.

b. Sunlight. Direct sunlight quickly destroys scent and this will severely limit the dog's efficiency under breaks in the canopy. However, as scent is constantly produced, and as air scent is not so affected, the dog will still have a reasonable range.

c. Vegetation. Heavy undergrowth will restrict the spread of the air scent and will tend to blend with ground scent. Primary jungle and open ground or trails are ideal for dogs.

d. Wind. Depending on the direction of the wind the scent may be considerably displaced from the target. The dog's average range of air scent of 200 meters in jungle may be doubled if down wind of the enemy or considerably decreased if up wind of the enemy.

e. Heat Exhaustion. This condition is common in unconditioned dogs. The stricken dog becomes lethargic, refuses to work, and attempts to keep in the shade. His temperature will rise rapidly up to 106° F. or more and he will appear extremely distressed. The dog should immediately be placed in the shade and cooled with water. It should be allowed to recover slowly.

■ Reminders for Dog Handler Going on Patrol

a. If possible, accompany the patrol leader on his ground reconnaissance and assist him in making the detailed plans for the patrol (such as suggesting a route that will allow the dog to work at maximum efficiency).

b. If it is to be a long patrol, make sure that food and water are provided for the dog.

c. Inform the patrol members of the temperament of the particular dog to be used on the patrol.

d. Inform the patrol what should be done in regard to the dog if you are seriously wounded or killed.

e. Establish with the patrol leader a system of signals to use for exchanging information once your dog detects the presence of the enemy.

f. Inspect your dog's working equipment to see that all metal parts are taped or wrapped to preclude unnecessary noise. This inspection includes the metal choke chain, the snap on the leash, and the D-ring of the leather harness.

g. Walk your dog at heel and review it in basic obedience for about 15 minutes just before you take it to join the patrol. This gives the dog an opportunity to evacuate and to burn up some of its accumulated nervous energy.

FM 21-75

■ The Infantry Scout Dog Platoon

Scout dogs used in the Army today are found in infantry scout dog platoons (see FM 20-20). Elements of a platoon are attached to lower units for specific missions or periods. They usually are employed as scout dog teams, each team consisting of a scout dog and a handler.

■ Mission

The mission of a scout dog team is to support you by detecting the enemy and giving silent warning. Teams may assist you on patrols, observation posts, outposts, and listening posts.

■ Preparation and Planning for Use of Scout Dogs

a. When an infantry scout dog platoon is attached to an infantry unit, the platoon commander advises the commanding officer and makes recommendations for the employment of the platoon.

b. The platoon commander is briefed on planned missions as far in advance as possible. This allows him time to select the scout dog team which will be most effective for each mission. It also gives the handlers time to prepare themselves and their dogs.

c. When scout teams are employed with units that have not previously used them, personnel are carefully oriented on the scout dog team's capabilities and limitations.

d. The presence of a scout dog team causes varied reactions among personnel unfamiliar with scout dogs. Some men may feel an exaggerated sense of security while others may become agitated and apprehensive. Prevent these extremes by having the handler brief the patrol on the team's purpose, capabilities, limitations, and method of operations.

e. A scout dog team usually is attached to a small unit such as a patrol for a particular mission. When possible, the same team works with the same unit or patrol for different missions. Performance improves as the team becomes familiar with the personnel.

■ Limitations of Scout Dog Teams

a. Alertness must still be maintained when a scout dog team accompanies a patrol. The team can almost always detect the enemy before you, but both handler and dog have limitations.

- (1) A scout dog has an acute sense of smell, keen hearing, and eyes that are unusually sensitive to movement. The dog's use of these faculties is affected by weather and terrain conditions such as rain, smoke, fog, dust, heavy underbrush, and thick woods. His effectiveness is reduced in areas of much noise and movement.
- (2) A scout dog must be retrained periodically. The longer he goes without retraining, the less effectively he performs.

(3) A dog is subject to the elements the same as a human. He tends to be less alert when extremely cold or when overheated.

(4) The handler must concentrate on "reading" his dog. This is difficult to do for extended periods. Take two scout dog teams on long patrols and alternate them for best results.

b. Despite limitations, a scout dog team is a very valuable aid. Consider the team's limitations, but capitalize on its strengths.

■ Preparation

a. The scout dog team joins the patrol in time to hear the warning order and participates in all phases of planning, preparation, and execution. The handler attends the debriefing.

b. The handler will give his recommendations for employment of the team. Your plan for employment is included in your patrol leader's order.

c. Rehearsals assist in completely integrating the scout dog team into the patrol. The patrol members become familiar with the team's method of operation. The dog becomes familiar with the scents of individual patrol members and with the noises and motions of the patrol on the move.

■ Action if The Handler Becomes A Casualty

a. If the handler becomes a casualty, he is treated according to the patrol's casualty plan. If he is left for later evacuation, the dog is left with him. If the handler is taken with the patrol, the dog usually will follow. If the dog does not follow, assign a patrol member to lead him by the leash.

b. Occasionally, a dog may adopt a protective attitude and refuse to allow anyone to approach if the handler is unconscious or otherwise unable to control him. If the tactical situation permits, make every effort to lure or force the dog away so proper treatment can be given. If the situation does not permit time to lie spent in this manner, or if the efforts fail, destroy the dog. The dog will not be destroyed however, if the handler is known to be dead. In such a case, both dog and body will be left and recovered by personnel of the infantry scout dog platoon.

■ Proper Use of The Scout Dog Team

The effectiveness of the scout dog team depends on you, the patrol leader. You must give the handler freedom to employ his dog to best advantage. Whenever possible, let the handler select the team's position in the patrol formation. Heed his advice and get the most the team has to offer.

APPENDIX D

(U) GUIDANCE FOR DEPLOYMENT AND UTILIZATION OF US ARMY SCOUT DOGS

FM 20-20

■ Deployment of Scout Dogs During Movement

a. Generally the best position for the scout dog team is directly in front of the patrol. The team precedes the patrol or screening element, keeping generally on the assigned direction of movement. Wind conditions may dictate that the team move on the windward side of the route of advance to take maximum advantage of the dog's senses of smell and hearing.

b. It may become necessary at times to place the team in the rear of the patrol if the wind is blowing from the rear or when speed is imminent (as in the approach march) since it is best to conserve the dog's energies whenever possible; this is particularly applicable whenever scout dogs are employed as part of a screening force for a larger body of troops moving to an assembly area, (Fig. 4)

c. On a reconnaissance or combat patrol where infiltration of hostile lines is desired the scout dog can be extremely useful in alerting friendly forces to locations of enemy outposts. In these instances the team, when alerting on one outpost, can move to its right or left to find the location of the other, thus enabling the patrol to slip between them, (Fig. 4)

d. On all patrol actions one member of the patrol should be assigned the mission of protecting the handler and dog. The reason for this is that when a scout dog is following a scent, the handler needs both hands to control him and therefore is helpless should fire be brought upon him.

e. The distance at which the dog may alert depends on the weather and terrain. It may be 300 meters or it may be 30 meters. But once the dog alerts, the handler should signal the patrol to halt, having the patrol leader move up on the side opposite the dog to receive information of the enemy. If contact is to be made, the handler, instead of moving to the patrol's rear, should remain in place to allow the patrol to pass through his position then fall in behind. This procedure eliminates unnecessary movement and hence risk to the team. In the event a firefight develops and the team is at the point position it should remain in place, and when possible it should move to the center of the patrol or to a position which would least interfere with the patrol's fire.

■ Deployment and Actions of Team on Outpost and Ambush Patrols

a. Scout dog teams can be very effective at static positions such as observation posts, outposts, listening posts, and for executing an ambush.

b. When employed in support of an outpost or listening post scout dogs should be placed in front of the main outpost line far enough in advance of these posts to reduce distractions to the dog yet close enough so that contact can be maintained at all times and the team's position is not placed in jeopardy in case of an enemy attack or infiltration.

c. When manning an outpost and the dog gives silent warning of hostile presence the team should immediately withdraw to the rear of the post so that they do not mask the friendly forces' fire. In this regard the handler should always have a prearranged route of withdrawal before going on outpost, (Fig. 5)

d. There are several methods by which a scout dog handler can alert the outpost commander of enemy approach, but the most simple and most often used is a simple string affair which is strung between the two points of communication. Individuals on either end may signal the other by having a prearranged signal of one, two, or three jerks to indicate "be on the alert," or "enemy in sight."

e. The procedures for withdrawal and stationing of scout dog teams on an ambush patrol are the same as for outposts, except that where the sector to be covered is too wide for one dog to screen effectively then two dogs or more should be employed, posting one at each end of the horseshoe, (Fig. 5)

f. Scout dogs can be successfully employed for detecting and locating hostile positions for purposes of avoiding or making contact, and are quite effective when the patrol mission calls for infiltrating enemy lines.

g. As a warning and detection device, scout dog teams are not limited to just ground operations but can also be employed from small water craft in swampy regions for screening canal banks for hidden enemy.

h. While scout dogs are primarily used at night due to the handicaps of darkness on human abilities, they may also be used during daylight where terrain and weather conditions limit human visibility and where enemy devices are apt to evade their detection; i. e., jungles, high grassy areas, rice paddies, and areas which encourage the use of underground hiding places due to absence of cover.

i. Working a scout dog in a village or hamlet, however, is conducive to the working abilities of the dog. A good example of this is where scout dogs have been used in support of search and seizure type operations against the enemy. In these instances the villagers were assembled at certain locations to minimize any distractions to the scout dogs while they searched houses for hidden enemy, (Fig. 6)

j. The most ideal conditions for working a scout dog are found in those areas sparsely inhabited with few distractions. It must be remembered that a scout dog is unable to distinguish between friend or foe and if through repeated contact with indigenous personnel the dog is constantly taken off the alert, it will soon lose interest in its task.

■ Maintaining Tactical Proficiency

a. Dogs in rear areas need refresher training and must be kept in training, and daily work of short duration is recommended.

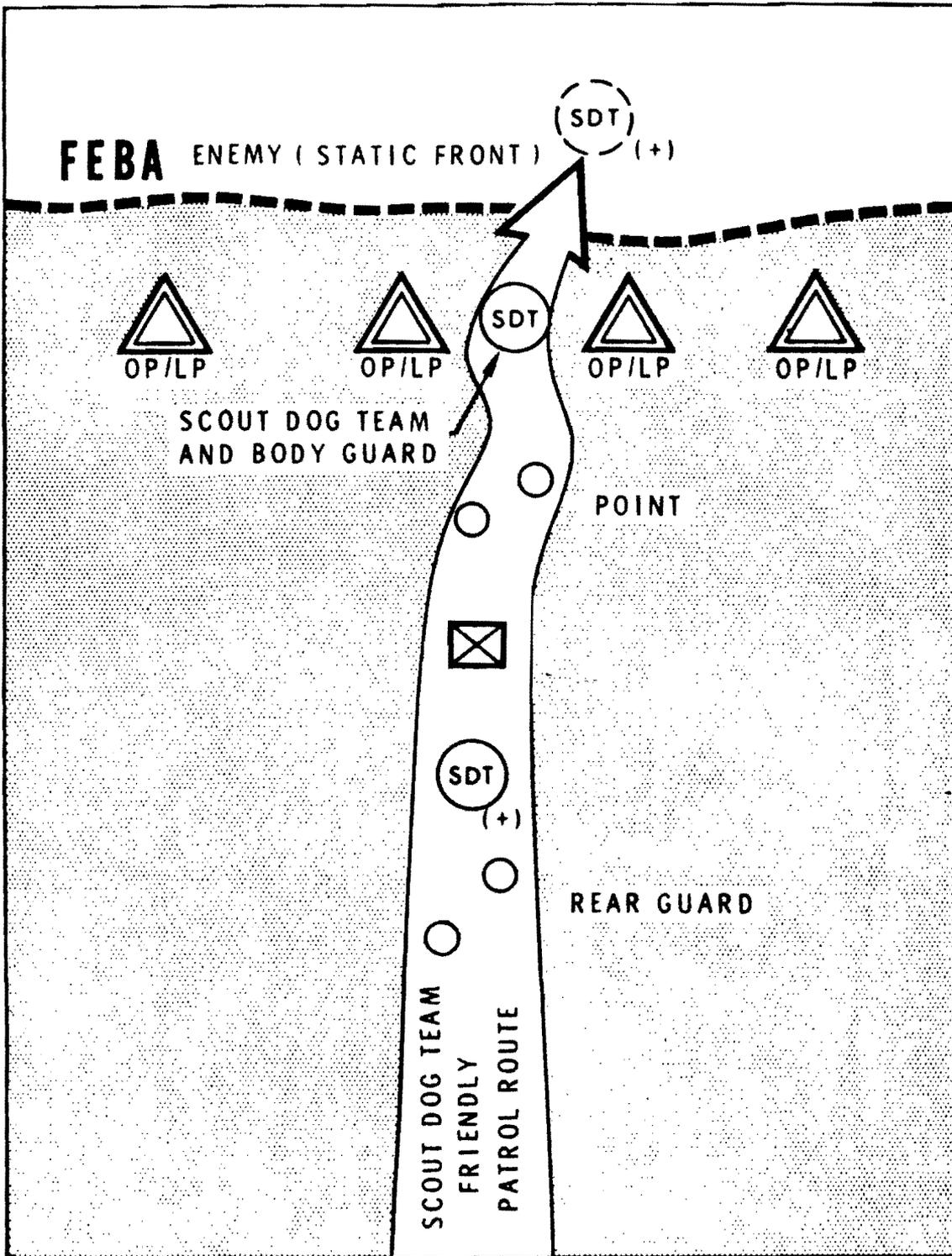


Figure 4 (U). Infiltration of Hostile Lines

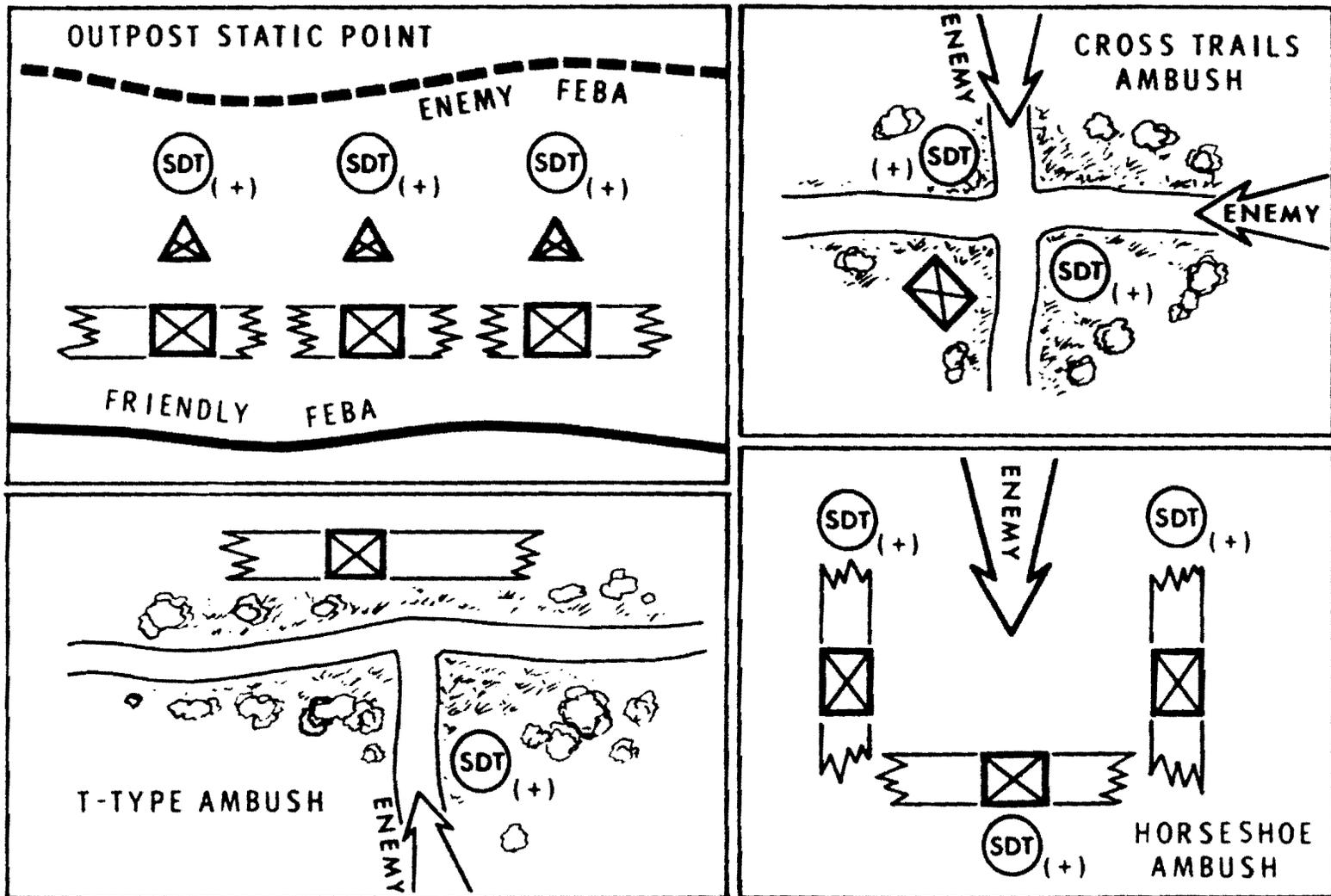
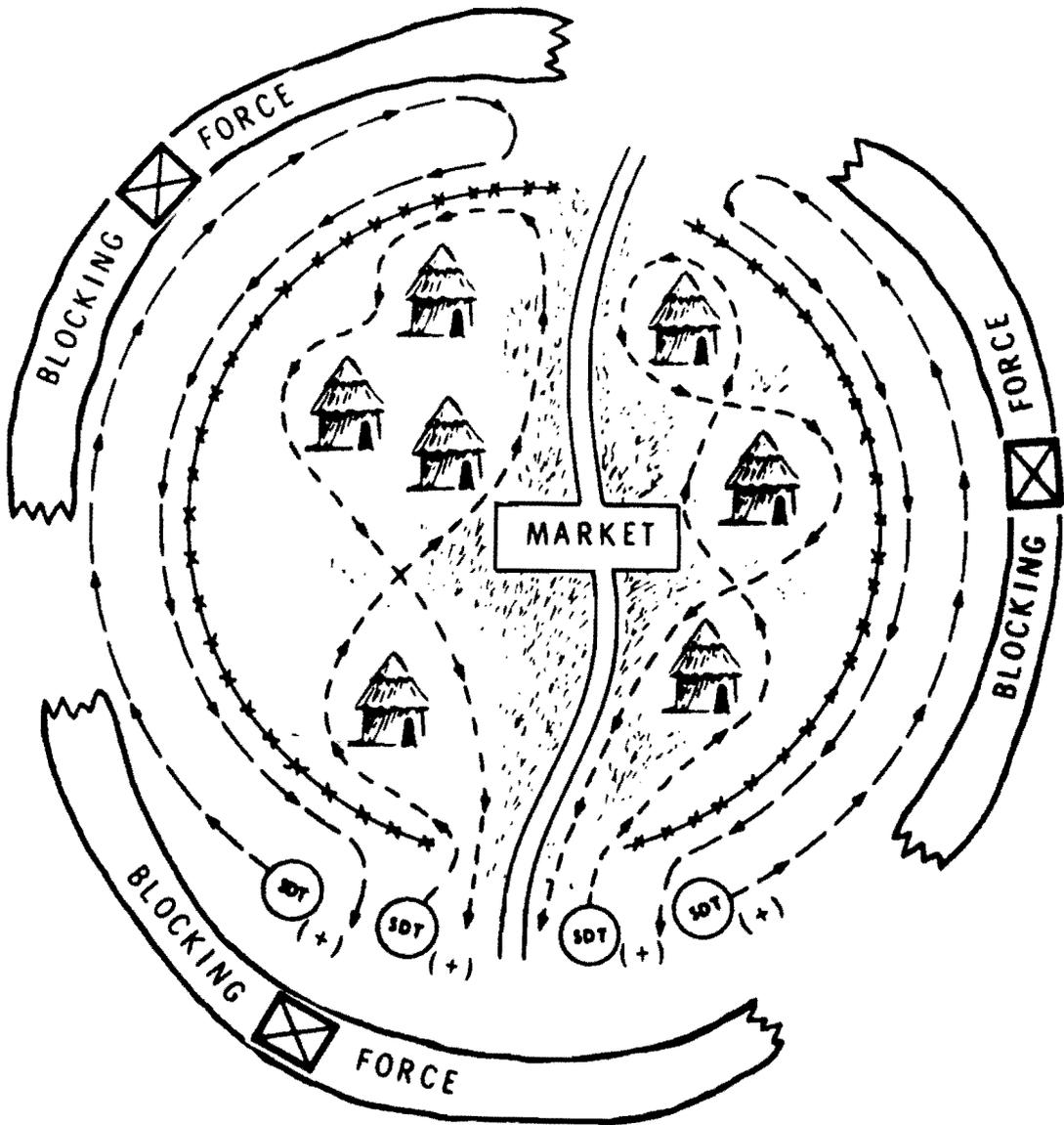


Figure 5 (U). Deployment of Scout Dog Team on Ambush and/or Outpost Sites



Search (Villages "Hamlets") Operations
 SDT (+) One Fire Team Should Go With SDT

Figure 6 (U). Search Operations; Villages, Hamlets

b. A scout dog should not be used on both outposts and patrols in one night. If both an outpost and a patrol are needed, two dogs should be utilized. Experience has proven that a scout dog's most valuable function is that of patrolling.

c. Dogs which have not made contact during two successive patrols should be encouraged by patrolling against a staged ambush. This may be done on a very small scale, but sufficient to maintain the dog's interest in his mission.

d. A scout dog can work at maximum efficiency for 2 or 3 hours at a time; less in some tropical climates. On long operations demanding the use of a single dog at the point element for longer periods of time, two dogs should be used keeping one in the rear as a reserve element (Fig. 4)

■ Capabilities and Limitations of Scout Dogs Operating in Rice Paddies, Marshes, Swamps or Jungle-Type Terrain.

a. The Use For and Purpose of This Training.

(1) For a scout dog team to be successful and accomplish its mission in support of infantry units, it must be conditioned to operate in mud, water, and swamps, and be capable of detecting enemy ambushes and other concealed hiding places (which may have previously provided a haven for the enemy to slip away and avoid detection).

(2) Marshes, swamps, and rice paddies are found throughout Asia. To effectively carry the war to the enemy in this region, patrols must travel through various types of terrain. Under these conditions, a patrol is extremely vulnerable to enemy ambush and sniper fire due to reduced visibility, cover, and concealment. With a highly trained scout dog the risk of the patrol being ambushed is reduced considerably.

(3) Recognizing this capability, scout dogs can effectively patrol at the point position to and from objective areas. A scout dog team must be capable of carrying out missions in water, mud, swampy areas, and on dry, clear, open terrain.

b. The Proper Employment of Scout Dog Teams in This Environment.

- (1) The dog should be worked on point position.
- (2) A minimum of one guard is assigned to protect the handler and dog.
- (3) The number of reserve dogs with the patrol would depend on distances, mission, and terrain.
- (4) Due to the necessary amount of noise caused by the patrol, the dog team should patrol ahead with the forward element, keeping eye contact with the main body. In this manner the dog can work more effectively and use its senses of scent, sound, and sight to better advantage.
- (5) Because of irregular wind drifts caused by this terrain, the dog team should be permitted to zigzag if possible, using the wind to his dog's advantage.
- (6) The handler should travel as light as possible, because excessive equipment will cause him to sink deeper in mud and swamp.

■ Search, Clear, Destroy Operations (Villages, and Hamlets)

a. Unless employed correctly, scout dogs in this environment could be a definite burden on the commanders of the using units. Experience reveals that dogs become confused and soon lose interest in their work; they chase chickens, cows, pigs, or other animals. In these instances, while the dogs have been of some psychological value, they have contributed little. The reason for this is due to too much human and animal scent plus constant distractions present in these villages. For this reason domestic animals should be introduced in the early stages of training and scout dogs should be corrected from alerting on animal scents.

b. Methods of employment. A scout dog team should-

- (1) Work downwind.
- (2) Have patrol remove all inhabitants from the houses and place them downwind.
- (3) Check all houses with his dog to discover if any enemy are hidden between double walls, or in tunnels under houses.
- (4) Check surrounding areas for underground hideouts, or caches of weapons.
- (5) Check along canals, rice paddies, rivers, or lakes for possible hideouts under banks.
- (6) Check carefully around pig and cattle pens, haystacks and other likely hiding places for caches of weapons and ammunition.

■ Proper Employment of Scout Dog Teams on Waterborne Patrols

a. Ordinarily the scout dog team will be employed with the lead element of the patrol; the dog and handler taking up a stationary position in the bow or stern of the craft.

b. Due to the irregular wind drifts (caused by the high banks and water currents) this screening element should follow a zigzag course down the canal or stream, working from one bank to the other.

c. If there is a prevailing wind blowing off either flank, however, the screening element should follow the bank farthest away from the upwind flanks so that the dog won't get caught in any dead space caused by the scent being blown over the canal bank. The principles of wind utilization are no different than when running land problems.

d. It should not be construed, however, that the dogs always work from the lead boat. For at times the wind may be blowing from the rear and this will necessitate placing the dog in the stern of the last boat.

e. In those instances where only one boat is employed, then the dog should be placed in the bow or stern, depending on the wind direction, and allowed to remain there.

f. It is not advisable to change the team's position once the boat is afloat. Should the boat be too small or crowded there is always the risk of the craft being capsized. There is also the danger of the dog biting a member of the patrol, or making other undue noises which would alert the enemy. If it becomes imperative for the team to change positions, then the boat

should be pulled onto land where the exchange can be made with the least possible delay, noise and/or confusion. This can be done by off-loading the team and then reloading them after other patrol members have shifted positions. The most important point to remember is not to risk any change of position where the possibility exists of capsizing the boat. This can cost lives, equipment, and the success of the mission.

■ Techniques of Loading and Off-Loading

a. Prior to entry into waterborne training exercises all dogs must be thoroughly obedient and under absolute control of the handler.

b. Practice should start with dogs being accustomed to getting in and out of a boat tied to a pier or bank. This should be repeated as often as necessary until the dog shows no fright and can manipulate any required maneuvers without threat of capsizing the craft. To accomplish this maneuver the handler should always enter the boat first. Then he can either lift the dog into the boat or have it enter by itself. The choice depends on the physical relationship of the boat to the bank or pier. The reason for the handler entering the boat first is so that he can be there to control the dog, and give encouragement if necessary.

c. The team should also be the first to enter the boat. While they are doing so other members of the patrol should be steadying the craft to prevent it from capsizing.

d. The team should also enter the boat from the center portion, unless the bow or stern can be stabilized. After entering the team should immediately take up positions in the stern or bow of the boat.

e. Once aboard the boat the dog must remain silent. It may be permitted to lie down only if the situation or patrol duration allows; otherwise, the dog should be kept in the sitting position, facing forward or to the rear of the craft depending on where it is stationed to take best advantage of the wind.

f. The changeover is made before entry into the boat. The boat may be too crowded or too easily capsized to permit making the changeover once adrift.

g. To off-load a scout dog the procedure is reversed, as explained previously. It is important to note that during off-loading exercises the dog is not permitted to jump into the water, unless absolutely necessary to gain the shore, because the resulting noise of splashing and shaking itself to dry off will alert any enemy in the immediate vicinity of the landing.

h. The scout dog team and patrol members of the lead boat should go ashore to reconnoiter the riverbank at suspected danger points.

i. When effecting any waterborne operation it is imperative that the dog be silent and under complete control of the handler at all times. This important point is repeated because any noise could cost the lives of the patrol.

FM 21-75

■ During Movement

a. Generally, the best position for the scout dog team is directly in front of the patrol. The team precedes the patrol, keeping generally on the assigned direction of movement. Wind conditions may dictate that the team move on the windward side of the route of advance to take maximum advantage of the dog's senses of smell and hearing.

b. The distances at which the team detects the enemy depend on wind direction and speed, weather conditions, and terrain. No average can be stated, but reliability is very high at 300 meters. Favorable conditions permit detection at far greater distances. Adverse conditions, such as wind from the rear, reduce the effective distance.

c. If the wind is blowing from either side rather than directly from the enemy, the process of detection may take longer since traversing may be necessary. In some situations, this traversing can be done by the team while the patrol continues on a direct route.

d. When the handler signals that the dog has detected the enemy, halt the patrol immediately and approach the handler on the side opposite the dog so the dog will not be distracted. From the nature of the dog's alert, the handler can tell you the approximate direction, distance, and location of the enemy. The information "read" by the handler is more exact as the team moves closer to the enemy.

e. If it is not practicable for you to reconnoiter the position, the scout dog team can do this and report to you. In such a situation, you must provide security for the team.

■ At The Objective

a. The scout dog team is especially valuable in the objective area. The team can locate sentries, determine the extent of positions, and pinpoint specific positions. When the mission is reconnaissance, and near approach of the patrol is not practicable, the team may be able to reconnoiter the objective and secure the needed information. When the mission is combat, information obtained by the team may allow you to position your patrol without being detected before you are ready to attack.

b. The scout dog team does not participate in combat actions at the objective. During this action, the team is positioned to the rear or to a flank where it can provide security and be prepared to assist the patrol on the return route.

■ Protection of the Scout Dog Team

The scout dog works on a leash in front of the handler. When working, the dog requires the handler's full attention; therefore, he cannot work the dog effectively and use his individual weapon at the same time. You must assign a patrol member to accompany and protect the team at all times.

APPENDIX E

(U) TRACKING GUIDANCE FOR US ARMY COMBAT TRACKER PROGRAM

FM 20-20

■ General

In jungle operations forces may have to hunt down small groups of guerrillas who are native to a particular area and know the terrain intimately. There is a requirement that troops be able to interpret signs left by the enemy and be able to track them. Particularly when patrolling, troops may encounter tracks which will disclose the presence of an enemy in the area and considerable information may be gained if the men, especially junior leaders, are able to "read" the signs correctly. It is difficult to move in the jungle without leaving some evidence on the ground. Even in the case of small groups some signs are always present and noticeable to the trained eye.

■ Training Resources

To a unit operating in the jungle there are three sources of trackers that are usually available.

a. **Native Trackers.** The availability of trackers from this source is subject to many variables. Attitude toward friendly forces, the language problem, reliability, and trustworthiness all enter into consideration when natives are to be used. Often natives will break and run at the first action and will constitute a threat to the security of a unit. Further, some of them may be bribed or coerced by guerrillas to lead friendly troops into ambush.

b. **Scout Dogs.** Well-trained scout dogs are useful in jungle operations. They may be used in patrolling, ambushing, and outpost duty.

c. **Troops.** All individuals can develop some degree of tracking ability.

■ Aids to Tracking

Some of the smaller signs which will disclose the presence or passage of the enemy are as follows:

a. **Footprints or portions of footprints.** It should be known what type of footwear the enemy is likely to be wearing so there will not be confusion with tracks made by friendly troops.

b. **Direction of grass, leaves or sticks kicked up by feet.** These will indicate the direction of movement by the enemy.

c. **Unnatural formation of vines, dead grass, and broken twigs** will indicate that they have been pushed aside thus disturbing the natural appearance of the vegetation.

d. **Sap or fluid from cuts or bruises on roots and trees.** Some bark is easily broken when stepped on and sap may appear.

e. **Disturbed dry leaf surfaces on the ground.**

f. **Change in color of vegetation.** This occurs when foliage has been disturbed and the lighter underside of the leaves is turned up. This color will contrast sharply against the normal shiny surfaces. On the ground the color pattern of the leaves will be distinguished by the dark shadows cast by turned-up leaves and by the dark undersides contrasting with the brown color of the other dry leaves.

g. **Dirt smudges on rocks, logs and leaves.** Footgear will usually be wet and dirt will adhere to it, smudging and dropping off in fragments.

h. **Water on certain areas** whereas the remainder is dry. Water will usually collect in depressions made by footprints. If the general size and physical characteristics of the enemy are known the depth of such a print may give a good indication of the weight the man was carrying; the fact that dirt or mud tends to pile up around the outside of the print usually means that a man was running when he made the print.

i. **Disturbances of insect life.** Some insects, especially ants, follow a definite path in movement and wear a distinctive imprint through vegetation on the ground. If something violates this path (for instance, a footprint) ants will go around the interruption. Deviation from an established route by ants is a good indication that something has passed over that area.

■ Tracking Conditions in Jungle

a. **Conditions favoring tracking procedures are-**

- (1) Air and ground temperatures approximately equal.
- (2) A mild day with heavy moisture in the air with slow evaporation.
- (3) Damp ground and vegetation.
- (4) Ground overshadowed by trees.
- (5) Low wind speed.

b. **Factors which adversely affect tracking are:**

- (1) Direct sunlight.
- (2) Strong wind.
- (3) Heavy rains.
- (4) Running water.

c. **Enemy deception.** Well-trained enemy jungle troops may use any of the following methods to confuse trackers or to deceive patrols:

- (1) Walking backwards.
- (2) Walking in a stream.

- (3) Jumping off to one side of a route frequently.
- (4) Splitting up into small groups of two or three persons.
- (5) Walking along logs or on stones.
- (6) Moving through country, such as rocky terrain over which it is difficult to track.

■ Counterdeception

The methods described above will delay the tracking process. No enemy is so skilled that he can completely cover his sign. A careful search of an area will show what method of deception has been used. Some measures to counterdeceptive efforts are:

- a. Analyze the direction of grass, twigs, and ferns as these will always point in the direction of movement regardless of the fact that foot prints appear to be going the other way.
- b. Search both banks of a stream at least 500 meters up and down from the point of entry.
- c. If it is apparent that the enemy has split up the point of separation should be marked. A decision based on study of available signs must be made as to which group will be followed.
- d. Examine any logs, stones, and roots in the immediate vicinity.
- e. Examine the area on either side of a path made by the enemy soldiers for signs of disturbance.

APPENDIX F

(U) OFF-LEASH SCOUT DOG TRAINING GUIDE

INTRODUCTION

Purpose and Scope

This appendix outlines an 18-week schedule for training scout dogs to work off-leash; the training schedule is summarized in Table VIII. During the first 12 weeks the training follows closely the schedule of basic scout dog training in use by the 26th Infantry Platoon (Scout Dog), Fort Benning, Georgia. The major changes introduced into training procedures used by the 26th Scout Dog Platoon are: (1) early introduction to obedience training and scouting on the 25-foot leash; (2) introduction of "drag-leash" techniques by the sixth week; (3) introduction to off-leash training by the sixth week; (4) early and continuing emphasis on "sit and stay" alert behavior; (5) continuation of intensive training in weeks 10, 11, and 12, with informal proficiency evaluation in week 11. Techniques for monitoring alerting behavior by radio are introduced in the 10th week. Weeks 13 through 18 are devoted to intensive off-leash training with radio monitoring. Operational readiness testing is conducted in the 18th week. After the 18th week, dogs and handlers are ready for operational deployment, or for staging preparatory to operational assignment.

Special Equipment

Radio Transmitter

A special radio transmitter attached to the dog's harness transmits signals to the handler. The character of the signals depends upon whether the dog is or is not moving. In order for the handler to recognize the meaning of the signals he hears, he must first relate the radio signals to the dog's actions by observing the dog while receiving radio signals. Then, when the dog does go out of his sight, the handler will be able to interpret the radio signals in terms of the dog's behavior.

Radio Harness

The radio transmitter is attached to a special working harness. The radio harness is used only when the dog is ready to start working on a reconnaissance problem; it is never used during obedience training.

Radio Receivers

The dog transmitter is compatible with the AN/PRR-9 (squad radio receiver) and with the AN/PRC-10 and -25 families of Army tactical radios. In training it is convenient to use such two-way radios as the commercial "Handy-Talkie" for communication between handlers and decoys. The instructor as well as the handler should have a receiver to monitor signals from the dog.

TABLE VIII (U). TRAINING SCHEDULE

Week	Training
1	Basic obedience on six-foot leash; weapons firing acclimatization.
2	Basic obedience on 6- and 25-foot leash; weapons firing. *
3	Advanced obedience on 6- and 25-foot leash; basic scouting, 25-meter patrols; alerting "sit-stay" behavior.
4	Advanced obedience on 25-foot leash and off-leash; basic scouting working up to 75-meter problems; "sit-stay" alerting behavior; introduction to booby trap and trip wire detection training and casualty (handler) recovery.
5	Advanced obedience, off-leash; scouting on 25-foot leash to 250 meters; "sit-stay" alerting behavior.
6	Night training; outpost training with 6- and 25-foot leash; day work, off-leash obedience; scouting with 500-meter and longer problems, drag-leash; short problems interspersed with long.
7	Night outpost training; day training in drag-leash to off-leash obedience, 500- to 600-meter problems; short problems interspersed with long.
8	Village search, short-leash to off-leash control; off-leash obedience, drag-leash to off-leash, 500- to 600-meter problems; short problems interspersed with long.
9	Expedient river crossing (three days), including water-borne patrols, crossing foot bridge, M113 familiarization; last 2 days, introduction to helicopter techniques; off-leash obedience, 500- to 600-meter problems; short problems interspersed with long.
10	Advanced obedience, 600- to 1000-meter problems; introduction off-leash to radio monitoring techniques; short problems interspersed with long.
11	Advanced obedience, off-leash; scouting and patrolling off-leash; on-leash and off-leash sweep; radio monitoring techniques; short problems interspersed with long; informal proficiency evaluation.
12	Advanced obedience, off-leash; radio-monitoring techniques; advanced scouting, off-leash, 1000 to 2000-meter problems; short problems interspersed with long.
13 through 18	Advanced obedience, off-leash; advanced scouting, off-leash, radio-monitoring techniques, 1000-5000-meter problems; short problems interspersed with long; review on continuing basis, village search, helicopter techniques, night employment (outpost); operational readiness test.

*Weapons firing is continued throughout training.

Dummy Radio Transmitter

Dummy radio equipment of the same dimensions and weight as the real transmitter is used during training. This dummy radio equipment should be available in early stages of training so that the dog becomes accustomed to carrying it.

Other Equipment

A high-pitched whistle is used only for recalling the dog; it must not be sounded for any other purpose. Leashes up to 25 feet in length are used.

Discipline During Training

Handler/Dog Relationship

The handler/dog relationship is of maximum importance in the off-leash program. Good verbal and hand-signal control are essential. Every command must be followed by a consequence. The basic principles of dog training outlined in FM 20-20 must be adhered to closely.

Rewarding the Dog

The intensity and duration of praise administered by the handler must closely reflect the handler's satisfaction with the dog's performance. If the dog has performed well, praise must include vigorous petting and rubbing for approximately one minute. Of all the rewards the handler can give his dog, petting is the most effective. It has been shown that a dog's behavior deteriorates when petting is withheld. The instructor should observe the handler's performance carefully and see to it that petting and rubbing the animal is a large proportion of the reward procedure. Any tendency of the handler to neglect giving petting and to reward correct performance only with verbal praise must be corrected.

ON-LEASH TRAINING (WEEKS 1-5)

Selection of Training Areas for the First Problems

Training Areas

The first training areas used should be fairly clear of trees and brush and sufficiently remote to ensure little chance of distraction by other personnel. The one or two men used as decoys must not have any contact with the dog prior to the problem. The decoys must reach their position in such a way as to insure that only airborne scent is available to the dog when it reaches the ambush area. The first problems should be in an area where the wind direction can be determined.

Decoy Placement

In the first problems the decoy must be placed so that he is definitely up-wind of the dog. It is important that the handler and the instructor know as nearly as possible when the dog should alert. The handler must

correct mistakes the dog may make in its alerting actions. The instructor must at this time prepare the handler for problems in which he will not know the position of the decoy. The handler must also be prepared for problems in which no decoy has been placed. In later parts of the training program, 25 to 50 percent of the training trials must include no-decoy ("no-target") trials. The situations that the handler will eventually experience in operations will include a great proportion of "no-target" trials.

Training Problems

Obedience Training

The dog is given 15 to 20 minutes of obedience training before the first scouting or other problem of the day. It is not necessary to give obedience training before every problem, but a short session of obedience with the choke collar and a short leash is conducted before the day's work.

Starting the Problem

To start a scouting problem, the handler faces in the direction he intends the dog to follow. The handler brings his dog to the "heel" position and puts the radio harness with the transmitter on the dog. During this procedure the dog is not allowed to move about. The dog is kept in the heel position until the handler gives the command "search." Simultaneously the handler uses the appropriate hand motion. As the dog moves out, the handler follows. Initially, the dog is allowed to approach the decoy close enough so that the "sit-stay" commands are definitely paired with the immediate presence of the decoy. As the dog learns to associate "sit-stay" behavior with the presence of a decoy, the distance to the decoy must be increased. This introduces a critical period of training during which the handler must learn, by closely observing the dog's total behavior, to recognize subtle indications the dog will give that it has received some sort of cue telling it of the presence of the decoy.

The Alert

When the dog has definitely become aware of the decoy's presence, the handler immediately gives the command "sit" accompanied by a sharp tug on the leash. This will stop the dog while it is in the "aura" of the decoy. When the dog has sat, the handler will give the command "stay." The decoy does not attempt to distract or excite the dog. Any attempt by the dog to move forward or to break its sitting position must bring a sharp "no" and a tug on the leash by the handler. The handler will have the dog remain in the "sit" position for a few moments. During this time the handler will gradually relax any tension that may be on the leash. If the dog attempts to move it must be strongly reprimanded with "no" and then commanded to "sit" again.

With the leash slack and the dog still in the sitting position, the handler will approach the dog and praise it while the decoy comes out of

hiding. The handler then moves away to the end of the leash and gives the command "come" followed by "heel." In later training, arm signals and the dog whistle will be substituted for the verbal command "come." Reward for correct alerting behavior will also, of necessity, have to be delayed in later off-leash training until the dog has returned to the handler. By that time, the entire sequence of correct behavior should be integrated into a single chain that begins and ends at the handler.

False Alerts

Incorrect alerting behavior by the dog, particularly performing alerts at inappropriate times (false alerts), poses the most difficult training problem for the handler and instructor. The critical factor in determining whether an alert is valid or false is whether a decoy is present in the dog's search environment. In early problems, when the dog's search environment is clearly limited, the problem is relatively simple. As the dog's search environment enlarges, however, the problem becomes more difficult. A basic requirement during all stages of training is that the total search environment has to be controlled, so that the instructor knows conclusively if a human being is or is not within the search environment.

Punishment for False Alerts

In a well controlled search environment it is essential that the dog receive punishment for making a false alert. A standard procedure must be followed: when the handler knows that an alert is false, the handler will go to the dog while it is sitting, say "no," sharply, bring the dog to heel, and return with the dog to the starting position. If the dog persists in making false alerts, it should be removed from the problem area and put through a snappy obedience session.

Limiting Alerting Distance

In general, any alert should be treated as false in which decoys are more than 300 meters away. This introduces a measure of arbitrariness into training situations. In effect it teaches the dog to disregard stimuli below some threshold value. The number of decoys used in training problems should be varied to familiarize the dog with a range of acceptable stimuli.

Interpreting Meteorological Conditions and Terrain Factors

The handler must acquire some understanding of the effect of meteorological conditions and terrain features on the distribution of airborne scent. At the same time the instructor must avoid creating a "meteorological mystique" according to which a dog's alert is judged valid if a single decoy is known to be a mile and a half away.

Performance at End of Fifth Week

By the end of the fifth week the dog should be performing correct sit-stay alerts on the 25-foot leash in controlled problems with hidden decoys. Alerting distance at this time will vary with individual dogs and will depend upon the wind direction, speed, and other environmental conditions in a given problem situation. Even though the dog is still on a leash, it should perform the correct alerting behavior without urging by the handler.

ELIMINATING THE LEASH (WEEKS 6-9)

Problem Design and the Alert

Intermediate Training

Beginning with the sixth week of training the major emphasis in the procedure will be on increasing the distance covered in problems, beginning off-leash work, and the positioning of decoys. During this phase of training correct alerting behavior will continue to be stressed.

Problem Length

Problems will be lengthened to cover distances of 500 to 600 meters, and one of every five problems will be run without a decoy (no target situation).

Setting the Decoy

The dog by now should be proficient in performing the sit-stay alert. Decoys will be positioned randomly with respect to the wind direction. The scent may be carried on the wind in such a way that the dog now has to pass the decoy in order to encounter the scent cone. At this stage of the training the handler, as well as the instructor, should know the location of decoys.

Working the Dog

Ultimately during off-leash scouting training and employment the dog will tend to optimize the distance at which it works ahead of the handler, depending on the nature of the terrain. The handler must control the working distance with reference to the tactical situation, wind conditions, and other factors. Until about the end of the sixth week of training the dog is kept on the 25-foot leash. If the dog works too slowly, the command "search" will be given sharply and repeated as needed. If the dog tends to work too rapidly, the command "no" and a snap of the leash are given.

The Alert

The dog must undergo as much training as necessary to prevent it from "running in on" the decoy. The handler must tug on the leash and have the dog sit if it tends to want to approach the decoy. As training progresses, however, and the dog learns to hold its sit-stay alert, decoys should

actively try to stimulate the dog when it has alerted correctly. This will tend to maintain the dog's interest in the game. When the dog makes an error, as judged by the handler, and misses a decoy, the handler may now request the decoy to startle the dog by movement or noise in the brush. When the dog now alerts, the handler will immediately give his commands for the alert, "sit and stay." Reward for an alert made in response to overt actions of a decoy must be given cautiously. Proper recognition for the dog's correct response/sit-stay behavior must be given, but by minimal reward the dog is made to understand that an alert that is elicited by a decoy's actions is less rewarding than when it comes about without any overt actions by the decoy.

Recalling the Dog

The handler gradually moves farther and farther away from his dog while it holds its alert, moving toward the starting position of the problem. The dog learns to cover more and more ground when the handler recalls it with the whistle. When it is recalled, the dog always returns to the heel position. It is most important that the dog learns to hold its alert until the recall signal is given. Recall procedure must be standardized.

Introduction to Off-Leash Scouting

The "Drag-Leash" Technique

The handler may release the 25-foot leash and allow the dog to drag it behind him. Initially the handler must be ready to pick up the free end of the leash to prevent the dog charging the decoy. Close attention must be paid to the dog's performance as it proceeds in a problem dragging its leash. Excessive loitering and obvious inattention to work must be discouraged.

Off-leash Obedience

Off-leash obedience training must be emphasized during these weeks of training. The dog must learn to "sit and stay" while the handler walks away to distances of 200 to 300 meters, and then to come immediately and heel on command. The dog must respond equally well to vocal commands, hand signals, or the dog whistle.

Realism in Training

Varying the Problems

By the ninth week problems should be set up in which the decoy's position is not always known to the handler in advance. Also, approximately every fifth trial should be a "no-target" situation. Short problems must be randomized with longer ones so that the dog and the handler do not become accustomed to problems of a particular length.

Use of the Radio

The handler and decoy should maintain radio communication if possible to establish definitely the validity of all alerts. The handler must become completely familiar with the characteristics of signals received from the dog's transmitter during searching and alerting.

Performance at End of Ninth Week

The dog must perform correct alerting behavior on-leash and with the drag leash at reasonable dog-to-decoy distances. The dog must "stay" when the handler walks away to distances of 100-200 meters toward the problem starting position. The dog must "come" promptly in response to arm signals or the dog whistle.

OFF-LEASH TRAINING (WEEKS 10-18)

Advanced Training Problems

The Training Area

Beginning problems in off-leash training are best situated in areas that allow the handler gradually to lengthen the distance between himself and the dog and at the same time to keep the dog in sight. The importance of controlling access of all persons to the training area cannot be overemphasized.

Training Routine

The routine procedure is the same as in earlier training. The radio harness is used when the dog is working on a scouting problem but at no other time. A break should be observed between problems. Prompt and precise performance by the dog must be emphasized, especially for the commands "search," "sit," "stay," and "come," in response to vocal, hand, and whistle signals. Hand and whistle signals, especially for "search" and "come," should be emphasized in advanced training.

Out-of-Sight Alerts

Problems will be set up during this period in which the dog's alert will occur out of sight of the handler. The handler will have to learn to depend upon signals from the harness radio to keep him informed of the dog's actions. The dog whistle must be used in these situations for recalling the dog. Upon completing a problem successfully the dog receives praise and petting after it has returned to the heel position. In these problems the handler will have a chance to develop skill in controlling his dog at a distance and in regulating the distance at which the dog is used effectively. Short problems must be interspersed with long problems so the dog never knows when to expect to make a detection.

Close-Range and On-Leash Performance

In practice problems, the handler strives to develop the dog's confidence in working at a distance and out of his sight, but at the same time the handler must maintain both his and the dog's skill at working together at close range and also on-leash, which may still be necessary in some situations.

Radio Contact Between Handler and Decoys

The decoy can greatly expedite training if he keeps the handler (and instructor) informed by radio to the fullest extent possible of a dog's actions in situations where the dog is in view of the decoy but not of the handler or instructor. The possible effect of radio noise as a cue to the dog must always be kept in mind whenever the radio is used for handler-decoy communication.

Realism in Training

Unit Training Problems

When a dog and handler have thoroughly mastered the routines and techniques of off-leash scouting, they should be integrated into a squad or larger patrol unit in field exercises designed for maximum realism. Such exercises must be designed to allow the dog/handler team major responsibility for insuring security of the unit.

Radio Monitoring of the Dog

On extended distance problems the handler will be able to identify movements of the dog by the consistent rhythm of changes in the transmitted signal. He will learn to differentiate running, walking, trotting, and temporary pauses, as well as true alerts.

Recall and Reward

The dog must respond to vocal commands, arm signals, and the dog whistle interchangeably to return to the heeling position at any time without hesitation, whether it has alerted or not; however, since the purpose of the recall is primarily to recover the dog after it has alerted, "false" returns should be kept to a minimum. The dog must, however, respond promptly and correctly to a recall signal at any time. The handler must always keep in mind the importance of rewarding the dog appropriately for correct behavior as soon as possible after successful performance. Fondling, petting, and verbal praise are the most meaningful rewards for the dog.

Performance at End of Eighteenth Week

A dog and its handler should be able to work as "point" in a five-mile scouting problem with the dog off-leash and free to range out of sight of the handler. The dog should be able to keep at least 100 meters in advance of

its handler while maintaining the desired azimuth with only arm signals to guide it. The handler should be able to monitor the dog solely by means of radio signals. The dog should not make any false alerts. Alerts on one-to six-man decoy parties should average not over 300 meters dog-to-decoy distance. The dog should hold a sit-stay alert until recalled by dog whistle. It should respond promptly and correctly to the recall whistle at any time.

An off-leash scout dog should be able to work on-leash if necessary. It should be reasonable proficient in all aspects of day and night performance normally expected of the average on-leash scout dog.

APPENDIX G

(C) AUSTRALIAN TRACKING GUIDANCE (U)

DEFINITION

(U) Tracking is the art of being able to follow or hunt down a man or beast from marks or scent. Whereas animals do not conceal their tracks and have set characteristics which make tracking comparatively easy, the enemy is cunning and skillful and will generally try to conceal his tracks.

REQUIREMENT

(U) There is a requirement for junior leaders to be able to interpret signs left by the enemy. The presence of enemy in an area will often be disclosed to a patrol by tracks. Considerable information regarding enemy movement can be gained by a patrol leader who is able to read the signs correctly.

(U) After an encounter the surviving enemy will often disperse rapidly to a prearranged rendezvous at a distance which varies with the type of enemy soldier, his tactics, and the ground. The ability to track when following up will materially help a patrol to locate and destroy the remaining enemy.

(U) Important information may be gained from a bivouac or camp area vacated by the enemy, if the patrol leader is trained to identify the inevitable signs of enemy occupation.

(U) Tracking plays a special role in counterinsurgency operations when it is often difficult to locate insurgents, particularly in jungle areas. In the passive and early active phases of insurgency, the enemy will rarely stand and fight; he conducts raids or ambushes and returns to base areas as quickly as possible. Patrol leaders must exploit the combined tracking potential of men and dogs to maintain contact with the enemy.

(U) When a patrol is sent out with native trackers it is essential for the patrol leader to have a fair knowledge of tracking. He can then recognize signs pointed out to him and if trackers' opinions are in conflict he is capable of making a final decision.

THE VISUAL TRACKER

Requirements

(U) The principal requirements for a visual tracker are good eyesight, memory, intelligence, fitness, and an understanding of nature. Although practice and experience will make the average soldier a tracker, only

those with special aptitude and skills will approach the standard of the experienced local tracker. Native trackers generally track best in the areas in which they were born.

(U) It is not necessary for all soldiers to become highly trained visual trackers. Whenever the enemy moves, he leaves evidence of his move; patrolling efficiency will be greatly enhanced if all troops have a general knowledge of tracking. Patience, persistence, and keen observations are the basis of good tracking.

Aids to Tracking

(U) Some of the smaller signs that will disclose the enemy's presence and aid in tracking are:

- Footprints or portions of footprints; the type of footwear the enemy is likely to be wearing should be known to minimize confusion with tracks made by friendly troops.
- Grass, leaves, or sticks kicked up by the enemy frequently indicate the direction of movement.
- Unnatural formations of vegetation indicate passage of a body which has disturbed the natural appearance of the vegetation.
- Sap, exuding from cuts or bruises on protruding roots; this is very noticeable with the rubber tree, the bark of which is easily broken.
- Dry leaf surfaces on the ground after rain; lack of dew on vegetation.
- Vegetation color changes which occur when the foliage has been disturbed and the lighter underside of the leaves is turned up, contrasting sharply with the normal shiny upper surfaces; on the ground the normal color pattern of the leaves will be disrupted by the dark shadows cast by turned-up leaves, and by the dark underside contrasting with the brown color of the other dry leaves.
- Dirt smudges on rocks, logs, and leaves left by passage of feet or footwear.
- Broken cobwebs up to the height of a man.
- Moss scraped from trees.
- Disturbance to animal or insect life.
- Disturbance of water where people have climbed out of creeks or stepped in puddles.

(U) The tracker moves from sign to sign and never passes a sign before he sees the next. Each sign may be quite different from the last. There is no reason why he cannot bypass signs if he sees others further ahead. The speed of his tracking is, of course, directly proportional to the ease

with which he finds each sign, and the time taken to examine it.

(U) As the visual tracker relies on sight he is unable to track at night except under such unusual circumstances as bright moonlight, artificial illumination, or phosphorescence in the undergrowth.

Common Native Tracks

(U) The enemy may use local inhabitants for porters or couriers. Points to note on native tracks are:

- **Walking.** Barefoot prints are soft rounded impressions formed by the heel, ball of the foot, or toes. Women's tracks are generally smaller and have on the whole two characteristics: they tend to be pigeon-toed, and their toes are more splayed than those of men.
- **Running.** Running footprints usually show skid marks, depth of impressions, prints that show heaviest impression of balls of feet and toes, splayed toes, and badly damaged vegetation with resultant lack of concealment of trail.
- **Load Carriers.** Shortened stride, with deeper impressions than normal in soft ground, and showing broadly splayed toes indicate passage of laden porters.

Interpreting Tracks

(U) A number of factors must be considered when interpreting signs:

- **Age of signs.** Obviously the tracking information will be more important if the sign is fresh, and subsequent action will depend on the age.
- **Type of Vegetation.** Signs will vary considerably with different types of vegetation. What will be obvious in grassland may not be so obvious in primary jungle, and the commander must evaluate the effects of these differences in interpreting signs.
- **Topography.** Likely places for good signs are steep inclines where slide marks will be left, or river banks where the ground is soft.
- **Weather conditions.** Rain will quickly obliterate most signs, but it will also provide wet vegetation and soften ground which will make signs more obvious. Strong winds will straighten bushes and ferns that have been bent in passage. High temperature will quickly restore many signs to their natural state.
- **Size and Composition of Units Tracked.** The number of individuals in the party and the presence of animals or vehicles will be evidenced in the resultant signs.

Judging the Age of Track Signs

(U) Track sign age determination can be made on the basis of:

- **Vegetation.** The state and position of trodden vegetation must be noted since different species of plants have different resilience. Only practice and experience will enable a tracker to use this evidence for accurate assessment of the age of a track.
- **Impressions in Mud.** The 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 and the mud, which has been pushed up around the depression made by a foot, will still cling to the edges of the depression. Later the water runs back, and later still mud kicked forward by the foot leaving the ground begins to dry.
- **Obliteration by Rain or Mist.** If tracks are pockmarked, they will have been made before the rain; if they are not they will have been made after the rain. Similarly, by noting if the tracks have been pockmarked by mist dripping from trees, an estimate of their age can be made.
- **Cracks in Bent Grass or Leaves.** An indication of the age of a track may be gained by the state of the dryness of cracks made by passage through living vegetation. When fresh such cracks are green, but after a few days they turn brown.
- **Superposed Game Tracks.** Most wild animals lie up during the day and move at night. If human prints on forest trails have animal tracks superposed, and these tracks show that the animals have moved in both directions, the human prints are probably at least one night old. If tracks show that the animals have moved only in one direction, then the human tracks were probably made during the night, after the animals had moved down to water and before they moved back.
- **Leaves Covering Tracks.** In forests, leaves are always falling from the trees. The number of leaves that fall depends on the amount of wind and rain during the past few days; this will give an indication of the age of tracks.

Deception and its Counter

(U) The enemy may use any of the following methods to deceive trackers:

- **Walking Backward.** This type of deception is used mainly in soft ground or dusty patches. Mud flakes are kicked up by the heel instead of the toe; the heel mark tends to be deeper than that of the ball of the foot, and the feet are placed wider apart although the pace is shorter.
- **Walking on the edges of paths or astride them.**

- Stepping in existing tracks to disguise the number in a group.
- Walking in streams or stream beds.
- Splitting up into small groups.
- Walking along fallen trees, over rocky ground, or stepping from rock to rock.
- Tip-toeing.
- Rear man covering tracks with leaves.

(U) These deception methods will delay a tracker but the commander must bear in mind that the enemy is not possessed with wings. Unless carried out by an expert, deception will often serve only to give a clearer indication of where the track is. A careful search of the immediate vicinity will show what method of deception has been used. The commander can then take steps to review the follow-up. Some suggested methods of countering deceptive practices are:

- Note the direction of bending of grass, twigs, or ferns which will always point in the direction of movement even when the footprints appear to be going the other way.
- Search banks of a stream for about a mile up and down from the point of entry.
- Use a "box" or "cross grain" search.
- Report immediately to the commander any split up of the enemy group; the commander will then decide which party to follow. The splitting-up point should be marked so that the team can return to it and start again if necessary.
- Examine logs or stones.
- "Lift" the team and try a search on more favorable ground.
- Examine the areas on either side of the track for signs of disturbances in the leaves.

Information Obtainable

(U) A visual tracker should be able to find at least some of the following information:

- Direction of tracks.
- Age of tracks.
- Number in party.
- Whether the party is load-carrying.
- Sex.
- Weapons.

CONFIDENTIAL

Organization of Tracking

(C) The use of native trackers must be concealed, or the enemy will make greater attempts to hide his tracks. When following a track, trackers should:

- Precede the patrol with an escort which will normally act as the patrol scouts, moving only a pace or two behind each tracker.
- Be free to concentrate on studying ground; hence the requirement for the protective escort who must be prepared to either knock the tracker aside or fire over his shoulder should the need arise.
- Work in threes: the leading tracker works to the front, followed by his escort; the second tracker, followed by his escort, watches for track breaking to the right or left; the third tracker, who is resting, remains with the main body of the patrol.
- When working a track, be rested approximately every 30 minutes. The normal work routine has the leading tracker, who has the most tiring job, dropping back to third position in the body of the patrol; the second tracker, whose eye has been shaped by his role in second place, moves up to the lead; and the rested man moves up from the patrol position to the role of second tracker.
- On encountering tracks, study them to deduce their meaning and fix the spot on the map. If a tracker is not with the patrol, the commander should mark the signs and, if possible, get a competent tracker to the location. Soldiers must not mill around an area where signs have been found. The quicker a tracker starts to follow a sign, the better the chances of being able to follow the track to its conclusion.

Handling of Native Trackers

(U) Native trackers should be under the direct control of a patrol commander. Their morale must be maintained by:

- The example set by members of the patrol.
- Proper attention to their administration.
- A sympathetic understanding of their problems.
- The knowledge that they have immediate close protection from the escort.

(U) New enemy methods used to conceal tracks must be explained to native trackers and, conversely, any new methods discovered by a tracker must be passed back to higher authority.

Training

(U) Visual trackers lose their skill if continuation training is not carried out. This training can be achieved by laying a simple track over about one mile of country two or three times a week, and ideally, once per day.

TRACKER DOGS

General

(U) The tracker dog is a trained war dog. His training and use are based upon his ability to track his prey rather than upon his naturally aggressive instincts. Tracker dogs are a valuable weapon which, properly used, give our forces an advantage over the enemy. When faced with the prospect of being tracked by dogs the average man tends to take rash avoiding action which not only slows him up but even increases the scent and enhances the dog's chances of success. The breeds most commonly used are the tractable breeds with "good noses," Labradors, retrievers, bloodhounds, Alsations, and Dobermann Pinschers.

(U) To obtain the maximum value from tracker dogs, it is essential to have an understanding of the conditions best suited for their employment. The behavior of dogs, like that of most animals, is strongly affected by outside influences. It follows, therefore, that the performance of any dog, no matter how highly trained, is not constant and the dog cannot be expected to work efficiently under all conditions. This is often not fully appreciated, and instances have occurred where adverse criticism has been leveled against a dog simply because the person responsible for its employment was ignorant of its limitations. Full value can be derived only from a thorough understanding of the capabilities of the dogs.

Tracking Conditions

Scent

(U) The ability of a dog to track depends entirely upon its sense of smell and the capacity of the quarry to produce a detectable scent. It is essential to know something of the theory of scent. All matter gives off scent to some degree. This scent consists of minute particles which tend to fall to the ground at various distances from the source. The combination of all these scents makes up a scent picture which the dog follows. The dog becomes conscious of the scent near or on the ground over which the individual has passed, when it comes in contact with the delicate membranes lining his nose.

(U) Composite scent consists of natural and artificial scents. The total of a human's scent varies with the individual, depending on race, diet, and habits. Added to body odour there is the scent given off the wearer's clothes, hair oil, toothpaste, equipment, and footwear, and those scents released by the brushing and breaking of vegetation and the crushing of

small insects. The ability of the dog to follow a track depends on the distribution, quantity, and life of a scent.

Factors Favoring a Successful Track

(U) The factors favoring a successful track are:

- Cloudy, Cool Weather. A mild overcast day favors tracking as it limits evaporation of scent.
- Vegetation. High undergrowth and jungle restrict the dissemination of scent.
- Time of Day. At night or in early morning evaporation is less rapid.
- Body Odour. An unclean person gives off more body odour than does one who is clean.
- Food and Equipment. Strong-smelling foodstuffs, such as curry powder, increase the scent picture.
- Speed of Movement. A running fugitive gives off more scent than one calmly walking.
- Scent Identification. Dogs do not need the classical article of clothing belonging to the pursued to enable them to find and follow his track, but if a discarded parachute, hat, etc., is available it is an asset.
- Freshness of Spoor. This is of prime importance. The hotter a scent is, the hotter will a dog follow it. Dogs have followed a track seven days cold but this is most unusual. All trained tracking dogs can reasonably be expected to follow overnight tracks.
- Blood. The presence of blood on the track aids most tracking dogs. However, some dogs become disturbed by the presence of blood or a cadaver and their performance deteriorates.

Factors Unfavorable to Tracking

(U) The following factors adversely affect the dog's ability to follow a track:

- Sun. When the sun is hot, evaporation is rapid.
- Wind. A strong dry wind rapidly disperses the scent.
- Rain. Heavy rain washes the scent away.
- Dry Ground Surface. Dry, bare ground, such as rocky paths or roads where there is little or no herbage adversely affects tracking.
- Manure. Heavily manured land overpowers the scent of the track.

- **Crowds.** Where the track has been crossed by other and fresher tracks, as in streets of villages, it is impossible to follow.
- **Transport.** A dog cannot follow a quarry that has been lifted off the ground in a vehicle.
- **Water.** The most important and classical enemy of the tracking dog is water, particularly running water. Dogs have been known to follow a track across the shallow still water of a swamp, but this is unusual. Paddy fields in tropical countries are formidable enemies of the tracking dogs.

(U) Although these factors have a direct effect on the "track picture," the degree of effect is variable. It is known that tracks made late in the day can normally be identified the following morning, and that tracks protected from direct rays of the sun and tropical rain have been recognized after 36 hours.

(U) As scent tends to remain more concentrated during the hours of darkness it may be assumed that dogs will track better at night than during the day. This assumption has been proved correct when the going is easy. However, to accustom dogs to the altered conditions they must be given regular night training. This is also necessary for the handler, as a greater degree of skill is required in reading his dog at night. As frequent halts will be made during an operational night track, these must be included during training. If the going is difficult and the tracking dog is slowed down too much he loses interest. Under such conditions it is probably better to postpone the tracking until morning.

Employment

(U) Since the most important factor in the successful employment of a tracking dog is time, the dog must be brought to the scene of the incident with all possible speed and not used as a last resort. It is suggested that tracker dogs and handlers be held centrally within the unit until a call for their services is made. When this happens they should be taken as near as possible to the scene of the incident by vehicle or helicopter in order that they may arrive fresh and not tired out by a long forced march. The degree of fatigue of a dog will determine its usefulness. Once it has been decided to use a tracking dog, the less fouling of an area with extraneous scent the better. Objects liable to have been in contact with the person to be tracked should not be touched, and movement over the area should be restricted to a minimum.

A Typical Track

(U) When the dog arrives at the scene of the incident a body harness and a seven-meter pilot line are put on and he is placed at the start of the track. Objects belonging to the enemy may or may not be offered to the dog and he may have to "cast" around if the start of the track is not obvious.

(U) Having found a track the dog "rockets off" nose down, tail stiff, to follow it. He is kept under control by a pilot line. He follows the track by scent and this may have drifted a few meters to either side depending on wind, so he will not necessarily sniff from footprint to footprint.

(U) When the dog arrives at a spot where the track is not obvious, such as the bank of a stream or the edge of a road, he may go off the track and have to be "cast around" until he picks it up again. This causes some delay.

(U) As the scent gets warmer the dog may "air scent," i.e., take his nose off the ground and point at the enemy. An experienced handler will be able to tell when the enemy is close at hand.

Dog Handlers

(U) The performance of a tracker dog is directly dependent upon the skill of the handler and the mutual understanding existing between him and his dog. The dog must be handled only by a skilled handler who must be given sufficient time to train his dog and keep him fit.

(U) Potential dog handlers should be chosen from among volunteers who have already received a sound basic military training and who are friendly and sympathetic towards dogs. This is a prime requisite. A dog will quickly sense an unsympathetic handler and its standard of performance will deteriorate. Other qualities for potential dog handlers are:

- Intelligence.
- Patience and perseverance.
- Dependability. The dog's whole life depends on its handler. Unless the handler is conscientious and reliable, capable of performing without strict supervision what he has been taught during his training, the dog will suffer.
- Resourcefulness. It is inevitable that situations will arise which do not appear in the textbooks, and improvisation by a resourceful man may be essential.

(U) Tracker dogs are trained on the reward system and must be allowed to earn their rewards as often as possible. Failures on difficult tracks are to be expected, but these failures must not occur too frequently or the dog will become disheartened. Following a failure the dog must, where circumstances permit, be given a simple track to enable him to earn his reward which is usually a piece of meat.

(U) Fatigue on the part of the handler may spoil the dog's performance. The tired handler may unwittingly put the dog off the scent, or discourage him from following the track through dense bush or awkward going. It is also not unknown for the over-tired handler to say that there is no scent or that the dog is exhausted. A fit dog will always be capable of going on longer than the handler.

(U) The efficiency of dogs and handlers can be maintained and improved only by regular training and use. The importance of this fact cannot be too strongly stressed. If neglected, the dog will quickly become stale, lose interest, and be of limited use as an operational weapon.

Advice to Dog Handlers

(U) As a trained dog handler you are responsible for the continued health and working efficiency of your dog.

DON' T

- Don' t allow anyone to handle or become friendly with your dog; it is not a pet and it, like yourself, has a job to do.
- Don' t throw sticks or other articles for your dog to retrieve.
- Don' t allow your dog to chase poultry or game.
- Don' t allow your dog to sleep in your bivouac.
- Don' t overdo your obedience work or your dog will lose its initiative.

DO

- Do praise your dog for a command successfully obeyed or a job well done.
- Do insist on commands being carried out.
- Do allow your dog to relax and play when off duty.
- Do ensure that kennel management is the best.
- Do give your dog regular training.