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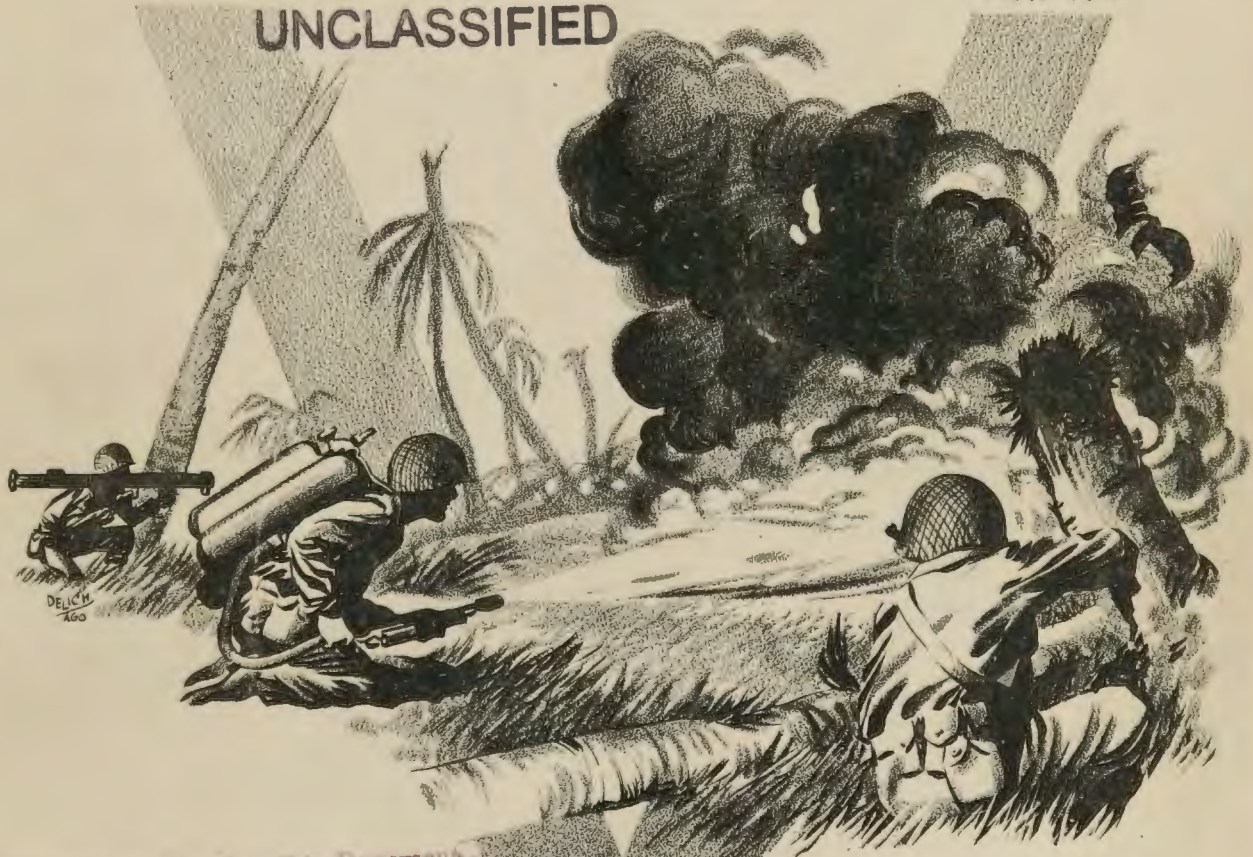
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HEADQUARTERS  
EUROPEAN THEATER OF OPERATIONS  
UNITED STATES ARMY

**BATTLE EXPERIENCES  
AGAINST THE JAPANESE**

1 MAY 1945

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Instructor Reading This Document

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**BATTLE EXPERIENCES  
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1. This pamphlet presents material on combat methods used by and against the Japanese and on the effects upon combat of the physical and climatic conditions existing in the theaters where they have been fought.

2. It is designed to assemble in convenient form all available material on these subjects with particular attention to matters of value to the individual and smaller unit. Additional information received will be published periodically under the title "Battle Experiences Against the Japanese".

3. Most of the material used comes from reports to the War Department or from the following War Department publications: "Intelligence Bulletin", "Military Reports from the United Nations", "Tactical and Technical Trends", all published by the Military Intelligence Division, and "Combat Lessons" and "Fighting on Guadalcanal" published by the War Department General Staff.

4. Like the "Battle Experiences" heretofore published periodically by this headquarters, the methods described are not necessarily applicable to all units in all situations. They are, however, based on actual experiences and are recommended for careful consideration. In considering and applying them it should be borne in mind that the progress of the war against the Japanese may bring radical changes in the climatic and terrain conditions affecting the fighting.

By command of General EISENHOWER:

*R. B. Lovett*  
R. B. LOVETT  
Brigadier General, USA  
Adjutant General

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## C O N T E N T S

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## "MUSTS" FOR THE JUNGLE SOLDIER

"If he is to survive it must be second nature for every jungle soldier to:

- a. "Keep his mouth shut whenever the enemy may be near.
- b. "Recognize common jungle sounds.
- c. "Keep his eyes off the ground and maintain constant observation in the direction he is assigned to watch.
- d. "Get off the trail at halts, conceal himself, and observe to the flanks.
- e. "Dig in during extended halts.
- f. "Know the Nambu (a light machine gun) by its sound. It is the frame-work of the Japs' jungle organization and is an infallible guide to flanks and strong-points.
- g. "Darken his face and hands and remove any shine from his equipment.
- h. "Conserve his ammunition and pick up an abandoned bandoleer when he sees one.
- i. "Be able to select a night position so that the jungle works to his advantage and to the disadvantage of the infiltrating Japs.
- j. "Memorize and invariably use the unit's selected code words for leaders, various set maneuvers, ammunition, medical aid men, etc.
- k. "Appreciate the fact that the Japs do not have cat's eyes, that they are afraid of the dark and that at night a moving Jap is an easy victim for a silent soldier who believes in his bayonet.
- l. "Care for his equipment religiously. Weapons deteriorate with unbelievable rapidity in the jungle and must be cleaned at every opportunity."--First Marine Corps, Bougainville.

T H E J A P A N E S E S O L D I E R

What is the Jap like? How does he fight?

Let's assume the trained German soldier is a professional heavyweight prizefighter--fighting is his business and he WAS good at it. If Jerry is a trained professional heavyweight, the Jap is definitely a lightweight--not a professional but an alley fighter who is not above a thumb in the eye, a knee in the crotch or a brickbat when you're not looking. Furthermore he's a left-hander, so to speak, with a style that's hard to solve until you get on to it.

The Jap is not the dope we thought he was before Pearl Harbor. He's not the superman we thought he was when he was marching down through Singapore and Java and right on to Australia's back door.

You've heard about his "Banzai" charges, his "Death for the Emperor," and his holding a grenade against his belly when he sees he's captured.

Here are reports on him from men who have met him first-hand.

I BE SURE HE IS DEAD.

1. With three holes in him. "Only nine men were killed during a company assault, but four of these were shot by a wounded Jap who had three holes in him. He was lying in thick brush 15 yards from my command post and had been passed over for dead. You have to kill them to get them out of the fight."--Major Lou Walt, 5th Marines, Guadalcanal.

2. Bayonet or bullet. "Ambushed Japanese soldiers often drop and feign death by lying still for long periods. Make sure they are really dead--using bullets or bayonets or both."--British Report.

3. If able to pull a trigger. "Japanese leave their sick and wounded behind when they are in a hurry. If the sick and wounded are still capable of pressing a trigger they're mighty likely to do just that."--Soldier, Southwest Pacific.

4. Instructions for Jap wounded. "A recent Japanese publication stated 'After all means to continue the fight have been exhausted, wounded who cannot be rescued must be ready to commit suicide at the proper time.'"--Report, Southwest Pacific.

II HE TRADES TREACHERY FOR MERCY.

5. Nice fellow! "They found the Jap under a shattered palm. There was a gaping wound in his abdomen. The men got a first-aid man. When he tried to go to work, the Jap kicked him. Someone said: 'Let's finish him.' Col Finn said: 'No, take care of him.' Col Finn stood with his back to the Jap. The Jap jumped up and rushed Finn with a large rock in his hand. One of the men slugged him. Someone said: 'Let's finish him.' Finn said: 'No, I tell you. No.' The first-aid man again bent to his work. He turned

around to get a bandage. The Jap jumped up with a second rock and sprang at the first-aid man. They plugged him full of holes before Col Finn could say a word."--"Island Victory" (Kwajalein), Lt Col S. L. A. Marshall.

6. Even those who try to help him. "In the thick of the fighting, every pile of wounded and dead had to be examined for men feigning death and awaiting only the opportunity to snipe or throw grenades at our men--including hospital personnel seeking to give them treatment."--Report, Attu.

### III DO NOT TRUST HIM WHEN HE SURRENDERS.

7. Make him strip. "In all cases surrendering Japs were forced to strip off all their clothing and approach with their hands high. They had a bad habit of hiding a grenade or two in their clothing to use when they came close."--Maj Leonard E. Wellendorf, 7th Inf Div, Kwajalein.

8. Knife in loin cloth. "Instead of our shorts or drawers, most of the Japs wear loin cloths something like a rather loose cotton athletic supporter. When making Jap prisoners strip, don't stop when you get them down to this loin cloth. Sometimes the Jap has a knife hidden in the pouch of this cloth."--Report, Pacific.

9. Even a stripped Jap could pull this one. "Occasionally a Jap would come in with his hands up in surrender. When close enough he would arm a grenade which had been concealed in his hand, and hold it until it exploded. Thus he would injure as many of us as possible while killing himself."--Report, Admiralty Islands.

10. The old surrender trick. "The Jap soldier came out of a pillbox with his hands raised in surrender. As five of our men went after him, other Japs in the pillbox shot three of them."--Soldier, Kwajalein.

11. These were nurses. "Several Jap nurses walked up to our wounded with their arms raised. When close at hand, they threw hand grenades among the soldiers."--Report, Solomon Islands.

12. Surrendered to bait a trap. "Two or three days after the Marines landed in the Solomons, a Japanese captain of a labor battalion walked into division headquarters and surrendered. He said his battalion would surrender and could be brought in if a detail were sent for them. A colonel and 20 men went to the specified position. As they stepped ashore they were all killed except a sergeant, who was wounded. The sergeant made his way back to headquarters and a force wiped out the ambush position by an attack from the rear. Instead of a labor battalion it turned out to be a special weapons detachment, 200 strong."--Report, Solomon Islands.

### IV HE IS INHUMAN.

13. Made the Koreans human decoys. "Sgt Bentley saw a Jap about 50 feet in front of our foxholes. Bentley and Pfc Henry B. Wojcik shot the man. Then other figures popped up and moved around in the same aimless fashion. They did not come toward our lines, nor did they move back. In the gloom they could be seen clearly because they were wearing white arm bands. Bentley and Wojcik kept firing--six--seven--eight. It was like shooting fish in a barrel--nine--ten. In about five minutes they shot down 16. Later, the company figured out that these must have been Koreans who were being forced out in the open by the Japs so they could locate our positions by our fire."--"Island Victory" (Kwajalein), Lt Col S. L. A. Marshall.

14. A comrade's body. "The Japs once took the body of one of their slain soldiers, tied it to a pole, and exposed it in an open space to draw our fire and locate our positions."--Report, Pacific.

15. Made civilians take the chance. "The Japanese soldiers were known to have taken civilian Japanese men, women and children into the caves with them. These civilians were sent out to forage for food and water left by the Americans."--Officer, Saipan.

#### V HE WILL BE WHERE YOU LEAST EXPECT HIM.

16. In a Lister bag. "One morning as we started getting out of our foxholes, two men were hit by bullets from an unlocated sniper. Suddenly a sergeant turned a tommy gun on our Lister bag. He had spotted a Jap in it. Sometime during the night this Jap had infiltrated through our perimeter, let the water out of our Lister bag, crawled in and waited until morning for a shot."--Officer, New Georgia.

17. In an "empty" bunker. "The Japs had a trick of lying quiet and letting the first assault troops go past their bunker to make them believe that the Japs had retreated or been killed. As soon as the first wave passed, the Japs--even badly wounded ones--opened fire from the rear."--Lt Donald B. Henry, Admiralty Islands.

18. Among the dead. "Three days after the landing on Kwajalein, Japs were still sniping from foxholes covered with a natural camouflage of palm fronds. Others lay prone and in full view among bodies of Jap dead. One officer spent some time standing near the bodies of a number of Japanese--one of whom was very much alive and biding his time. Later this sniper was discovered and killed. He could have shot the officer who stood near him but evidently was waiting until he could kill several at one time."--Officer, Kwajalein.

#### VI CAN'T THINK FOR HIMSELF.

19. Doesn't travel alone. "For some reason the Japs usually travel in pairs. Whether they are afraid to operate alone, I don't know, but where there is one there is invariably another."--Report, Pacific.

20. Needs orders. "Whenever we killed a Japanese officer, his men seemed to have a hard time thinking for themselves. They often went to pieces."--Soldier, Southwest Pacific.

#### VII HE IS STUPID ABOUT SOME THINGS.

21. Lack of stealth. "The Japanese exhibited no particular stealth, guile, or ability to conceal themselves during their infiltrations. They came by the easiest route, not sliding or creeping or moving from cover to cover but running at a slow lope, crouched over. All their moves were in the open. A flare would have trapped them all if it had gone up at the right moment. After they got within our lines their actions were eccentric and wasteful of their own power. They didn't seem to know what to do with themselves. What helped them was the greenness of our own men who were in the lines for the first time."--Island Victory" (Kwajalein), Lt Col S. L. A. Marshall.

22. Slow to correct mistakes. a. "On Bataan and Corregidor, it took the Jap a long time to correct his mistakes. On Bataan there was only one main road along which he could bring his artillery. Our forces had this road well covered. We wiped out two batteries in the same place within a half hour. After the loss of six batteries in two days, the Japs built



a road through the jungle out of sight of our observers.

b. "On Corregidor the Japs sent in 54 two-motored bombers on the first day's attack. Fifteen planes were shot down. Yet, for seven days there was no change in the Jap altitude of attack or in the formation used. During that time we reduced the 54 planes to eight. Finally on the seventh day the planes started coming in from different directions and at different altitudes."--Report, Pacific.

23. Frequently aims too high. "Machine guns, though extensively employed on Leyte, generally were aimed too high and did comparatively little damage. They sometimes fired as much as 15 feet over our heads. Except when in pillboxes, they were rarely sited for mutual support."--Observer, Leyte.

24. Rarely searches or traverses. "In spite of the Jap cleverness at concealment and covering avenues of approach, he seldom traverses or searches with his machine gun. Therein lies the key to his destruction--avoid his fixed line of fire and wipe him out."--Report, Southwest Pacific.

25. Leaves bayonets uncamouflaged. "The bayonets on Japanese rifles aren't camouflaged. The enemy would attack with the damn things glittering in the sun."--Soldier, Southwest Pacific.

26. His reactions are slow. "Jap riflemen seem completely lost in a situation where they have not had a chance to dig in and set up a defense. Their reactions are considerably slower than the Americans. A Jap rifleman would rise to his knees and look around for a target. Before he managed to get his gun to his shoulder he would be picked off."--Regt Comdr, New Guinea.

27. No good in open. a. "When the enemy on Makin was holed up or in the swamps, the resistance was determined. When pushed into the open, they could not handle themselves."--Col S. L. A. Marshall, Makin.

b. "When we pushed them into the open, an entire group of Japs would run like deer to the nearest cover on their rear. There was no evidence of leadership. They did not attempt to cross the clearing in rushes or in staggered groups. Once hidden they would again fight tenaciously."--1st Sgt Thomas Valentine, Makin.

28. Doesn't even sell own life dearly. "After a series of attacks against our defensive perimeter had been repulsed with heavy losses, 12 Jap soldiers, led by an officer in a soiled white uniform, came out into the open. They had advanced only a few yards and our forces had not opened fire when the officer pulled the pin from a grenade, tapped it on his helmet to arm it and held it against his stomach. The enlisted men then did likewise."--Observer, Admiralty Islands.

29. Careless at mealtimes. "Attacks at mealtimes were most successful and the Jap was often caught off guard or in bunches. Best results were from attacks from flanks and rear."--British Report, Burma.

30. Poor security. "Jap security is often poor. When they rest they sometimes all rest. Quiet troops can really get scalps. One patrol got 13 Japs at the cost of one round of ammunition plus some dulling of knives."--Marine Capt, New Britain.

#### VIII SMALL AND USUALLY AWKWARD.

31. "The average height of the Jap soldier is 5 feet 3½ inches and his average weight is 120 pounds. Despite the reputation of the Jap for quickness and agility, the average soldier is apt to be awkward."--Report, Pacific.



IX HE FACES DEATH BRAVELY--SOMETIMES.

32. No surrender here. "Staff Sergeant Mitchell L. Nahas hadn't noticed a large hole between his men and the blockhouse but when the platoon advanced again he almost fell into it. Then he observed that the excavation was quite large and that most of it was covered with palm branches and tree trunks as if to conceal a position.

"Sergeant Nahas listened and heard voices. He and one of the BAR men lay at the open end and poured fire into the hole. They stopped and listened. The flow of conversation from within continued only a moment. The ground shook suddenly from five distinct explosions--suicide grenades. Still Nahas was not satisfied; he got a flame thrower and seared the hole until the container was empty.

"Co A, doing a clean-up job, came along. Capt Jones reconnoitered the ruin and thought he heard children whimpering and crying inside. For ten minutes men took turns trying to get a surrender. There was no answer.

"Then came a voice in clear English: 'Go away, you damned white sons of bitches.' Jones shrugged his shoulders in a helpless motion, walked to the door and threw in a sat-chel charge. That silenced it."--"Island Victory" (Kwajalein), Lt Col S. L. A. Marshall.

33. Antitank suicide mission? "A dead Jap who had been shot and was lying in the road in front of tanks had an antitank mine tied to his body."--Report, Biak.

34. Human mine detectors. "If the Japs found a large U.S. minefield in their path, they would not use mechanical detectors. Instead they would line up a detail of soldiers and walk them across. As soldiers detonated the mines or were shot, replacements moved up to continue clearing a path."--Soldier, Solomon Islands.

35. Drown rather than surrender. "Of a force of well over 700 that we wiped out, we were able to take only 34 prisoners. Of these 33 were badly wounded. Upwards of 300 Japs trapped along the beach chose to swim out to sea rather than surrender. Machine gun fire picked them off like rabbits. After it was all over, we saw a single Jap swimming well out to sea so we sent a boat to help him. As the boat came alongside, he made a dive and never came up."--Report, Southwest Pacific.

36. Took a gasoline fire. "A sniper infiltrated behind U.S. lines at night and hid himself very effectively in a rubbish heap. When discovered he would not give himself up until gasoline had been poured on the rubbish pile and set afire."--Officers, Kwajalein.

37. Can be cowed. "The effect of the naval--air bombardment on Makin was said by the Koreans to be overpowering and stupefying. The defenders fled their garrison and crowded down into dugouts and trenches. We found anti-aircraft guns, antitank guns and naval guns unharmed by the bombardment, fully munitioned but unfired and in some cases still covered. When the barrage lifted, many of the Japs did not go back to their firing positions. Many of them were killed while still cowering in dugouts that had hardly been touched by shelling or bombardment."--Col S. L. A. Marshall, Makin.

38. Will keep his head down. "Despite the many instances of the Jap's fanatical determination to die rather than be captured, the average Jap will keep down when faced with fire superiority. He does not want to die if he can help it. And he does get shaky under our artillery and mortar fire. As one noncommissioned officer put it: 'This business about the Jap being a superman is so much tripe. When you start giving him the real business, he will run like hell and be twice as scared as you are and when I think how scared I was that's saying a lot.'"--Report, Pacific.

39. Not too willing to die. "The Jap is not always too willing to die for his emperor when the odds are against him, and he will squeal like a pig when he is routed."--Report, Southwest Pacific.

40. And the Jap will run. "The shambles in the village was hideous when the Life-buoys (British flame throwers) started flaming. The Japanese had had enough; they broke and ran. They abandoned everything--their dead, their documents, equipment and weapons. They fled across the paddy fields and into the woods beyond. The patrols that followed them could find no trace of this demoralized force."--British Report, Burma.

When you meet the Jap remember these six rules:

- RULE ONE - THE JAP IS ALWAYS DANGEROUS.
- RULE TWO - THE JAP IS WITHOUT HUMANITY.
- RULE THREE - THE JAP MAY BE HIDING ANYWHERE.
- RULE FOUR - THE JAP IS DEPENDENT UPON OTHERS.
- RULE FIVE - THE JAP SOMETIMES IS STUPID.
- RULE SIX - THE JAP FACES DEATH STOICALLY - SOMETIMES.

## Chapter Two

### J A P A N E S E M E T H O D S

"The Jap is crafty; he is a master of camouflage; he will wait hours for a target; he will use decoys to draw fire and thus locate a position; he takes delight in plaguing inexperienced troops by firing so-called explosive bullets into tree tops at the rear and flanks of positions to make our troops think they are being fired on from those locations; he uses many noisemaking tricks to try to bewilder us."--Report, Southwest Pacific.

#### I JAP RUSES TO DRAW FIRE.

41. Firecrackers. "One night Jap snipers worked their way into tree positions close to the perimeter. About dawn they dropped firecrackers. The sound resembled Jap rifle fire and several of our men exposed their positions by firing. The Jap snipers then opened up on them. Our men soon learned to listen for the hiss which precedes the explosion of the firecracker."--Col S. L. A. Marshall, Makin.

42. Rifle bolt noise. a. "A Japanese trick to draw our fire was for a hidden Jap to work his bolt back and forth. Men who got sucked in and fired without seeing who they were firing at generally drew fire from another direction."--Cpl Fred Carter, 5th Marines, Guadalcanal.

b. "The Japs in Burma tried to draw fire by using a simple mechanical device to represent the clicking of rifle bolts. The device was attached to a bush and connected by a rope to a soldier hidden in safety."--Report, Burma.

43. Dummy hand grenades. "Single Japs tried to scare us and draw our fire by banging a chunk of coral on their helmets and then throwing it at us. They hoped we would think it was a grenade."--Soldier, Biak.

44. Moving bushes. "Japanese soldiers tied a length of rope to bushes and then moved to a place of safety. Then they pulled the rope to make opposing forces believe that enemy troops were moving among the bushes, thus drawing fire and locating positions."--Report, Burma.

45. Bogus calls, noises. "The Japanese used all their old tricks--bogus calls, animal noises, and wild shooting--to give the impression of strength, as well as to cause our troops to disclose their positions by firing."--British Report, Burma.

46. That smoke may be phony. "To bring down artillery fire and thus locate our guns, the Japs have been sending patrols to light fires. It should be remembered that the Jap usually has very good smoke discipline. Smoke columns should be viewed with suspicion."--Report, Pacific.

47. Cracking bamboo. "When short of ammunition, the Japs get bamboo and crack it together to simulate rifle fire when they want to draw our fire and find our positions."--Cpl J. S. Stankus, 5th Marines, Guadalcanal.

## II TRICKS TO MAKE OUR TROOPS EXPOSE THEMSELVES.

48. Sword for souvenir hunters. "Decoys were used by the Japanese who hid in the caves on Saipan. They placed a Japanese sword or rifle near the cave opening to attract souvenir hunters. The trick worked."--Officer, Saipan.

49. Simulated torture. "Sandwiching in a few words of English, a group of Japanese screamed and yelled to give the impression that American soldiers were being tortured. The idea was to attract American troops to the scene to be mowed down by fire."--Report, Pacific.

50. Covering dead and wounded. "We lost many lives in our attempts to recover our dead, wounded or lost automatic weapons. Such attempts would be met with a hail of fire. Evidently the Japanese made definite plans to cover them with fire."--Australian Report, New Guinea.

51. When you rush to wounded. "If a Jap sniper picks off a buddy and you rush to his side immediately, the Jap will have a bead on you too. I repeatedly saw men rush to a pal's rescue, only to be shot themselves."--Soldier, Southwest Pacific.

52. Aid men not respected. "Japs have a habit of shouting in English to fool American troops. In one case the Japs shot some of our soldiers and then yelled 'Medics'. When aid men rushed up to the wounded the Japs started to pick them off."--Sgt, Bougainville.

53. Even torture wounded. "A favorite Jap trick is to capture a wounded man and place him near a trail or a perimeter. Then they cover him with machine gun fire. They will torture him until he screams or yells for help but it is absolutely suicide to send help for him."--Sgt, New Guinea.

54. Draw us into lanes of fire. "Dummy positions were prepared by the Japanese in obvious positions to draw our attackers into prepared lanes of fire from other positions."--Australian Report, New Guinea.

55. Disclosing pillbox location. "One trick the Japs used was to fire several rounds from a pillbox to disclose its location to our troops. When we advanced to knock out the pillbox, we would be met by flanking fire from machine guns concealed on both sides of it."--Soldier, Bougainville.

56. Ruses used in New Guinea. "The Japs used the following ruses in New Guinea:

- a. "They dragged one of our own dead close to our lines and propped him up, expecting that a group of our troops would be sent to 'rescue' him.
- b. "They placed captured weapons in front of our troops for the same purpose.
- c. "They fired captured weapons toward their own rear to lead our troops into the belief that other units of ours had advanced to that point.
- d. "They wore cut-out circular boards over their caps to simulate Australian hats."--Report, New Guinea.

## III JAP ATTEMPTS TO CONFUSE.

57. Gas-ruse. "One night the Japs put down smoke and yelled, 'Gas!' We were green at the time and two companies withdrew, leaving one company exposed on both flanks."--Col Merritt A. Edson, 5th Marines, Guadalcanal.

58. Jap "Banzai" charges. a. "Every time the Japanese attack, they yell 'Banzai'. They yelled as they ran in on this attack and our rifles mowed them down. When he shouts 'Banzai' the Jap thinks everybody is going to run--but we didn't run and there were plenty of Jap casualties. The charge was not well coordinated. It was made by a succession of small units charging from different points. Our men were able to concentrate their rifle fire on first one group and then another."--Maj Gen Robert L. Spragins, Guadalcanal.

b. "Some of the Japs looked about 14 or 15 years old but they are not all small. Some of the men from Kyushu are big guys and I saw an Imperial Marine from Formosa who was at least six feet two. They yell 'Banzai' or 'Blood for the Emperor' as they come running towards us. As a rule the heavier the action is going to be, the louder they yell."--Soldier, Southwest Pacific.

c. "Jap 'Banzai' charges can be expected every time the Japs are surrounded or cornered."--Canadian Officers with 27th Inf Div, Saipan.

d. "Screaming and yelling, tracer bullets and general fireworks--all this is a favorite way for the Japs to begin an attack. It's like kids playing Indians and war-whooping before they pounce on another gang. Except the Japs aren't kids and they're not playing."--Soldier, Southwest Pacific.

e. "In their 'Banzai' charges, they even employed loud speakers with phonograph records of battle noises."--Regtl Comdr, New Georgia.

59. Smoke and noise. "A captured Jap document gave these instructions: 'Decoy the Americans from one direction by smoke, firing or shouting. Then attack him from an unexpected direction.'"--Report, Pacific.

60. Speaking English. a. "I heard our captain who had been wounded by a sniper call to Sgt Miller of the third platoon: 'Have you been relieved Miller?' Miller answered 'No.' Then I heard a Jap say: 'Come out, Miller.' I decided not to give any more orders by yelling."--Report, Southwest Pacific.

b. "The attack began soon after dusk and for some time confused firing continued on all sides. It was ended when voices called out 'Cease fire, friends.' Most of the troops were deceived and stopped shooting, and the Japanese took advantage of the lull to rush the defenses. Luckily they succeeded only in piling themselves up on the wire obstacle, thus enabling our troops to concentrate their fire."--British Report, Burma.

c. "We used nicknames for the officers. The Nips had caught on to the names of our officers and would yell or speak in the night: 'This is Capt Joe Smith talking. "A" company withdraw to the next hill.' One night Capt Walt called me and we very cautiously identified each other by our nicknames. At the end of our conversation a voice broke in and said in perfect English: 'Our situation here, Colonel Edson, is excellent. Thank you, sir.' That was the enemy speaking."--Col Merritt A. Edson, 5th Marines, Guadalcanal.

d. "One of our men in a foxhole one night heard a voice calling 'Don't shoot!' Don't shoot!' He held his fire and the Jap who had called out in English jumped into his foxhole and attacked him with a pickaxe."--Col S. L. A. Marshall, Makin.

e. "A Jap, camouflaged as a tropical bush, crouched for two days on the edge of an Australian jungle outpost. He learned names and nicknames. One day in perfect Australian accent he called out 'Say, Bill, where are you? This is Alf.' When Bill shouted in reply, the tropical bush suddenly arose and shot him dead. This sniper was wounded and captured only after the area had been completely raked by machine gun fire."--Australian Report, New Guinea.

61. Drop firecrackers from planes. "On one instance firecrackers with slow-burning fuses were dropped behind American lines by airplane to simulate the presence of Jap troops."--Report, Southwest Pacific.

62. Used women and child as screen. "One night soldiers in foxholes heard a child crying in the woods ahead of them. They held their fire and a native family, a man, a woman, and a child, came toward them from the direction of the enemy. A few Japs were trying to use them as a screen and were driving them forward with bayonets. The men lay quiet, letting the natives come through, and then shot the Japs."--Col S. L. A. Marshall, Makin.

63. Dress as Filipino women. "The Japs tried two unusual tricks on Leyte. Once about 30 Japs dressed as Filipino women and approached our position. When they were within range they started throwing hand grenades. Another time the Japanese drove water buffalo toward our perimeter and came in behind the animals."--Report, Leyte.

64. A powder-filled helmet. "The Japs tried one unusual trick in the night attack on our perimeter. They would dump the powder from 20mm shells into a helmet, drop in an armed grenade and throw it at us like a bucket from five or six yards. I think they were doing it to draw our fire, to provide light for their attack and, of course, to inflict direct damage on us. Each Jap who got up to throw a helmet was a dead duck."--Lt, Biak.

65. Infiltrate into rear areas. "About 30 Japs infiltrated through our lines and successively attacked a regimental command post, an artillery battery, a division command post and an ammunition dump. Some installations were not properly organized for defense and many men did not know just what they were supposed to do. The Japs will infiltrate whether on defense or offense. Be prepared to meet them. See that each man knows exactly what part he has in all-round defense."--Maj Gen Robert L. Spragins, Guadalcanal.

66. Matching our flares. "When our units signaled with colored flares, the Japanese fired flares of the same color, hoping to confuse the attackers. The Japanese were unaware of the exact meaning of the prearranged signals, and the ruse failed."--Officer, Southwest Pacific.

67. Short round propaganda. "In Burma while our artillery was firing on a close-in target, the Jap opened up with mortars, timing his fire so the burst of our shells and his bombs were as nearly simultaneous as possible. Not only did that make his mortars hard to locate but also he hoped to make our infantry believe their casualties were caused by short rounds from our guns."--Report, Burma.

#### IV JAP BOOBY TRAPS.

68. Poisoned liquor. "The men had been warned against drinking the liquor found on Saipan until medical officers could test it, but these warnings were ignored in some cases. Some men became violently drunk, while others died of what was diagnosed as wood alcohol poisoning. The wood alcohol was found in bottles with Burgundy labels."--Officer, Saipan.

69. Flags and swords. "The Jap planted many booby traps using flags and swords. The usual plan was to place a land mine so it would be stepped on in an attempt to get the flag or sword."--Cavalryman, Admiralty Islands.

70. Anything may be dangerous. "In booby-trapping a phonograph, an electrical contact was set up by the Japs so that moving the phonograph arm to play a record set it off. A radio was booby-trapped by removing all except one battery and filling the cavity with explosive picric acid. Turning the switch set it off. An artillery piece was booby-trapped by placing mines in front of and behind each wheel so they would be set off if the gun were moved. Parasols, flashlights and pipes also have been booby-trapped."--Report, Pacific.

71. Booby traps on buried equipment. "The Jap often buries arms and equipment he cannot evacuate during withdrawals. Sometimes he includes a few booby traps."--Report, Pacific.

72. Grenades for booby traps. a. "One end and a portion of the side of a can are cut away and a hole punched in the remaining end for a trip wire. The Japs then take a British or American grenade, remove the safety pin, and slip the grenade partly inside the can so that the release handle is still held down. When the trip wire is hit, the can is pulled away from the grenade and the handle is released. The grenade may be placed inside the can and then the can balanced on a tree limb. When the trip wire is hit, the can falls over and the grenade drops out, releasing the handle."--Report, Pacific.

b. "The Japs have taken a British or American grenade, pulled the safety pin and placed it in the fork of a tree in such a manner that the tree holds the release handle down. A trip wire is attached. When the trip wire is hit, the grenade is jerked from the tree fork and detonates."--Report, Pacific.

c. "The Japanese have a grenade activated by a pull on the firing string. This makes it adaptable for booby traps. The Japanese may rig up such booby traps on dead soldiers in battle areas so that a pull on the leg or some other part of the body will cause detonation."--Report, Pacific.

d. "The Japs booby-trapped many of their own dead, placing grenades in the armpits or under the body."--Report, Guam.

73. Coconuts booby-trapped. "The Japs on Leyte used a large number of mines made by filling coconut shells with black powder. A hand grenade was imbedded in the powder with a five-second pressure detonator exposed. They were not particularly effective but they were easy to camouflage. We soon learned to be particularly suspicious of coconuts lying on the ground around foxholes or scattered along the sides of roads and trails. Some were detonated by trip wires and others by pressure. On a few occasions the Japs put these coconut bombs on the end of a three-foot fiber rope, whirled them and threw them as hand bombs. They made a terrific explosion but did little damage."--Lt, Leyte.

74. Old pistol trick. "One of the men in my platoon got caught by an old trick. He found a Jap pistol but before he picked it up he tied a hook on a long string and pulled the pistol to him just to make sure it wasn't a booby trap. He took the pistol back to camp with him and that night when he snapped back the cocking piece, the pistol exploded and blew off his hand."--Sgt, Leyte.

75. Sacks of rice. "Sacks of rice placed alongside a roadway, abandoned boxes of dynamite, and artillery ammunition were frequently booby-trapped."--British Report, Burma.

76. Vines for trip wires. a. "Trip wires on Jap booby traps were frequently attached to long vines to make them more difficult to detect."--Report, Pacific.

b. "In the jungle it is easy to mistake a trip wire for a vine. Vines grow beside nearly every trail and their tendrils are likely to creep across trails and roads. Then there have been a few instances in which vines were used as trip wires by the Japanese. Trails used a lot should be kept as clear of vines as possible. Remember the Jap likes to plant mines in rear areas."--Report, Pacific.



## V ANTI-PERSONNEL MINES.

77. In good cover. "Since Kwajalein was characterized by surprise and speed, the Japanese did not have time to devise booby traps. They did lay a number of anti-personnel mines. Inasmuch as some of these were laid near trees, it is believed the Japanese hoped to injure attackers seeking cover."--Officers, Kwajalein.

78. Passageways between buildings. "We also learned not to go through the passageway between buildings that had been held by the Japs; these passageways generally were mined."--Cavalryman, Admiralty Islands.

79. In rice paddies. "One place the Jap liked to lay mines was in rice paddies. They placed them along rows of rice and then strung wires through the grass."--Soldier, Leyte.

## VI JAPANESE TECHNIQUE OF FIRE.

80. Doesn't depress his machine guns. "The Japanese generally do not depress their machine guns lower than knee level. For this reason we make our advances by crawling, except during an assault. We have crawled up to within 25 yards of Jap machine guns while they were firing over our heads."--Sgt O.S. Marion, 5th Marines.

81. Fires all weapons high. "Here's a good argument for expert crawling and creeping. There are many reports from front line soldiers of the Japs always firing high. In one engagement early in the Southwest Pacific wounds of our men were reported as being only 10% below the knee and only 20% below the hips. Bullet scars on trees were mostly 2½ feet above the ground."--Report, Pacific.

82. Much use of alternate positions. "The Jap likes to make much use of alternate positions for his medium and light machine guns, even moving them about a great deal during the day."--Report, New Guinea.

83. Remote-controlled machine guns. "On Leyte we found one remote-controlled Jap machine gun in a tree. The operators were hidden in foxholes some 75 yards away. The gun, aimed down a road towards our advancing troops, was fired by a rope."--Sgt, Leyte.

84. Difficult to locate his guns. "The Japs never used automatic weapons as such until absolutely necessary. They fired only single shots, making it difficult to locate machine guns or even to know just what was opposing us."--Australian Report, New Guinea.

85. Close-in fires. "The Jap will hold his fire until the assault is 30 to 50 yards away. Fifty is about the maximum. One fixed line of fire for a machine gun was only 10 yards from the parapet of the Japanese trench."--British Report, Burma.

86. Tree bursts used. "At Natamo and Talesea the Japs obtained tree bursts by sighting a 75mm gun to fire at a tree about 50 yards down the trail they were defending. They opened fire when our troops reached the position and a bloody slugfest resulted. In two cases we knocked out the guns by hitting the deck and throwing back plenty of lead."--Marine Capt, New Guinea.

87. Firing on command posts. "Jap artillery would register with one or two rounds on a target just prior to darkness. About two hours later they would open up on this registration point with everything they had. Moral: Move command posts after darkness if the enemy has registered on them."--Col H. D. Harris, USMC, Southwest Pacific.

## VII JAP TACTICAL AND TECHNICAL WEAKNESSES.

88. He doesn't like being flanked. a. "One weakness of the Jap is his inability to stand being flanked. This stems from his absolute faith in flank attacks. Anyway, when he is flanked, he is likely to pull out, even though it is impossible for him to know the strength of the flanking force. If he doesn't pull out, he may try counter-bayonet charges rather than wait behind prepared defenses. On Guadalcanal, one of these charges resulted in slaughter because of our well-placed automatic rifle."--Marine Capt, New Britain.

b. "No attempt was made to attack any position frontally. Automatic encirclement produced quick results. Jap resistance speedily weakened, and our casualties were minimized."--Australian Report, New Guinea.

c. "The outstanding feature of the rapid advance of my regiment was the aggressive action of advance guards combined with rapid flanking. The point would hit to the front and a base of fire was immediately built up on the point. The following platoon moved to a flank at once, always on the up-hill side. This flanking action was continued by the commander of the leading company and, if necessary, the battalion commander sent another company even farther to the flank to hit behind the Jap resistance."--Inf Regtl Comdr, Southwest Pacific.

89. Too few qualified machine gunners. "I think as a rule only one man in a Japanese machine gun crew knew how to operate the gun. If he could be identified and killed, it was usually an easy matter to get the remainder of the crew, as they would become excited when the gunner was killed."--Cavalryman, Admiralty Islands.

90. Support is weak. "In most instances I have observed, the Jap did not have adequate or well-prepared artillery or mortar concentrations."--Marine Capt, New Britain.

91. Will leave a position. "He will sometimes leave a most favorable position to launch a 'Banzai' charge--even though it's a case of six against 60."--Marine Capt, New Britain.

92. Lacks control, reserves. "When given a choice the Jap operates exclusively at night. He attacks on a very narrow front en masse. This leads to many 'purple nights' when we watch longingly for sunrise. But the result for him has been almost complete annihilation in every case. These attacking groups start out and then seem to pass out of any real control of their higher leaders. We have never seen anything to indicate that any effort has been reinforced after the initial push has been made."--Col G. C. Thomas, USMC, Guadalcanal.

93. Vulnerable to night patrols. "Because of our tendency to stop, set up a perimeter defense, dig foxholes and stop all activity before dusk, the Japs apparently do not establish a night defense line. They continue with preparation of meals, improvement of their defenses and movement of ammunition and supplies, all quite noisily. In view of this, patrols against the Japs in this situation might be in order. Because the Japs do talk so much, a person able to understand Japanese might accompany these patrols with profit."--Canadian Army Observers, Pacific.

## VIII JAP SNIPERS--AND HOW TO DEAL WITH THEM.

94. Jap snipers are smart. "Japanese soldiers in the Admiralty Islands were best as snipers operating along jungle trails, singly or in small groups. They had good camouflage, and were adequately supplied with food and ammunition. They selected the best targets, and did not necessarily fire on our forward elements. To avoid disclosing their positions, they usually held their fire until American troops were firing. The Japanese did not snipe from trees exclusively; they frequently used undergrowth, the bases of trees, or other natural cover."--Report, Admiralty Islands.

95. Do the unusual. "Japanese snipers were not where you expected them. If our troops were advancing along a ridge, the snipers usually were on the low side and fired into our men from trees on the level rather than from above."--Soldier, New Britain.

96. Jap snipers cover roads and trails. "Movement of troops to forward lines was usually by road or well-defined trail and sniper fire was always encountered. A tendency for troops to skyline themselves was a big problem. Use of cover and concealment was not practiced as it had been taught."--Canadian Officers with 27th Inf Div, Saipan.

97. In fight to end. "Although the Jap snipers sometimes changed positions, they stayed in the fight until they were killed or until our troops had left the area."--Report, Admiralty Islands.

98. Snipers in machine gun squads. "According to a prisoner, every Jap light machine gun squad has a sniper and an alternate sniper. When a sniper becomes a casualty, another man immediately takes his place. The Japanese regard the sniper as one of the key men."--Report, Pacific.

99. Pick off stragglers. "Frequently Jap snipers would permit an entire platoon to pass before attempting to pick off stragglers. Sniper fire on Makin was most inaccurate even at close range."--Col S. L. A. Marshall, Makin.

100. Use camouflage tricks. "The Jap snipers on Makin when the Marines raided the island were extremely well camouflaged. All were dressed in a jungle green uniform. Some used individual camouflage nets and some even went so far as to hang coconuts all over their bodies. One sniper had the tops of two trees tied together. When spotted, he cut the trees loose, making it hard to decide which tree he was in."--Report, Pacific.

101. Sniper and observation posts. "Sniper and observation posts of the Japanese were well located. They had no paths leading to them, and were well camouflaged with grass or turf and moss. A few of these posts had a T-shaped stick, about three feet high, which apparently was used as a rest for field glasses. The Jap sniper or sentry approached his post from a different direction each time he reported. Relief parties did not come close to the post."--Report, Attu.

102. But they are ineffective. a. "Although we have had hundreds of snipers in our positions, I know of only one man having been killed by a sniper. They are ducks on the pond when daylight comes."--Col G. C. Thomas, USMC, Guadalcanal.

b. "Sniping was continuous in all areas day and night but was so ineffective as hardly to constitute a menace. Considering the volume of sniper fire, our casualties were astonishingly low. The Jap on Leyte was a poor marksman."--Observer, Leyte.

103. Sniper-finding aid. a. "Finding Japanese snipers in the trees was facilitated by looking for trees with notches cut in the trunk to help them in climbing, and for broken limbs which might be hiding a Jap."--S/Sgt, New Guinea.

b. "Small notches were cut into some trees, ladder fashion, so snipers could climb them. A number of trees had a flat T-shaped board fastened in the upper part of the tree so the sniper could sit there for long periods with slight discomfort. Several of the Jap snipers painted their faces green for camouflage."--Col S. L. A. Marshall, Makin.

104. Don't hold up advance for snipers. "All commanders must realize that you cannot clear out all the snipers as you advance. Some will be left but they won't be particularly effective--annoying, yes. You can get these snipers by small groups from the reserves. Some Japanese snipers, by-passed in the attack, hid for two or three days and then quit. Some will hang around inside our lines for a month."--Col Merritt A. Edson, 5th Marines, Guadalcanal.

105. How snipers increase delay. "A patrol was fired on by a sniper from the top of a tall tree. The patrol located him and apparently shot him down. Advancing they were fired on again. This happened several times. Investigation revealed that one sniper had been holding them up. Dummies had been placed in other trees and could be dropped by a pulley arrangement by the real sniper after the Americans had fired. In one case the pulley arrangement was fixed so the dummy sniper could be pulled back up into the tree."--Report, New Guinea.

106. Stalking Jap snipers. "One way to combat Jap snipers is to use stalker-snipers. The stalker-snipers nearly always work in pairs, making full use of camouflage. While moving, they must be completely under cover. If trails are not available, about the only way they can get about in the Burma jungle is by crawling along dry stream beds and gullies."--British Report, Burma.

#### IX THE JAP DOES VARY HIS METHODS.

107. "On Guadalcanal, the Japs figured correctly that we would tend to stick to the beach road while investigating villages far out from our lines. Therefore, all their sniping trenches were on the parallel ridges facing the beach trail. Later they figured we knew better than to stick to the lowland, so they concentrated on the ridge approaches. An outfit must be alert at all times. Don't count on what the enemy has done in the past."--Marine Capt, New Britain.

#### X JAP DEFENSIVE TACTICS.

108. Jap defense mobile. "Japanese defensive tactics are vigorous and mobile. Fighting patrols operate on the flanks of advancing troops. Once a Jap company moved around to our rear at night and disrupted communications--until they were destroyed. They believe that passive defense has the disadvantage of making it easy for the enemy to build up strong firepower."--British Report, Burma.

109. Hard to locate weapons. "Japanese seldom open fire from their defense areas unless an assault is actually going on. Reconnaissance parties are left to snipers in the branches or under the roots of trees, or to the small detachments which are occasionally found in front of the main position. Nothing is done to give away the position of an automatic weapon. Concealment is often so good it is difficult to say whether a hill top is occupied by the enemy or not. You seldom see a Jap, and you seldom see movement."--British Report, Burma.

110. One defensive fault. "One fault of the Jap is that he plans his defenses with the expectation of stopping us cold. He distributes most of his main effort to the front. If we continue to probe at his front and show no intention of flanking his position, quite often he becomes lax in his flank protection. Then an aggressive attack on his flank will pay big dividends."--Lt, Biak.

111. Used high ground in Burma. "A feature of all Japanese defensive positions so far examined is that they go for high ground and have no qualms about occupying the crest of a hill, even if there is a pagoda on it. Automatic weapons are often located on the crest."--British Report, Burma. (NOTE: In Guadalcanal and Bougainville, the reverse slopes were defended and seldom if ever were weapons found on the crest.)

112. They really dig in. "When they're on the defensive they're forever digging in, like natural-born ground hogs."--Soldier, Southwest Pacific.

113. Outpost in tree. "Their outposts are at times in trees. I saw one hollow tree inside of which were two Japs and a light machine gun. They built a trap door on our side. Every once in a while they would open the door, poke out a machine gun and fire. We took care of this."--NCO, 7th Marines, Guadalcanal.

114. Reaction to artillery fire. "When we put heavy fire on the Japs, they crawled up close to our lines to keep from getting hit. Moreover, while they were up there, they put light mortar fire on us during our own barrage. When our barrage stopped, they slipped back. The Japs vary their tactics a good deal. They always try for surprise."--Soldier, Southwest Pacific.

115. Watch immediate counterattacks. "Another, but not invariable, feature of Japanese defensive tactics is the immediate counterattack. This seldom has been a big affair. The charge is preceded by a shower of grenade discharger ('knee mortar') shells and is made with automatic weapons--probably one or two light machine guns. This attack may be made from the rear of a small area, the forward trench of which has already been captured. It may also be made from a neighboring area, but this is less likely. Its strength lies solely in the speed with which it comes in. It is launched within five or ten minutes after the area has been penetrated."--British Report, Burma.

116. Mortar fire on lost positions. "Whenever the American troops captured an objective the Japs placed mortar fire on them. However, this usually came from 15 minutes to half an hour after the objective was seized."--Canadian Officers with 27th Inf Div, Saipan.

117. Look out for this trick. "On one occasion our men made for weapon pits dug in the open. These were covered by riflemen in trees and were death traps."--Australian Report, New Guinea.

118. Protection for machine guns. a. "Jap machine gun nests were well protected by riflemen in trees and on the ground."--Australian Report, New Guinea.

b. "A Japanese machine gun is usually covered by other weapons, including a sniper or two."--Lt S. C. Murray, New Guinea.

119. Stubbornness of defense unpredictable. "What the Japs would do was unpredictable. In one instance, a piece of commanding terrain was occupied by Japs in sufficient force to hold up a Marine regiment for 12 hours. It was assaulted three times without effect.

Then, for no apparent reason, it was abandoned during darkness. In other instances, terrain of no tactical significance was held doggedly to the last man."--Report, Guam.

## XI JAP OFFENSIVE METHODS.

120. Instructions to troops from captured Jap documents. a. Move to rear and flanks. "American troops are weak in hand-to-hand combat and unable to resist our assaults. Therefore we need not fear the Americans in any way. However, they prepare excellent fire plans. So we must, as far as possible, move around their flanks and rear.

b. American rear areas weak. "Intervals between enemy positions are long--70 to 100 yards--and there are many places, especially in the rear area, where defensive precautions are lacking.

c. Move silently. "Fire from the enemy's trenches is aimed in the direction of sound when targets cannot be recognized. Americans simply poke rifles out and fire blindly. For this reason, if we are silent, it is not difficult to encircle and infiltrate into American positions.

d. Use fog and rain. "Use fog and rain to catch the Americans off guard.

e. Unapproachable positions. "Make an assault suddenly from positions which the Americans believe unapproachable, such as cliffs, rivers, and jungles."--Report, Pacific.

121. Used rain in New Guinea. "Japanese patrols often used the noise of the rain to cover their movement."--Report, New Guinea.

122. Jap use of weapons. a. Mortars and grenade dischargers. (1) "Rounds from the Jap grenade discharger have a concussion effect, but there is little fragmentation. The Japs always use a lot of mortar fire before they move in."--Soldier, Southwest Pacific.

(2) "The Japs love mortars. They also use their grenade dischargers extensively. These are the weapons that were incorrectly called 'knee mortars' at first, because of the shape of the base plate. They're really used from logs, on the ground, or upright trees."--Soldier, Southwest Pacific.

b. Hand grenades. "On Biak the Japanese tied three grenades together with cord, about a foot apart. The Japs would pull the pins, strike the grenades against a solid surface (to arm them), whirl them around their heads, and then fling the contrivance. They burst with powerful fragmentation effect."--Pfc, Biak.

c. Bayonets. (1) "A captured Jap document gave these instructions: Sudden bayonet assaults, combined with covering fire, will always be successful."--Report, Pacific.

(2) "Japanese emphasize the bayonet in training but on Attu they usually gave a poor performance with it. Some soldiers believed they may have feared our larger size and greater physical strength."--Report, Attu.

123. Clear mines, attack that night. "In one case the Japs dispatched a suicide squad to detonate American land mines during the daytime and then launched a strong attack through the same area soon after nightfall."--Soldier, Solomon Islands.

124. Watch these Jap holidays. "Japs frequently choose their national holidays for major attacks. Some of these are: 1 January, beginning of a three-day Jap celebration dedicated to the memory of their ancestors; 11 February, Empire Day; 10 March and 27 May, respectively, Army and Navy day; 21 March and 23 September, celebrations in honor of imperial ancestors; 3 April and 3 November, anniversaries of the birth or death of famous Jap emperors; 29 April, birthday of Hirohito; 30 April, Memorial Day; and 23 November, a national thanksgiving."--Report, Pacific.

125. Crawl under own fire. "To locate our perimeter the Japs went from tree to tree during darkness making noise, calling names of people or crying out for medical help. They hoped to draw our fire and thus find out our positions. When they had located our perimeter, they fired their machine guns about waist high over our position. Then they sent in a group of men, crawling under their own fire. They crawled very slowly until they felt the edge of a foxhole. Then they would back away a bit and throw in hand grenades." --Sgt, New Guinea.

### XII JAP SIGNALS.

126. Prearranged signals. "The Japs used prearranged signals extensively. Examples include: Indicating targets to mortars and artillery by means of machine gun tracers, colored smoke, and parachute flares fired from mortars and grenade dischargers. In some divisions, all units down to platoons have flag signal sets."--Report, Pacific.

127. Animal sounds. "The Jap in Burma has used simulated cock-crowling and hyena-barking as a means of signalling at night."--Report, Burma.

128. By rifle fire. "Japanese who have infiltrated sometimes signal to each other with their rifles by a certain number of shots. We trap these Japs by constantly patrolling."--7th Marine Regt, Guadalcanal.

### XIII JAPANESE CAMOUFLAGE.

129. Use of natural cover. "On Makin, the Japs depended mainly on the natural cover of coconut trees and native vegetation for camouflage. These materials, used frequently with transplanted trees, were used to camouflage all installations. Some of the buildings were constructed with large breadfruit trees growing within them. The trees were not part of the structure. Often the roof was built around the trunk and the tree pruned in such a way that it could keep on growing."--Report, Makin

130. Cut palm fronds. "The Japanese on Makin also used cut palm fronds (branches) for camouflage. These were spread over movable stores or new installations. All oil drum storage dumps were concealed this way. They placed palm fronds over the roofs of large buildings, and put palm frond roofs on small buildings to conceal them from air observation and to make them resemble native structures."--Report, Makin.

131. Deceptive painting. "Deceptive painting, in tones of red and grey, was used on the roofs of some buildings on Makin to make them blend into the foliage. Strips of varying width were usually painted roughly parallel to the length of the building. In cases where this painting was used, no palm fronds were placed on the roofs. All of the heavy guns on the island were camouflage-painted with red, yellow, green and blue."--Report, Makin.

132. Vary with terrain. "The Japs have adapted their clothing and camouflage to the terrain on which they are fighting. Where jungle growth predominated they were dressed in green and stained their faces, hands, and even their weapons. In Malaya even some of the elephants the Japs used had been stained green."--Report, Pacific.

133. Not the obvious position. "The Japs sometimes pull surprises. Once here on Biak the Japs ignored the heavy jungle growth and coral formations and took concealed positions in the open, using dried coconut palm fronds for concealment. This ruse almost worked."--Squad Leader, Biak.



134. Fire lanes well hidden. "Japs in the Solomons were particularly good at cutting fire lanes and keeping them concealed. Low and narrow lanes, extending one to two feet above the ground, were usually cut in all directions when the Japs organized a position. Only low brush was cut and the fire lanes really amounted to a tunnel through the jungle growth. The lanes were hard to see unless troops were crawling. Several of our men were wounded in the lower legs and ankles."--Report, South Pacific.

135. Use of dummy positions. a. "A dummy antiaircraft gun was a coconut palm log painted gray, with one end hollowed out to represent the muzzle. From 100 yards away it appeared real. Dummy soldiers were found at another antiaircraft position. They consisted of tree limbs nailed together, with coconuts as heads and Jap uniforms for clothing. The dummy antiaircraft guns consisted of tree trunks or limbs tied together. A large limb represented the receiver and a smaller one represented the barrel. It is doubtful if these positions would have deceived ground troops at 200 yards or less."--Report, Makin.

b. "A Japanese document says: 'Experiments on Munda proved that dummy positions and dummy guns were effective in drawing hostile artillery and bombing attacks. Always try to build dummy gun positions some distance away from our real positions'."--Report, Pacific.

c. "Five dummy guns were found on one island. Three were designed to resemble coast-defense guns and were placed so that they 'guarded' the best stretch of landing beach. The barrels were coconut logs with burlap wrapped around the 'muzzle'. Three of the guns were in coral stone revetments while the other two were in coconut log revetments projecting from one to three and one-half feet above the ground."--Report, Pacific.

136. Keen eyesight pays. "I would like to tell you that a man's keenness of eye may determine whether or not he will live. Ten men in my platoon were killed because they walked up on a Japanese 37mm gun. I went up later, after the gun had been put out by our mortars, to help bring back the dead. The Japanese gun was so well camouflaged that I got within four feet of it before I saw it."--Plat Sgt R. A. Zullo, 5th Marines Guadalcanal.

137. Hiding radio installations. "One feature of Japanese radio installations is their camouflage and concealment. Large antennas are arranged with ropes and pulleys to permit raising to the tops of trees for maximum efficiency or lowering for concealment or adjustment."--Report, Pacific.

#### XIV MISCELLANEOUS.

138. Crossing rivers by raft bridges. "Here's how the Japs move large troop units across rivers by rafts: Prior to the crossing, log rafts are built and scattered along the river bank, overhanging trees and camouflage concealing them from reconnaissance. When it is time for the crossing, the rafts are assembled under cover of darkness. They are then lashed together and the downstream end secured to the shore held by the Jap forces. The upstream end of the line of rafts is then released and the current swings it to the opposite shore. After troops and transport have crossed during the night, the rafts are pulled upstream and concealed near their original position before daylight."--Report, Pacific.

139. Use of armored shields. "A number of Jap portable armored shields were found on Kolombangara Island and New Georgia. These shields have all been about one-fourth inch thick and it was first thought that they were carried by machine gunners as defense armor. Recently, however, many have been found in the gun ports of pillboxes, indicating that

this is their major use. These shields will withstand hand grenades and ordinary .30 caliber ammunition. Armor piercing .30 caliber penetrates them without trouble."--Report, Pacific.

140. A withdrawal technique. "To cover withdrawal from organized positions, the Japs often fired a large number of mortar shells during the night or just before dawn. They also left the barrels of rifles and machine guns sticking out of emplacements to make it appear the latter were still occupied."--Report, New Guinea.

141. Use of sound cover. "The Japs took advantage of all sounds that might be used to cover their position while firing. Our officers and men commented widely on their ability to time rifle and machine gun fire so the report would be drowned out by the roar of plane motors, the report of our artillery, or the firing during strafings."-- Col S. L. A. Marshall, Making.

142. Burial of abandoned equipment. "In Malaya Allied troops once occupied positions previously held by the Japs. Curiosity prompted them to open one of about 20 graves in the area. It contained nothing but weapons and ammunition. All of the graves were then opened. Only one contained a body. It is believed that the Japs had been unable to remove the equipment when they abandoned the position and hoped to retake the area and recover the equipment."--Report, Malaya.

## Chapter Three

### DEFENSE AGAINST THE JAPANESE

#### I TACTICAL ORGANIZATION.

143. All around security for squads. "Even squads established all around security during darkness. On the first night on Bougainville, the battalion commander and the executive officer had to help attack with knives a Japanese patrol which had worked its way into the battalion command post and killed one man and wounded another before being discovered."--3d Marine Regt, Bougainville.

144. Platoon perimeters. "Initially units formed perimeter defenses by company or battalion. Later, especially along ridges and hilltops, platoon perimeters proved satisfactory. Larger units organized several areas in depth to protect against encirclement. Approaches to a position, such as trails and firm ground, were made the responsibility of a single unit. In addition to the men on the outer perimeter, units the size of a company organized a support line, while units the size of a battalion and larger provided a support and a reserve line."--Col A. R. MacKechnie, New Guinea.

145. Perimeters for rear area units. "For a large headquarters unit a complete perimeter defense was set up with the perimeter divided into three platoon sectors with seven two-man foxholes in each sector. Six of these were outposts and the seventh was a sector control post."--Observer, Southwest Pacific.

146. Static defense around an installation. a. "In a static perimeter defense of an air and naval base, density of troops and fire power has to be high because in jungle terrain there are no fields of fire except those prepared by the troops themselves with much labor. To afford reasonable security against infiltration of demolition squads, which could create havoc among airplanes and ammunition and other supply dumps, the perimeter had to be practically a vermin-proof fence."--Lt Gen Harmon, Bougainville.

b. "Platoon leaders in the Bougainville perimeter directed the action of pillboxes rather than of squads. The three to five men in each pillbox worked as a unit under the command of the senior within the box."--XIV Corps, Bougainville.

#### II ORGANIZATION OF THE GROUND.

147. Overhead cover for foxholes. "We insisted on overhead cover for foxholes because of the Japanese mortar fire. You have to guard against the men building these foxholes up too high above the level of the ground."--Ex O, 7th Marines, Guadalcanal.

148. Use hardwood for construction. "The palmetto log looks sturdy for use in machine gun emplacements and dugouts but it is spongy and rots. I have seen them collapse on the gun and crew. Use hard wood."--Cpl J. S. Stankus, 5th Marines, Guadalcanal.

149. Platoon defense area for one night. a. "Dig three-man emplacements so they are mutually supporting and cover the area completely around the platoon.

b. "Booby-trap completely around the perimeter.

c. "Clear light brush or cut fire lanes outside the perimeter for 20 to 40 yards.

d. "Place sharp-pointed sticks in the ground 10 to 25 feet in front of the weapons pits, inclined in the direction of enemy approach. The sticks must not be so high as to interfere with the firing of weapons."--Inf Regt, Bougainville.

150. How the infantry did it in New Guinea. a. "Three-man pits 5 to 10 yards apart were found better than one-man foxholes. Foxholes and emplacements were connected by a crawl or deeper trench close behind. When there was time, log and dirt splinterproof roofs strong enough to resist mortar shells were built.

b. "The command group and the heavy weapons were dug in near the center of the position.

c. "A trip wire was placed around the outside of the perimeter but within hand grenade throwing distance. To this trip wire were tied empty food cans which rattled when anyone hit the wire. Lines of booby traps were also placed from 20 to 30 yards outside the circumference. When possible, trip wires were tied into interlaced vines. Barbed wire often was laced to trees close to the position. Double apron fence was used in single or double rows.

d. "Low brush was cleared outside the perimeter or several lanes cut into the jungle 20 to 40 yards from each pit."--Col A. R. MacKechnie, New Guinea.

151. A tip on sleeping. "Arrange for all men to sleep with their feet to the center and their heads to the perimeter. Then if an alarm is sounded there is less confusion. Men simply have to turn over on their stomachs and they know they are facing outward."--British Report, Burma.

152. Booby traps in depth. "When used as a part of a perimeter defense, booby traps should be laid in depth. Otherwise, if one member of a Jap patrol sets off a booby trap while approaching a position, the entire patrol will go through the gap."--Report, Biak.

153. Used ammunition cloverleaves. "A field artillery battalion took the metallic ends of cloverleaf ammunition bundles, bolted them together by the long center bolt and placed them at random over an area about ten yards in depth and about 15 to 20 yards in front of the gun. Approaching enemy tripped over these at night and gave warning of infiltration."--USAFTE Board, Admiralty Islands.

154. Improvised pillboxes in a static defense. "Our front line consisted of a series of pillboxes made of logs and dirt. We had 37mm guns, machine guns, BARs, rifles, carbines, and grenades distributed to provide maximum fields of fire and mutual support. This was backed up by mortars and artillery."--Lt Gen Harmon, Bougainville.

155. Holding high ground not enough in Burma. "The theory that if you hold the high ground you will win is not always true in jungle warfare because the density of the lower jungle terrain obstructs observation. You must combine holding the high ground with holding the dry-stream beds, gullies, and clefts in hills. Clefts in hills are natural lines of travel and are more easily traversed than low jungle terrain. When all the important parts of the terrain cannot be held because of a lack of men, it is necessary to use patrols."--British Report, Burma.

### III CONCEALMENT OF POSITIONS.

156. Maintain natural appearance. "Every precaution must be taken to keep the appearance of the jungle normal. When preparing fire lanes, only the low brush is cleared away."--Col A. R. MacKechnie, New Guinea.

157. Japs "go after" machine guns. "The Japanese always try to get machine guns out of action as early as possible. To do this they may deliberately expose small groups. Most of these Jap groups can be wiped out with mortars, rifles, carbines or grenades. That keeps the location of the machine guns concealed until the real attack is made and they can achieve mass slaughter. When repeated assaults are made, the Japanese would send men armed with knives and grenades forward to get the machine guns which had repelled the last assault.

Late one night the enemy did succeed in putting out of action most machine guns in one sector. This was blamed on excessive firing, premature firing, and failure to move to alternate positions often enough."--Observer, Admiralty Islands.

158. Grenades are best. "Use grenades freely when the enemy is seen or heard approaching. Hold the weapons fire for a definite target. Premature firing of weapons will give away your position."--Inf Regt, Bougainville.

159. Taking care of prowlers. "Remember in a perimeter defense in the Pacific only the outer perimeter fires--and then only in case of a serious attack. If something hits the trip wire outside the perimeter, men in the perimeter open up with hand grenades. Inside the perimeter, prowlers who sift through are taken care of with the knife and bayonet only."--Col A. R. MacKechnie, New Guinea.

160. Tracers and cigarettes taboo. "Firing of tracer ammunition at night was prohibited to prevent exposing location of weapons. Smoking at night, of course, was strictly prohibited."--XIV Corps, Bougainville.

161. Generators too noisy at night. "On the first night on the Admiralties, radios with motor and hand-driven generators were operated. Their noise attracted the bulk of infiltrating enemy. Thereafter, only battery radios were used."--Observer, Admiralty Islands.

162. Alternate positions after dark. a. "The Japs would watch our positions all day long and at night would try to capture the machine gun positions and turn the guns against us. This was stopped when the machine guns were set up in one place during the day and removed to a prepared position as soon as it became dark."--Cavalryman, Admiralty Islands.

b. "To guard against attacks by Jap patrols after dark, we would set up the machine guns at one place and then immediately after dark move them to another prepared location. We would leave riflemen in a position where they could ambush the Japs when they tried to hit that original machine gun."--Lt L. M. Standridge, 43d Inf Div, Southwest Pacific.

c. "Prepare individual alternate positions. When the Japs are close to you, don't remain at night in a position you have occupied during the daylight. One of our regiments had a listening post outside the line with two men in the foxhole. They failed to have alternate foxholes and the Japs sneaked in one night and bayoneted them both. The men would have been better off out in the open than they were in this single foxhole where the Japs had them spotted."--Maj Gen Robert L. Spraggins, Guadalcanal.

#### IV ORGANIZATION OF FIRES.

163. Sector of fire. "One unit used two-man foxholes completely around its area. Each man was taken to his post and to those on his right and left so he knew just what sector he could cover with his fire."--Observer, Southwest Pacific.

164. Promiscuous firing dangerous. "Unnecessary casualties have resulted from promiscuous firing, particularly at night. This was avoided or lessened in some cases by a general policy of halting offensive action early enough in the afternoon to permit thorough organizing of a perimeter defense before darkness. Uncontrolled fire at night may be reduced by;

a. "Having the men comb the brush and search the trees in the area to be occupied.

b. "Requiring each individual to become oriented and thoroughly familiar with the location of all friendly troops in his immediate vicinity.

c. "Using barbed wire, booby traps, anti-personnel mines and trip wires outside the perimeter.

d. "Thorough training in fire discipline."--Hq, Sixth Army

165. Use bayonets. "Have the men comb the brush and search the trees in the area in daylight so they know no Japs are there before dark. Then establish a perimeter defense with dependable noncommissioned officers only. Take ammunition away from the others and everybody will get more rest. If an enemy does slip through the perimeter he has to attack a slit trench at close quarters and the man alert in the trench can use his bayonet."  
--Bu CO, 165th Inf Regt, Makin.

166. Fire control. "Fire control must be exercised by all noncommissioned officers and platoon leaders, especially at night. Count the grenades at darkness and again at dawn. Issue only eight rounds of caliber .30 ammunition to men who are trigger happy."--Col Charles N. Hunter, Burma.

167. Don't give away defensive positions too early. "Fire discipline in a defensive situation must be emphasized. The Jap is a master at drawing fire without danger to himself. One Indian division has a rule that no one shoots by night or day unless there is no doubt the target is a Jap soldier and it is impossible to miss. They don't want the Jap to report where fire came from."--Report, Burma.

168. Rules for sentries. a. "A large headquarters unit, well to the rear of the front line, adopted set guard rules to reduce promiscuous firing and to improve local security. These rules were read to every individual and repeated inspections were made to make sure they were thoroughly understood.

b. "Rules for sentries in the foxholes on the perimeter included:

(1) "I will not fire at anything but an actually identified Jap. I will not keep a shell in the chamber of my weapon.

(2) "I will rely on the grenade, bayonet and knife to repel individual attack. I will never fire into the perimeter.

(3) "I will report to the sector control post anything suspicious that I can't identify."

c. "Rules for those inside the perimeter included:

(1) "No weapons will be loaded at night but they will be kept close at hand.

(2) "No firing will be done inside the command post area at night except on order of the command post defense commander. Bolos and knives will be used against infiltrating, enemy."--Observer, South Pacific.

169. Automatic weapons. a. Preparation necessary. "Fire lanes 20 to 40 yards long and one to two yards wide are cut for individual riflemen and for automatic weapons. Automatic weapons are also given a flanking lane. Mutually flanking machine gun fires are arranged between adjacent perimeters. All small arms fire should be grazing."--Col A. R. MacKechnie, New Guinea.

b. On main line of resistance at night. "In the early days on the Admiralty Islands machine guns emplaced in the rear of the main line of resistance were found to be useless and dangerous at night. Thereafter all automatic weapons were placed on the main line of resistance and sited for all-round fire."--Report, Admiralty Islands.

170. Mortars. "As many mortars as possible must be placed to reach any area in front of the main line of resistance to a depth of 300 yards. By doing so, enemy attacks frequently can be broken as they deploy."--Observer, Admiralty Islands.

171. Supporting fires. a. Always necessary. "Arrange for supporting artillery or mortar fires even in a defensive area for a platoon for one night."--Inf Regt, Bougainville.

b. Even antiaircraft artillery can be used. "Four 90mm antiaircraft guns were sited along the crest of a ridge on the perimeter and used in direct fire against Jap gun positions and small groups of Japs. Results were excellent. It is believed these guns destroyed five enemy 75mm guns."--Lt Gen Harmon, Bougainville.

## V SECURITY MEASURES.

172. Outposts. a. "Use outposts to cover the platoon as it organizes the position."--Inf Regt, Bougainville.

b. "Forward listening posts of two to four men pushed well out at night proved invaluable. Their mission was to remain hidden, watch and listen, and report."--Australian report, New Guinea.

c. "Observation and sniper posts are established in foxholes and trees. Normally, in daytime, observation is maintained by tree observers and a sentry in each squad."--Col A. R. MacKechnie, New Guinea.

173. Prohibition of movement at night. a. "At night, all men and officers used foxholes--and stayed in them."--Inf Regt, Bougainville.

b. "All movement not essential to the conduct of the defense was prohibited during darkness in the Admiralty Islands. Once an enlisted man violated this in a rear area. He was taken for an enemy and fired on by three men."--Observer, Admiralty Islands.

c. "Even in rear areas personnel were warned not to enter or leave the perimeter. There was a strict warning not to wander out into the grass to urinate."--Observer, Southwest Pacific.

d. "One night an officer sleeping in a jungle hammock had his throat cut. An officer in a foxhole a few feet away was on the alert but didn't see the Jap until the hammock moved violently. He and a soldier shot the Jap. The officer who was killed was a veteran of seven landings and felt sure his close-in security measures made it unnecessary for him to sleep below ground. His detachment and other personnel were completely around his hammock, with at least one man in each three-man foxhole always on the alert, but they were unable to protect the officer who unduly exposed himself."--Observer, Admiralty Islands.

174. Alertness at night. a. "At night the three men in every forward foxhole divide the night. In case of alert, sentries are increased."--Col A. R. MacKechnie, New Guinea.

b. "At night, from one-fourth to one-half of front line units were on the alert at all times."--XIV Corps, Solomon Islands.

175. Conduct of sentries and use of pass words. a. "The Jap has trouble pronouncing the letter 'l' so use pass words with several 'l's' in them."--British Report, Burma.

b. "The word 'halt' should never be used. It is unnecessary. The enemy knows what it means, and it sometimes gives him time to decide on a quick plan of action. Our sentries are too trusting at night. They must treat every man as an enemy until he has proved himself. Anyone not able to give the pass word at night must be shot. The pass word should be changed every night. Patrols going out for several days should be given the passwords for each day until their return."--British Report, Burma.

c. "Sentries at a large rear-area headquarters were given this special order: 'Any person attempting to enter this perimeter at night will be challenged. Upon receiving an answering password, I will have the person advance slowly to be recognized. If no answering password is returned, I will say 'Come out in the open with your hands up.' I will then call the sector control post and take whatever protection action is necessary.'"--Observer, Southwest Pacific. (NOTE: It should be noted that this procedure was used in a large headquarters well to the rear.)

176. Alertness during rain. a. "The Japs took advantage of the noise of the almost nightly rain to send patrols into our defensive areas."--Australian Report, New Guinea.

b. "A captured Jap document said: 'In the jungle, dawn and dusk are considered the best times to launch an attack, especially if it is raining. Under such conditions the hostile forces are under tents in trenches and therefore it is easier for us to approach undetected.'"--Report, Pacific.



177. Procedure to allow movement. "Every all-round defensive position must have a definite procedure to follow in case of alarm if utter confusion is to be avoided. One corps headquarters felt the need of working out a system whereby there could be movement inside the defense perimeter until actual Jap infiltration started. They worked out a two-alarm system. Movement was allowed inside the perimeter. When the first alarm was given, all personnel moved to their defensive positions. After the second alarm was given, all movement of friendly personnel within the perimeter ceased. Anything seen moving after this signal was a target."--Observer, Burma.

178. Vine handrails for movement. "Handrails of jungle vine, put up along all paths within small unit perimeters, enabled men to find their way at night and helped prevent noise and confusion."--Australian Report, New Guinea.

## VI CONDUCT OF DEFENSE.

179. Defend in place. a. Hold the position. "During our training we emphasized holding the battle position. This paid off on Bougainville. Infiltrating Japanese isolated pillboxes but failed to cause a withdrawal and the isolated pillboxes provided supporting fires for counterattacks."--XIV Corps, Bougainville.

b. Let others plug hole. "Our orders to Marines on the perimeter defenses are: 'You stay on your position and don't pull back. If they bust through, we will block up the hole --but you stay there'"--Col A. L. Sims, 7th Marines, Guadalcanal.

180. Box fires by artillery. "One night our 105s boxed our forward hill on three sides about 300 yards from our troops. They fired twice each hour at irregular intervals with additional concentrations on call. Our mortars also covered likely approaches. When the mad Jap rush came that night we gave them everything we had. The following morning we buried 99 Japs."--Regtl Comdr, New Georgia.

181. Effect of change in position. a. Enemy gets confused. "On one occasion our outposts were withdrawn to the main line of resistance just before dark after making frequent contacts. The enemy apparently assumed that he would find our main forces on or close to the old outpost line. He started a general attack just after dark, apparently directed against the former outpost line. By the time it reached the main line of resistance it was no longer coordinated."--Observer, Admiralty Islands.

b. 50 yards may fool him. "The Jap night attacks, of course, have limited objectives. Often withdrawing after dark as much as 50 yards will fool them and they won't know where you are."--Col Merritt A. Edson, 5th Marine Regt, Guadalcanal.

c. And don't forget a counterattack. "We found it good technique to move our defensive positions immediately after dark and on occasion hit the Jap with a counterattack during the period of confusion when he hit where we had been."--Report, New Guinea.

d. Safer for patrols. "The exact location of a patrol's night bivouac and defensive area must be selected before dark. Some patrols do not like to occupy the position until nightfall."--Lt. S. C. Murray, New Guinea. (NOTE: Some small groups have reported that they sometimes went into a bivouac defensive position before dark and then moved forward or backwards 100 to 150 yards early in the night.)

182. Illumination of forward areas. a. "Since the Jap attacks took place in darkness, our troops used all available means of illumination. These included the 60mm mortar parachute flares which proved effective; small light projectors; searchlights reflected against low-hanging clouds; illuminating flares previously installed and ignited by remote control; and piles of slow-burning powder."--Lt Gen Harmon, Bougainville.

b. "Leaders in charge of sector control posts which supervised six sets of foxholes in the defensive perimeters were instructed to fire rocket flares in front of the perimeter as they thought it necessary."--Observer, Southwest Pacific.

183. How the Japs attacked. a. On the Admiralty Islands. (1) "Many Japs would infiltrate our lines during the night. One morning we counted 149 enemy dead within our lines. One night a detachment of an artillery battalion killed 47 enemy in the battalion position. Enemy fortifications we had seized and had not yet destroyed were often occupied by infiltrating Japs. At daylight there had to be a mop up of Japs within the position.

(2) "One afternoon a patrol of 17 Japanese, mostly officers and led by a battalion commander, were discovered and killed after they had worked their way to within 75 yards of the task force command post. On another occasion, 50 enemy crossed the harbor entrance by wading and using inflated belts and attacked our position at the base of the peninsula.

(3) "In one night attack the Japs started feeling out our lines at 2020. At 2100 one plane came over and dropped eight bombs. Then, two yellow flares and a tracer were fired almost vertically just in front of one troop. Immediately the enemy launched strong attacks. The first assaults were stopped with no penetration. They were repeated throughout the night. One attack was an advance in column of about 20 enemy. They were singing 'Deep in the Heart of Texas'. (NOTE: Invasion of the Admiralty Islands was by a division long stationed in Texas.) This column was annihilated. Examination of their bodies showed no alcohol or narcotics.

(4) "There were numerous other examples of infiltration. Shortly before daylight, using knives and grenades, numerous enemy had worked themselves into one troop's position. The squadron commander organized an attack and drove them out. Then a Jap machine gun crew of at least three men worked up to a revetment overlooking a field artillery battery position and opened fire. The battery commander sent a group to get them and the cannoneers kept on firing. The Japs were destroyed in a few minutes. One lone Jap started sniping at a battery position from only 30 yards. He was killed before he did any damage."--Observer, Admiralty Islands.

b. On Bougainville: "For two weeks there were a series of Jap attacks and short penetrations, followed by American counterattacks restoring original positions. The Japanese attacks were all launched around 0300 to 0400 with several hours of darkness remaining. When the Jap attacked, he stormed through with fanatical determination, crawling over and under our wire and in some cases breaching it with bangalore torpedoes. Although some scattered forces penetrated 150 yards into our line the Japs never succeeded in reaching our regimental reserve positions."--Lt Gen Harmon, Bougainville.

c. Raids, then attacks. "The Jap usually attacked us between 0300 and 0500 hours. Prior to that time, they would make small nuisance raids which kept our men constantly awake."--Pfc, Los Negros.

d. Be prepared for steady pressure. "The Jap, when attacking, will keep banging his head against a stone wall, and seems to justify it to himself by calling it determination."--Marine Capt, New Britain.

184. Jap counterattacks. "In New Guinea, Japanese usually counterattacked when driven out of a position, and when forced to give up terrain protecting their rear or supply lines. These attacks were usually made at dusk or shortly after dark. Counterattacks were accompanied by wild firing, howls, screams and other noises. The purpose of such tactics was to frighten troops, draw rifle and machine gun fire to locate our positions, and to cover the main attack. The latter usually was made by stealth from another direction with the Japanese crawling as quietly as possible with fixed bayonets to our emplacements or foxholes. Sometimes the enemy tossed grenades at our positions before assaulting with the bayonet, and on other occasions they stormed the positions in waves, led by sword-brandishing officers. In a few instances, 30 to 40 Japanese made daylight bayonet attacks by simply rushing our positions. The number of attacks at night varied from one to nine. Intervals between attacks varied from 30 minutes to one hour."--Report, New Guinea.

185. Counterattacks. a. "Perimeter defense is fine but also prepare a counterattack plan. Set up an alarm system and a system of signals to indicate the direction you want all men to move for the counterattack."--Bn CO, 165th Inf Regt, Makin.

b. "The only way you can defend a place in the Burma jungles is to attack. This should feature infiltrations--not mass frontal attacks against strongly defended positions."  
--British Report, Burma.

#### VII COMMUNICATIONS IN DEFENSE.

186. Sound-powered telephones. "Each squad in a platoon defensive area should be on a sound-powered telephone circuit with the other squads and the command post."--Inf Regt, Bougainville.

187. Use open circuit. "In night defense, each platoon command post and company command post was connected by telephone on an open circuit so that any message was heard by all. Telephones were manned from dark to daylight so there was no ringing."--3d Marine Regt, Bougainville,

#### VIII PATROL OUTSIDE PERIMETER.

188. "we did considerable night patrolling beyond our perimeter defense area. The patrol would move out during the day to a rendezvous outside the perimeter and near the area in which it is intended to operate. It would not attempt to re-enter the perimeter until daylight. Basic weapon for these night patrols was the hand grenade."--New Zealand Report, Vella Lavella.

#### IX TRAFFIC INTO DEFENSE POSITIONS.

189. "One route into defensive positions should be clearly marked so that supply parties and visitors will stay on the trail and not blunder into the area from an unexpected direction. Telephone wire can be used for this purpose."--Regtl Comdr, New Guinea.

## Chapter Four

### P A T R O L L I N G

Asked what was responsible for the rapid advance of his infantry division across Guam, a major general replied:

"AGGRESSIVE PATROLS OF ALL KINDS."

"Patrols of all types--and all of them aggressive--not only made possible the speed and directness of the division's advance but also gave the men confidence that paid dividends in every phase of the operation " the General added.

"Patrols were co-ordinated by the division G-2 to make sure that all sectors were covered and that information needed for the operation of the division as a unit would be at hand. Regiments constantly patrolled at least 2000 yards to the front and long distance patrols were sent out over the entire island. The resulting complete knowledge of the Jap's whereabouts enabled the division to advance rapidly without too much worry about rear and flanks."

\* \* \* \*

Experience has emphasized the double importance of patrolling in the war against the Jap.

Reconnaissance patrols against the Japanese are of these two types:

- a. The short patrol with a specific mission, such as was common in fighting the German.
- b. The long patrol, which must be out several days, which sometimes lands on an enemy-held island in advance of an invasion, which usually requires special preparation and equipment, and which may require special personnel.

Combat patrols are, in the main, divided into these two types:

- a. The types of patrols normal against the German.
- b. Rear-area patrols--usually known as "Termite Patrols"-- made necessary by the Jap's constant use of infiltration tactics.

#### I PRELIMINARY PREPARATIONS.

190. Training, indoctrination and physical condition. a. "I remember how I used to 'cuss' when scouting and patrolling was scheduled. But despite the training and the fact that I have veterans with lots of combat experience in patrolling, we still have plenty to learn. The story of one of our patrols in Jap territory will give you some idea of the physical demands upon personnel. We were out four days and could move only about 1000 yards per day. We would start every morning at 0700, halt one hour for lunch and keep moving until 1700, when we would set up our perimeter defense and dig in. Actually we were moving ahead as rapidly as we could, but the jungle was so thick that we could make only a little more than half a mile in nine hours."--Lt B. Maeir, Bougainville.

b. "When we first landed on Guam, patrols were sent only short distances so as not to interfere with artillery, air and naval fire support and to accustom new troops gradually to operations against the Japs. In some organizations, volunteers were used; in others, qualified men were chosen. These first men proved that it could be done, and on their return from patrols became objects of admiration. Others began clamoring for the same work. All men went on at least one patrol. The success of these missions buoyed the men's confidence. Regiments were then ordered to patrol continuously to approximately 2000 yards."--77th Inf Div, Guam.

c. "If I were training my battalion again, I would have training in patience. I would have patrols wait for the enemy to expose themselves. The Japs move around too. They have to relieve themselves and get food. In this patience training I would sometimes require the men to stay still for hours at a time."--Lt Col, 164th Inf Regt, Guadalcanal.

d. "I practice walking quietly over rocks, twigs, grass, leaves, through vines, etc. I received instruction in scouting and patrolling at Quantico but I still practice around here in the bivouac area. Some of the other noncoms used to laugh at me, but they don't any more because I have been on more patrols than any man in the regiment and am still alive."--Plat Sgt C. C. Arndt, 5th Marines, Guadalcanal.

e. "Troops should be given as much actual experience as possible in scouting and patrolling against the enemy. In this theater the assault phase of each operation is usually short and is followed by a longer patrolling period for mopping up scattered enemy groups. The patrolling stage should be conducted, to the extent practicable, by troops who were not in the assault."--Hq, Sixth Army.

f. "If I had to train my regiment over again, I would emphasize even more small group and individual training. There must be training in difficult observation. I have noticed that not more than five percent of the men can really see while observing."--Col Merritt A. Edson, CO, 5th Marine Regt, Guadalcanal.

g. "Every man should be equipped with a compass and must know how to use it. The 'dumb-bells' who do not know how to use one have to be helped instead of being able to help themselves."--Sgt D. L. Golden, 164th Inf Regt, Guadalcanal.

191. Camouflage. a. "Paint rifles of all patrol members olive drab."--Report, Pacific.

b. "Shine from the smallest metal surface, such as a belt buckle or a watch, must be avoided. A luminous watch is a real danger."--Report, Pacific.

c. "A white skin is most conspicuous and the practice of some patrol members marching stripped to the waist is inviting trouble."--(This is also a good way to get malaria.)--Report, Pacific.

d. "A Jap suddenly appeared right in front of a patrol. He took two or three steps toward the patrol leader, turned around and walked off. Members of the patrol are sure that if their faces had not been 'painted' with iodine and green ink they would have been discovered."--AGF Observer, Southwest Pacific.

e. "Camouflage jungle suits were found to be the best uniform for patrols in jungle areas."--AGF Observer, Southwest Pacific.

## II TYPES OF PATROLS AND HOW THEY FUNCTION

192. Reconnaissance patrols. a. "For days, long range reconnaissance patrols worked their way along the sword grass slopes, dodging occasional Jap patrols, sleeping in caves, maintaining a lookout for activity, making contact with small Jap forces, and encouraging friendly Chamorros. The patrols obtained vital information which indicated that the Japs were withdrawing from the southern half of Guam. Since the patrols maintained contact with these withdrawing Japs, G-2 knew from day to day exactly where the enemy was."--77th Inf Div, Guam.

b. "Missions were given the reconnaissance troop beyond the limit of regimental reconnaissance, usually from 4000 yards to 95 miles out."--37th Inf Div, Bougainville.

193. Combat patrols. a. (1) "While the Division still was consolidating its beach-head, combat patrols from infantry regiments constantly combed in front of their positions. These patrols, which ranged in size from reinforced squads to reinforced companies, kept the Japs disorganized, destroyed their small caches of food, supplies and ammunition; and helped break up enemy attempts to reorganize for counterattacks.

(2) "After organized resistance had ended, there still remained the job of hunting down isolated groups of Japs. This was done by strong combat patrols which operated in the area north of a straggler line established across the center of the island in the division sector."--77th Inf Div, Guam.

(b) "Lines of communication through jungle were secured by periodic patrols where strong hostile activity was not expected. In danger spots, it was necessary to establish strong fixed guards in foxholes along the trail. Additional security was provided by patrols which combed the areas on the flanks of the lines of communication."--XIV Corps, Solomon Islands.

194. Security patrols. "Security patrolling was required throughout the entire division rear area. The dense jungle growth in the northern half of Guam confined most movement to roads and trails. As a result, some groups of Japs were by-passed during the advance, while others infiltrated. Even after the backbone of resistance had been broken, groups of well-armed Japs were found everywhere, and all of our troops-- whether they were artillerymen, ordnance mechanics, clerks, medics or truck drivers--found constant patrolling necessary to security."--77th Inf Div, Guam.

195. Sniper and ambush patrols. "Too many patrols are misnamed reconnaissance patrols. Many early patrol leaders failed to fire on Japs when they should have. Most of our patrols are now classed as combat, sniper, or ambush patrols."--Regtl Comdr, Bougainville.

### III ORGANIZATION AND OPERATION.

196. Patrol on organized basis. "Routine patrolling is at best ineffectual and at worst results in being ambushed by the enemy. All patrolling should be organized, probably on a battalion basis, and coordinated at least by regiment. A patrol map for every 24 hours should be prepared in advance. Habit must not play any part."--British Report, Burma.

197. Composition. a. "Combat patrols in this area are usually a strong platoon or two weak ones. Mortars are usually carried on these patrols."--Observer, Burma.

b. "Patrols often were accompanied by engineer parties, artillery forward observers, and native guides whose reliability had been verified. Accompanying engineers were able to reconnoiter roads and bridges ahead of front-line troops. The engineer who went along with one of the Reconnaissance Troop's long-distance patrols selected a route along which the division later built a supply road. Artillery observers accompanied patrols and adjusted supporting fires. Most of the native guides knew about where the Japs were and their familiarity with the terrain saved the patrols much time."--77th Inf Div, Guam.

c. "The regiment which was to spearhead the attack across the island sent a noncommissioned officer with a reconnaissance troop patrol which crossed the island along the route the Division was to follow. This soldier acted as regimental guide when the advance started."--77th Inf Div, Guam.

198. Formation. a. "Patrols of a platoon or less usually were divided into a point, a main body and a rear point. The first consisted of a leader and one man. All stressed the importance of having the two members move along the edge of the jungle on opposite sides of the trail, directly abreast, and observe to the front on the opposite sides of the trail, rather than on their own side. Numerous cases were reported in which one member of the point saw an enemy about to shoot at the other member and shot the Jap first. The main body followed at about the limit of visibility (usually five to 25 yards) in column at about five yards distance. The rear point consisted of two men and followed the main body, almost at the limit of visibility, by bounds between bends and crests."--AGF Observer, Southwest Pacific.

b. "An intelligence patrol on a four-day mission consisted of one officer, 20 men and five native bearers. Normally a 'tommy' gunner and petrol leader were in front. If the area was very dense two 'tommy' gunners were in the front, one on each side of the trail. The distances between men and squads varied from five to eight yards. Visual contact was maintained. The native carriers were placed either between the two squads or behind the rear squad with a 'tommy' gunner and a second in command behind them."--Lt S. C. Murray, New Guinea.

c. "Basis of small patrols was generally the four-man fire team of three riflemen and one automatic rifleman in either a wedge or box formation. A larger patrol would form a wedge or a box of wedges of four men each with the leader of each team in the center."--3d Marine Regt, Bougainville.

d. "On combat patrols, keep one squad back as reserve and to cover the forward elements if they are forced to withdraw."--Inf Regt, Bougainville.

e. "Certain men in each patrol should be designated to watch for snipers."--Inf Regt, Bougainville.

f. "For patrols, the single column was found most practicable in dense jungle terrain."--37th Inf Div, Bougainville.

g. "A large patrol should be broken down so as to have one noncommissioned officer or acting noncommissioned officer in charge of not more than four or five men. Otherwise it is impossible to account for every man at a moment's notice."--Lt, Bougainville.

199. Patrol weapons. a. "On a jungle patrol include a high percentage of automatic weapons and concentrate a large proportion of them well forward. The point should be heavily armed."--First Marine Amphibious Corps, Bougainville.

b. "A 21-man intelligence patrol carried five Thompson submachine guns and 16 carbines. The carbine was preferred to the M-1 rifle because it is easier to carry through the jungle."--Lt S. C. Murray, New Guinea.

c. "The BAR was found to be invaluable in the attack because of its mobility and fire power. Patrols were always reinforced with BAR teams."--XIV Corps, Solomon Islands.

d. "The point and advance party on patrols always preferred automatic shoulder weapons. Heavy weapons were carried only when operating against known hostile positions."--37th Inf Div, Bougainville.

e. "An amphibious patrol of six men to an enemy-held island carried carbines and jungle knives. The patrol planned to accomplish its mission--discovering the enemy strength around an airfield--in one day, and for that reason carried only 45 rounds of ammunition per man."--AGF Observer, Southwest Pacific.

200. Equipment. a. "The first rule of any patrol is: Travel light!"--First Marine Amphibious Corps, Bougainville.

b. "After many jungle patrols, we can give these tips:

(1) "Carry three canteens, two on your belt, one on your back.

(2) "Leave packs concealed in a probable bivouac site in rear of your intended operations.

(3) "Take a dry pair of heavy wool socks, a jungle sweater and a pair of gloves. Keep these in rubberized food containers.



(4) "The medical jungle kit is indispensable. Have one for every two men."--Lt B. Maeir, Bougainville.

c. "Scouts or anyone leading a patrol should have sharp knives for slicing vines."--Lt B. Maeir, Bougainville.

d. "On a four-day jungle patrol, each man of a 21-man patrol carried an M-1917 haversack containing a poncho, one ration, head net, extra pair of socks and halazone and atabrine tablets. They carried the normal ammunition load plus hand grenades. Their uniform included shoes, leggings, twill jackets, trousers and caps."--Lt S. C. Murray, New Guinea.

e. "Patrols carry smoke pots or smoke grenades."--Americal Inf Div, Bougainville.

f. "Minimum equipment is a 'must' for patrols. Recommended uniform is twill or a one-piece camouflage jungle suit, fatigue hat or cap, and GI shoes. Following equipment is useful: Per individual: Two canteens, four pair of socks, one shelter half; Per squad: One Coleman stove, one jungle medical kit, one jungle knife with 18-inch blade."--37th Inf Div, Bougainville.

g. "A six-man patrol was to land from a flying boat on an enemy-held island and move inland to an air strip seeking enemy information. The mission was to take one day but might be extended. Clothing was twill cap, camouflage jungle suits and jungle boots. Equipment included: Per man: Australian compass, waterproof match box, two canteens, first-aid packet, iodine, atabrine, halazone tablets, insect repellent; one pair of field glasses for each two men and one SCR-536 radio for the party. After the mission was completed, the patrol recommended that a 1917 haversack or a bag, field canvas, be carried and left where the boat was hidden rather than carrying so much equipment suspended from the belt. A poncho should be carried for warmth at night. Carrying of field glasses was questionable. They added weight and on this mission were not used."--AGF Observer, Southwest Pacific.

h. "The helmet is too noisy for jungle work. It also interferes with hearing."--Lt, New Guinea.

201. Security. a. "The Japs like streams for their ambushes and patrols should approach streams carefully. Don't stop until both banks have been well scouted in both directions. When the point steps out to cross a stream, be sure its members have grenades in their hands ready to throw."--First Marine Amphibious Corps, Bougainville.

b. "An officer experienced in jungle patrolling says:

(1) "Patrols are most likely to give away their presence in an area by footprints.

(2) "Any noise such as talking, coughing, spitting, etc., has to be treated as the greatest of all dangers.

(3) "A man on patrol must move silently and make every use of natural cover."--Report, Pacific.

c. "Coughs and sneezes can be muffled by placing the cap over the mouth. This should be practiced in every day training so that it becomes a habit."--Lt Raymond H. Ross, Bougainville.

d. "It's tough to move like a cat through the jungle hour after hour. But it has to be done. One man making a little noise can cause a whole patrol to be wiped out. This has happened."--Lt B. Maeir, Bougainville.

e. "The following rules for patrol security have been recommended by a unit operating against the Japs in Burma:

(1) "No talking above a whisper.

(2) "Avoid trails or paths. When necessary the patrol can move 20 yards inside the jungle on either side of a trail and have only the leading man (a guide) to use the path. This prevents dust and footprints.

(3) "Conceal all refuse and footprints. This applies to ration wrappings, empty cigarette packs, cigarette butts, cellophane, human excreta, burned-out fires and so on. Don't let the enemy pick up a trail.

(4) "Fires should never be lighted unless authorized by the patrol leader. During the early morning, fires create a fog of smoke even among thick trees and are very obvious. Surprisingly enough fires are even more dangerous in the daytime than at night in the jungle, for fires in thick jungle at night cannot be seen for more than 70 yards."--British Report, Burma.

f. "Use a sharp knife to slice vines. I said slice, not hack. Noise of hacking may be fatal."--Lt B. Maeir, Bougainville.

g. "Patrol bivouac areas should be at least 300 yards from a trail or stream and preferably on high ground. Reconnoiter in all directions at least 400 yards. When departing try to leave no trace of having been there. Stumps and butt ends of saplings and plants which have been cut can be smeared with dirt to make them less conspicuous."--Lt Raymond H. Ross, Bougainville.

h. "Preferred locations for a patrol bivouac are astride a ridge or on a small hill. Groups of three men dig slit trenches on the perimeter. Each man must know the exact location of the groups on his flanks. One man in each group of three is on the alert at all times. Movement after dark is kept to a minimum and in all cases is prearranged. No lights or fires are permitted after nightfall."--Lt S. C. Murray, New Guinea.

i. "The British patrols usually moved by day, and frequently caught the Japs unaware. At night the patrols generally hid out, away from streams, watering places, and trails."--British Report, Burma.

j. "Avoid entering villages or being seen by natives. Use silent observation at close range. If it is impossible to avoid being seen, conceal the route and intentions of the patrol. For example, the patrol leader might tell villagers that his destination is a certain place. The patrol would actually start for the place named, but later would either return close to its starting point and watch the village for, say, 24 hours, or cut through the jungle to another route."--British Report, Burma.

k. "Every night patrols moved after dark to positions which could be easily defended."--77th Inf Div, Guam.

l. "For night bivouacs of patrols, a tight circular perimeter is used."--37th Inf Div, Bougainville.

m. "When I am scouting and come to an opening in the jungle and have to cross it, I usually run across quickly and quietly. Going slow here may cost a scout his life. Different types of terrain call for different methods."--Plat Sgt C. C. Arndt, 5th Marine Regt, Guadalcanal.

n. "Men should be taught to recognize shoeprints on a trail. On two occasions a suspicious looking shoeprint caused us to surprise the Japs in a situation where they might well have surprised us if we had not been alert."--Merrill's Marauders, Burma.

202. Action on contact. a. "Maneuver swiftly when you hit the Japs. Jap ambush weapons actually cover just the trail. The Japs are confused by an attacker who acts quickly."--First Marine Amphibious Corps, Bougainville.

b. "When fired upon, each man promptly takes cover and works off the trail to the right and left five to ten yards, thus setting up a small perimeter defense. The men must be told in advance which way each is to move. Usually the platoon sergeant directs the defense while the platoon leader, perhaps with two men, reconnoiters to determine if the resistance can be driven off or by-passed."--Lt S. C. Murray, New Guinea.

c. "Patrols must have a set play for deployment when the enemy is met."--37th Inf Div, Bougainville.

d. "When enemy contact was made by our four-man fire teams in our patrols (three rifle-men and one automatic rifleman in a wedge or box formation), the automatic rifleman would cover the target with fire, one rifleman would protect the automatic rifleman and the other two would move in to outflank the target. Success usually depended upon the speed with which everybody moved."--3d Marine Regt, Bougainville.

e. "Moves must be by bounds, with the moving portion of the patrol covered by fire from the stationary portion. Set plans for action when ambushed must be rehearsed until they are second nature."--Observer, Burma.

203. Control of patrols. a. "Seven patrols traveled routes totaling over 80 miles and spent 56 man-days in Jap-held Guam, without suffering a single casualty. Their general routes and objectives were carefully planned but the precise routes were left to the discretion of patrol leaders."--77th Inf Div, Guam.

b. "To prevent overlapping and to insure patrol coverage of the entire front and flanks, sectors and patrol routes were coordinated by G-2 and Regimental S-2's."--77th Inf Div, Guam.

c. "There was the problem of coordinating long-distance patrols with artillery, air, and naval gunfire. Patrols made periodic radio reports of their exact positions, so that each fire support mission could be checked with the location of the patrol. Patrols could not be allowed to interfere with defensive fires especially night fires in support of front-line troops. However, in no instance was it necessary to refuse a fire support request on account of patrols, and once a patrol itself was able to direct artillery fire, by radio, on a small concentration of Jap troops."--77th Inf Div, Guam.

d. "Combat patrols must have a previously selected route of withdrawal."--Inf Regt, Bougainville.

e. "Select successive reorganization points as the patrol progresses down the trail."--First Marine Amphibious Corps, Bougainville.

f. "Patrol leaders should have rendezvous points designated. Equip each man with some sort of a compass and be sure every man knows the azimuth back to the front lines. Non-commissioned officers should be taught to pass this on at every stop."--Lt B. Maier, Bougainville.

g. "Most men when passing a trail fork notice it and that is all. After passing several forks in the same type of jungle, they cannot tell which fork is which. If the patrol is to return by the same route, all members of the patrol should be trained to remember something particular about each fork."--Lt, Bougainville.

204. Patrol communication. a. "Patrols to objectives five to seven miles away carried an SCR-300 radio. A schedule of reporting and a simple number code for locations were prearranged. Patrol leaders could send messages at any time but were required to make reports every three hours within a prescribed 10 minute period."--77th Inf Div, Guam.

b. "On a four-day patrol, an SCR-610 was carried by native bearers."--Lt S. C. Murray, New Guinea.

c. "For patrols, the SCR-284 and the SCR-300 were found most reliable for long and short ranges respectively. Waterproof all radios."--37th Inf Div, Bougainville.

d. "Close liaison between patrols and supporting aviation cannot be over-emphasized. Cub planes were used repeatedly for communication relays. Colored smoke grenades were useful from ground to air. Use of panels depended on density of overhead foliage."--37th Inf Div, Bougainville.

e. "When the patrol needs artillery it sets off a white smoke signal. It then disengages and sets off a red smoke signal to mark its own position. Fire is immediately brought down on the point located by the white signal."--Americal Inf Div, Bougainville.

205. Patrol supply. a. "Cub planes were used repeatedly to supply patrols both by parachute and free drop."--37th Inf Div, Bougainville.

b. "One patrol going onto an enemy-held island for a mission that was expected to last from 24 to 48 hours carried raisins and peanuts from the jungle ration in waterproof bags, meat from the K ration, and chocolate bars."--AGF Observer, Southwest Pacific.

c. "Each man of a 21-man patrol on a four-day jungle mission carried one ration. In addition five native bearers carried 32 rations plus rice and bully beef for themselves.

The 32 rations were 'C', but figured on a four-can basis instead of six. This was supplemented a little by native fruits."--Lt S. C. Murray, New Guinea.

d. "When carrying 'K' rations, remove the box and carry only the food. The box adds weight and bulk and is one more thing to conceal."--Lt Raymond H. Ross, Bougainville.

206. Patrol reports. "Remember that difficulties of jungle terrain cause many patrol leaders to feel that they have covered two or three times as much ground as they have. This must be considered in evaluating patrol reports."--XIV Corps, Solomon Islands.

207. Japanese anti-patrol measures. "Japanese anti-patrol measures in Burma included placing very fine trip wires across jungle tracks leading to his positions. These wires usually had tin can alarms attached but were sometimes booby-trapped. Another trick was to dig positions and leave them empty but well covered by fire, in the hope that our patrols would be careless while investigating."--Report, Burma.

#### IV LEAVE AN AMBUSH PARTY.

208. "I recommend always leaving an ambush group on a jungle trail half an hour behind the withdrawing party. A Jap group, attempting to attack one of our returning patrols, ran into our usual rear guard ambush and was completely destroyed."--British Report, Burma.

#### V TIP FOR PATROL LEADERS.

209. "Under the strain of jungle movements, choosing the bivouac area of a patrol for safety and comfort is important. Stopping early enough to take care of small personal comforts cannot be over-emphasized. In the jungle the leader who drives his men until they are exhausted and darkness overtakes them; who forces them to eat in the dark; who does not have time for security measures and who does not have a few words of encouragement for each individual invites frayed nerves, dulled senses and a lack of initiative which may spell disaster."--Lt, Bougainville.

## Chapter Five

### A M B U S H E S

"My message to troops in training for this type of warfare is to go back to the tactics of French and Indian days. Study the tactics of those times, fit in our modern weapons, and you have a solution."--Gen Vandergrift, Comdr of the Marines on Guadalcanal, now Commandant, U. S. Marine Corps.

#### I PRE-AMBUSH ACTIVITIES.

210. Selection of sites. a. "A detailed reconnaissance to pick the exact site should be made before the ambush patrol is sent out. Don't set an ambush in a location from which you may just see the enemy. Find a spot where evidence of recent use indicates that the Japs will undoubtedly come again. This will keep men from becoming restless and 'trigger-happy'."--Col Crump Garvin, Regtl Comdr, Bougainville.

b. "Take time to find an innocent appearing site, perhaps not too strong tactically. The Japs know a likely ambush site, and if they approach one that is too good they will be alert."--First Marine Amphibious Corps, Bougainville.

c. "Japs are great trail users. Troops found it profitable, especially at night, to lay ambushes along trails leading into our positions and to water points. Infiltrating Japs invariably stumbled headlong into these ambushes."--77th Inf Div, Guam.

d. "Invariably, when one of our patrols hit the Japs and withdrew, the Japs would pursue them. Based on this we set up a nice ambush. Patrols were sent out in pairs. One patrol would follow about a mile behind the other. When the first patrol hit the Japs, the second would get off the trail and set up an ambush. The first patrol would withdraw through the rear one and almost invariably a pursuing Jap patrol would hit our ambush."--First Marine Amphibious Corps, Bougainville.

211. Rendezvous points. a. "There must be a detailed reconnaissance not only to pick out the ambush site but also the rendezvous point. Selection of the rendezvous point must be made carefully--not hastily, while on the way to the site of the ambush."--Regtl Comdr, Bougainville.

b. "When the fight takes place in an ambush, confusion usually results. Therefore a rendezvous is essential. It may take hours before all can assemble at this rendezvous."--British Report, Burma.

212. Route of withdrawal. "Be sure that you have more than one route of withdrawal, and that all routes have been reconnoitered."--First Marine Amphibious Corps, Bougainville.

#### II BRIEFING AMBUSH PARTY.

213. "Detailed briefing of all men is necessary if an ambush is to work--and this briefing must be even more complete if it is desired to take a Japanese prisoner. This is exemplified by the following account of an ambush set in New Guinea:

"The lieutenant who led the ambush used seven men and one native scout. A site was chosen where a much-used Japanese trail entered a defile. The native scout was sent ahead of the patrol to a point from which approaching Japs could be seen. At the site of the ambush, two men were hidden where the Japanese had to clamber across a log to enter the narrow part of the defile. They were to let the first Japanese pass and were to jump the second.

Just behind these two men was the lieutenant. When the first two men attacked the second Japanese, he was to spring on the leading Jap. It was hoped to take these two alive. The lieutenant and these two men had their carbines at hand but were not to use them. Close by these leading positions were two more men, also unarmed but with their weapons close at hand, who were to help either the lieutenant or the two leading men if necessary. A rifleman was to shoot the third Jap in the column. A BAR man was put in position to fire on the remainder. The last man, a rifleman, was posted to place his fire wherever it was needed.

"The ambush worked exactly as planned. The native was able to give the ambush party 30 minutes warning of the Japs' approach. The leading Jap, carrying his rifle at 'port arms', was about five yards ahead of the second man. The two soldiers in the leading positions jumped the second man and subdued him without difficulty. As they moved, the lieutenant sprang on the leading Jap, a big man who was downed only after being clubbed over the head with a pistol. The designated rifleman shot the third man, who was so close that, as he fell, his rifle struck one of the two men struggling with Jap No. 2. The BAR man got all three remaining Japs.

"The whole show was over in 30 seconds. Except for the lieutenant, who was bitten on the hand, there were no casualties.

"The patrol's withdrawal was covered by the BAR man and a man with a carbine. The native obliterated all tracks to keep the Japs from knowing the size of the patrol."--Report, New Guinea.

### III PREPARATIONS AT AMBUSH SITE.

214. Disposition of ambush party. a. "If the ambush party is on one side of the trail only, Japanese will plunge into the jungle on the other. If the party is on both sides, there is danger that the elements will fire on each other. Staggering the elements on both sides is a solution. Terrain usually dictates the answer."--British Report, Burma.

b. "When an ambush is on a hillside, there is a question as to whether the Japanese should be trapped on higher or lower ground than that used by the ambush party, or whether the ambush party should use both high and low ground so as to sandwich the Japanese. High ground puts the ambush party in an advantageous position, but the enemy will disappear more rapidly when he flees downhill. Dispersed snipers may handle the situation when the enemy flees downhill."--British Report, Burma.

c. "An ambush must have a reserve to take advantage of favorable opportunities and to deal with the unexpected. Often a bold use of the reserve when the main party is withdrawing to its rendezvous catches the Japs off balance. If the ambush is successful, the reserve may move in the direction from which the Japs advanced and destroy the mortar which always comes into action and which usually is not far to the rear."--British Report, Burma.

d. "The command to open fire must be given only by the commander of the ambush party. Therefore, his position usually should be in a place where he can see how many rats have entered the trap."--British Report, Burma.

215. Use of weapons. a. "Emplace automatic weapons to cover the trail with secondary fields of fire on lines the Japs will take when they deploy. Automatic weapons should also cover the probable line of Jap withdrawal."--First Marine Amphibious Corps, Bougainville.

b. "Use explosives such as TNT and bangalores. Conceal them in undergrowth next to the trail. Fire them with the ten-cap hand exploder."--First Marine Amphibious Corps, Bougainville.

216. Baiting the trap. "Japanese curiosity sometimes leads them to examine 'bait'. In one ambush a Japanese helmet was left in the middle of the trail. The Japanese col-

lected around this helmet, examining it and asking questions. This gave us a concentrated target at short range."--British Report, Burma.

217. Security. a. "Leaving footprints while preparing an ambush may turn it into a costly failure. Where impossible to hide them, one trick that has been used is to have the minimum number of soldiers move about and have them barefooted. Then if the footprints are discovered the Japs think natives made them."--British Report, Burma.

b. "Wipe out footprints made in fixing the ambush. The technique can be picked up from natives."--First Marine Amphibious Corps, Bougainville.

c. "Study the approach from the enemy side and pick out trees which seem likely to be used by Jap snipers. Work double-edged razor blades into the bark to discourage climbing."--First Marine Amphibious Corps, Bougainville.

#### IV AMBUSH OPERATION.

218. Waiting for the Jap. a. "Men on ambush are prone to let their imagination run away with them. They imagine the Jap is attempting to surround them, and that they are 'sticking their necks out'."--Regtl Comdr, Bougainville.

b. "Courage, stealth, and patience are needed by men on ambush. Two ambush patrols we sent out were placed in fine positions by a lieutenant who knew the country, Jap habits and the trails used by the enemy. After putting the groups in position he returned as ordered. The third day both groups returned, reporting large numbers of Japanese had caused them to withdraw to a hidden bivouac, where they stayed two days. Not a shot had been fired. The leaders said they didn't fire because they thought there were Japs all around them and that fire would disclose their presence and the Japs might attempt to cut them off. These weak leaders were immediately sent out again under an experienced patrol commander to demonstrate that men can remain close to the enemy and pick them off by stealth and patience if the group has nerve and confidence in itself."--Col Crump Garvin, Inf Regtl Comdr, Bougainville.

219. How the Jap reacts. a. "When ambushed, the Jap usually gets his leading elements off the trail and tries a flanking movement. He also brings his mortar into action (he usually has a mortar with him) without delay and attacks astride the trail within five minutes--in addition to the flanking movement."--British Report, Burma.

b. "When ambushed, Japanese soldiers sometimes fall and feign death."--Report, Southwest Pacific.

220. Don't pull out too quickly. "Any plan for ambush must provide for remaining in at least temporary possession of the battlefield. Otherwise the Japs will be able to kill our wounded, collect their own, and prevent us from getting identifications."--British Report, Burma.

#### V JAPANESE AMBUSHES.

221. A typical Jap ambush in Burma. a. The trap. "A British company, with an advance guard, was pursuing a Jap force along a trail. At one point the trail ran along an old stream bed that formed a clearing about 150 yards long and 20 yards wide.

"The advance guard examined the clearing for signs of an ambush, saw none and notified the main body. What the advance guard failed to discover was that the Japs had built a well-camouflaged platform in a tree at each end of the clearing and placed two machine guns on each platform. The advance guard also failed to reconnoiter far enough down several minor game trails that ran into the clearing. When the advance guard passed on, Japs concealed along these small trails moved up and hid in positions overlooking the clearing.

"When the main body got completely in the clearing, the Jap machine guns at each end opened fire. The British troops headed for cover of the jungle but were met by the Japs armed with knives. Casualties were about 40 percent of the British company; most of the Japanese escaped.

b. British comment. "If security troops are really alert, they can prevent ambush. There usually will be some warning sign. It may be only a footprint or the distant crackle of a twig. There are two definite lessons from this ambush:

(1) "Clearings have always been dangerous places for inhabitants of a jungle. Remember that a hunter often sits silent and concealed overlooking a clearing, hoping that a tiger or a panther will cross it.

(2) "A hunter often perches in a tree because an animal is unlikely to look upward. As a soldier, look upward. Don't forget those Jap machine gun platforms in a tree. It is a frequent Jap trick."--British Report, Burma.

222. Two Saipan ambushes and a remedy. a. Single set of tracks. "The Japs would make a single set of cloven-sandal tracks in soft mud. Americans would follow the trail expecting to come upon one Jap. Instead our men would walk into heavy gunfire from an ambush.

b. Fake fires. "The Japanese would start small cooking fires in a little valley or near some caves. Attracted by the smoke, our troops would proceed, expecting to surprise the Japs preparing a meal. Instead these patrols would be ambushed by the Japs waiting along the trail.

c. The remedy. "When news of these tricks got around, the Americans, upon discovering smoke or footprints, would send out large alert combat patrols and clean out the Japs."--Officer, Saipan.

223. Don't use same route. "One of our patrols took a route a previous patrol had used and was ambushed. The Japs are cagey. They will follow a returning patrol sometimes for long distances and then set an ambush in case it comes out again."--Merrill's Marauders, Burma.

224. Moving telephone wire. "Once the Japs tried to ambush a patrol by moving the sound-powered telephone wire we had strung out behind us. They hoped we would follow it into their position in a thicket on our return, but we could tell from the change of direction that something was wrong. It was the Japs who got surprised."--Rifleman, Biak.

225. Remember this Jap bait. "The Japs scattered garments and equipment on a trail to give the impression they had fled in disorder. Then a little farther down the trail they set up an ambush."--Report, New Guinea.



## Chapter Six

### J A P A N E S E F O R T I F I C A T I O N S

#### I TYPES OF BUNKERS AND STRONGPOINTS.

226. Elaborate strongpoints. a. "Jap bunkers on Cape Torokina were built of coconut and ironwood logs, 18 to 24 inches in diameter, fastened with staples. The log frame, about 14 feet square and with an interior height of seven feet, was covered with a dome of sand. The roof had three to five feet of sand even at the eaves. The interiors of some were lined with sandbags."--Marine Corps, Cape Torokina.

b. "The Jap pillboxes on Munda were massive--three or four layers of logs and often banked with coral rock piled into domes six to eight feet high. In most cases the occupants lived in them. Some pillboxes were 10 feet deep. They were built in two sections, one a firing platform and the other a deep pit for protection."--Report, Munda.

c. "The entrance to some of the shelters began at the bottom of the trench and extended straight down 10 feet. The Japs used a ladder to get in and out. At the bottom of this 'well' (entrance), a short tunnel led to an underground room, which was six feet wide, eight feet long, and three feet high. The ceiling, walls, and floor were lined with split bamboo. The shelters sometimes were dug under a clump of big bamboo trees."--Report, Pacific.

d. "Sometimes holes which, at a distance, appeared to be foxholes turned out to be entrances to large dugouts with living quarters, caches for supplies, or tunnels to observation posts or machine gun positions."--Report, Attu.

e. "A captured Jap antitank gun position was dug into a hill just below the crest. The gun pit was roofed with bamboo and earth, about two feet thick. Two shelters were tunneled into the hill."--Report, Burma.

f. "On the Marshalls, the Japs made much use of concrete heavily reinforced with steel. Concrete structures were used chiefly for blockhouses, emplacement of heavy guns, storage, ammunition dumps, power plants and protection of radio equipment. Kwajalein Island was covered with a series of cisterns, circular concrete structures about seven feet tall, reinforced with steel. These cisterns were evidently located so they could be used as pillboxes."--Lt Gen, Marshall Islands.

g. "The Japanese in New Guinea constructed fieldworks of the blockhouse type under grass huts, which are on stilts with the floor a few feet from the ground. Logs and soil were placed on the floor of the huts to provide overhead cover. A trench was then dug around the hut just inside the supporting stilts, and walls were built up with logs and covered with sod to within about nine inches of the floor of the hut. In this a firing slit for all-round fire was provided. This fortification proved adaptable to the defenses of inhabited areas, and at a distance it was difficult to distinguish the prepared blockhouse from other huts."--British Report, New Guinea.

h. "On Makin we came across a series of semi-underground bombproof shelters. These, like the Jap machine gun emplacements, were well constructed. They were about 50 feet long and made of sturdy logs, 12 to 15 inches in diameter. These logs were covered with sandbags and then with plenty of loose sand. The Japs lived through a terrific bombardment in them and were still fit to fight."--Lt Col, Makin.

i. "Japanese pillboxes were numerous on Leyte. Most common were deep dugouts, walled and topped with two or three thicknesses of palm logs covered with from two to six feet of earth. There were also pillboxes of concrete reinforced with steel. Their size usually was 12 by 18 feet."--Observer, Leyte.

j. "Japanese defensive installations at Buna featured excavations four to six feet in depth. These were covered with palm logs at least 12 inches in diameter and then with

earth. The sides were usually reinforced with boards, sandbags or logs. Fire lanes had been prepared in surrounding jungle."--Report, Buna.

k. "Six-sided steel pillboxes, roughly pyramidal, were used by the Japs on Betio. These apparently are prefabricated and used as the framework of a complete pillbox. The steel walls are double, so sand or other material can be packed between them. In some cases they were covered with concrete and coconut logs."--Report, Betio.

227. Special features of strong points. a. "A grenade well has been found in Jap shelters and emplacements. This well is a narrow, fairly deep pit dug in the center of the floor. When a grenade is thrown in, it rolls or is kicked into this well. If the grenade goes into this well before exploding, it is far less likely to injure the occupants."--Report, Pacific.

b. "One device in Jap emplacements which protects the occupants against rifle fire, as well as against hand grenades, is a protective wall just inside the structure, facing the entrance."--Report, Pacific.

c. "Often a small ditch is dug in front of the firing ports. Earth and debris dislodged by exploding shells fall into the ditch instead of obstructing the ports."--Report, Pacific.

d. "On Makin, after pole charges had collapsed several dugouts, we found why grenades were not too effective against some of them. Several had movable steel plates about three-eighths of an inch thick that could be pulled across the dugout entrance."--Col S. L. A. Marshall, Makin.

228. Use of wire. "Although not much wire has been encountered around Jap fortifications in Burma, air photographs show they are building both double and single fences, with and without aprons. The wire may be in the rear as well as in front of the enemy positions. Loose wire is sometimes put down in bushes in front of a position."--British Report, Burma.

229. Simpler strong points. a. "In some trenches holes are dug into the sides, big enough to hold a crouching man. Such a hole at the bottom of a five-foot trench affords protection from all types of fire. Many foxholes have similar offsets dug at the bottom. A few of these were large enough to permit a soldier to lie down and sleep--a sort of slit trench four feet underground."--Report, Pacific.

b. "The Japs used a spider-type underground defensive position. Trenches fanned out like spokes from the hub of a wheel. The tops of the trenches were covered with brush. In such a position the Japs were able to move quickly from one location to another."--Maj Gen, Makin and Saipan.

c. "Give the Jap time and he is a great digger. In one position in the Pacific, a squad occupied a position with about 50 yards frontage. In this position there had been constructed five coconut-log pillboxes designed to hold three men each. In addition 11 one-man foxholes had been built and all pillboxes and foxholes were connected by communication trenches."--Report, Pacific.

230. Tank traps. "The Japs had built two large tank traps on Makin. One tank trap was covered by concealed trenches on all four sides. The lateral trench system was especially strong, being revetted by 18-inch coconut palm logs bound together by a cable. The coconut palm does not shatter under shell fire but simply fuzzes up. Our bombardment had not broken down this revetment at any point. The tank ditch itself was about eight feet deep and 12 feet wide, and zigzagged. On both sides were belts of loosely strung wire about 10 yards wide. The ditch, filled with water, looked formidable, but one of our medium tanks tried it and negotiated it with ease. About 200 feet behind the tank trap was a line of entrenchments with concrete pillboxes at each end. The concrete was about 40 inches thick. The pillboxes had been skillfully camouflaged with natural growth and were hardly visible

from the front."--Col S. L. A. Marshall, Makin.

## II ORGANIZATION OF POSITIONS.

231. Fires and support. a. "Bunkers in Burma are generally found in mutually supporting groups of six or more. They can usually be supported from the rear as well as the sides. Bunkers frequently have four or more firing slits which permit a comparatively wide field of fire. These slits are eight to twelve inches high and up to four feet wide. Normally they are just above ground level. The entrance to the bunkers is generally at the rear and communication trenches lead to other bunkers or foxholes."--Report, Burma.
- b. "Jap bunkers on Cape Torokina were surrounded by foxholes connected by deep, narrow trenches, which eventually led to the rear door of the bunker. The foxholes covered not only the approaches to the particular bunker they surrounded but also approaches to neighboring bunkers. Machine guns in bunkers were sited to fire diagonally along the beach or across the front of avenues of approach; thus each bunker achieved cross fire with neighboring bunkers. A bunker usually contained two machine guns, with each gun laid on a fixed line. No two guns were laid on the same line. The firing ports were very close to the ground."--Marine Corps, Cape Torokina.
- c. "Timbered weapon pits and emplacements with overhead cover were grouped by the Japs in nests of three, four, or five. They were well sited and mutually supporting in depth."--Australian Report, New Guinea.
- d. "One Japanese company position in Burma consisted of three localities, each on a 'pimple', with a total front of about 1,000 yards. Each locality was surrounded by a four-strand barbed-wire fence about 20 yards forward of the foxholes. There were also three-bay light machine gun positions of earth and timber. Each dugout was at the end of a trench, and had an earth-and-timber cover about 12 inches thick."--Report, Burma.
- e. "Japanese heavy weapons in New Georgia were usually in two-decker pillboxes. Entering these pillboxes were trenches which concealed light machine guns protecting the pillboxes. All were mutually supporting and well concealed."--Lt Col, New Georgia.

232. Communication trenches. a. "The Japs make much use of communication trenches between mutually supporting pillboxes."--Report, Pacific.
- b. "On Attu, gun emplacements were connected with larger defensive installations and living quarters by camouflaged trenches covered with timber and dirt."--Report, Attu.
- c. "On Leyte, zig-zag trenches, about 20 inches wide and 30 inches deep ran generally up and down the beach as well as around clearings back in the jungle. They were rarely found occupied. It is believed that many of them were placed to be used for communication between mutually supporting pillboxes."--Observer, Leyte.
- d. "In the area of the strongest Jap fortifications on Makin there was an elaborate system of communications between strong points. Tunnels about four feet in diameter and about four and one half feet below ground connected many of the positions. One main tunnel zigzagged across the atoll for over 100 yards."--Col S. L. A. Marshall, Makin.

## III CAMOUFLAGE.

233. Use of turf in camouflage. "Because all vegetation grows so rapidly in the tropics, turf can be very valuable as camouflage. A Japanese document gave this instruction:
- a. "Turf is used mainly for camouflaging earthworks. It must be placed so it resembles natural grass. The roots are buried well into the earth, and the spaces between are filled with loose soil.
- b. "When the season and time permit, sow fast-growing grass or legumes on the earthworks.
- c. "If possible, use only the turf taken from the earth at the position. In any case,

seek grass of the same variety, density, shape and height.

d. "To avoid bending or breaking the stems and blades of grass in turf, do not pile the blocks of turf on top of each other."--Report, Pacific.

234. On Cape Torokina. "Small palms and clumps of Bermuda grass were set in the sand of bunkers. The natural underbrush which covered Cape Torokina had been left standing. At first, it seemed that the Japs had made a mistake in not removing this underbrush, which presumably would restrict the fields of fire. But as soon as one got in a bunker or foxhole, it could be seen that the Japanese had cleverly prepared fields of fire by stripping the bushes of all branches and foliage up to 8 or 10 inches above the ground. Thus the Japs were able to see the feet of attackers. Because bushes had been left virtually intact, supporting bunkers could not be seen from the beach; their presence was detected only when they fired on the attackers."--Marine Corps, Cape Torokina.

235. On Munda. "Jap camouflage of bunkers on Munda was excellent, with practically everything underground. Paths were well covered and marked by creeper vines used as guide lines. Dugouts often were placed close to the trunks in a strong network of trees. Only at short distances could the construction be seen."--Report, Munda.

236. In Burma. "The hill, on the crest of which the Japs had dug an antitank gun emplacement, was covered with bamboo and trees. A narrow loophole kept the flash of the gun from disclosing the position. No more vegetation than was necessary was removed during construction. This was replaced by cut bamboo stuck upright in the roof. This blended with vegetation since the position was occupied during the dry season when living bamboo was withered and yellow. Troops scrutinized the hill from a road 350 yards distant but were unable to determine the gun position."--British Report, Burma.

237. On Leyte. "Jap pillboxes were beautifully concealed. They had been constructed for some months and had well-rooted bamboo, palms and grass growing on top and all around them."--Observer, Leyte.

238. On Makin. "The Jap constructed concrete pillboxes under palm trees, then placed turf on top of the pillboxes and even transplanted small trees to have them on top and around the pillboxes. They built rifle pits and machine gun emplacements directly behind the beach under the fringe of coconut trees and left intact the low undergrowth in front of the position."--Report, Makin.

239. Rear may be weak in camouflage. "When reconnoitering Jap positions from the air you can see more from the rear of the position than you can from the front. Positions encountered in Burma were admirably camouflaged from the front but the entrances to all pillboxes could be plainly seen from the rear in the air."--Col Charles N. Hunter, Burma.

#### IV USE OF CONCEALED PITS:

240. Palm fronds cover holes. "As Sgt Horning crawled on, he saw a layer of palm fronds on the ground 20 yards to the front. Suddenly the palms moved and he knew there was a Jap there. Horning got up to the fronds and under the edges saw a black pit and something moving within. He rolled two grenades over the edge. The Jap took death sitting down. Pfc Robert Everett had crawled up by Horning and then crawled on around the hole. Horning didn't see Everett rise up and stand with his back to another patch of fronds. When his gaze rose, there was just time to yell: 'Watch it!' A Jap from the second hole was making a flying tackle at Everett's knees. Everett spun out of it and as he twisted he jammed the muzzle of his BAR against the Jap's head and pulled the trigger. The holes were everywhere. Each one had to be searched. The beach was so littered with broken foliage that it was like looking through a haystack for a few poisoned needles.

241. Every patch must be searched. "As far as Lt Blue could see up the beach there were palm frond patches. He passed the word: 'Go at every patch with fire first and then with your bayonet.' They moved on. There was no enemy fire. The men searched the first few holes diligently, ripping the fronds off with their bayonets. They found nothing. Lt Blue noticed that they had already begun to ease up, hitting a hole and then skipping a hole. The man in front of Blue stepped across a frond patch and kept moving. A Jap rifle lay across the hole. From underneath, a hand reached up for it. Blue saw the hand; saw also that five of his men were beyond it. He took the chance and fired. The bullet split the hand at the knuckles. The Jap had started to rise but Blue was so close that the blast knocked the Jap back again and his helmet flew off. Blue fired two slugs into the Jap's head. 'Start looking into every hole or we'll all be killed,' Blue shouted to his men."--"Island Victory" (Kwajalein), Lt Col S. L. A. Marshall.

R E D U C I N G   J A P A N E S E   F O R T I F I C A T I O N S

Much of the offensive in the war against the Japs has consisted of attacks against fortified positions, and as American troops draw nearer the Nip homeland an increase in this type of fighting may well be expected. A recent report from Iwo Jima stated: "Between the airport on Iwo Jima and the Jap village of Motoyama, a distance of slightly over two miles, engineers counted 1200 emplacements. Many of these emplacements were conical pillboxes sunk into hill crests and topped by heavy timber and sheets of concrete. Over these the Japs heaped stones and dirt and planted grass. The Marines often could not see the emplacements until they were directly in front of the gun slits."

I   ONE SET PLAY THAT HAS WORKED.

242. Reconnaissance. a. "Locate the bunker and determine whether it has one or more embrasures.

b. "Locate its supporting emplacements and machine guns. This will require patient reconnaissance. Take these supporting installations under fire.

243. The approach. a. "Work an antitank grenadier or a rocketeer (bazooka) under cover to within 50 yards of the bunker--or closer, if possible. The success of this man's approach depends chiefly on the quality of the covering fire he receives. This, in turn, is dependent upon the thoroughness with which weapons supporting the bunker have been searched out.

b. "Behind the grenadier about 15 to 20 yards move up a demolition team of two men, each armed with the following:

One 12-lb block TNT charge, double-primed, with a five or ten-second fuze.

Two smoke grenades.

One incendiary grenade.

Two fragmentation grenades.

c. "Upon reaching the firing position the grenadier fires several grenades into the bunker embrasure. At 50 yards an average man can get three out of four rounds into the bunker opening. Their effect is to daze the Japs by concussion.

244. The knockout blow. a. "Immediately after the grenadier makes his first hit, the demolition team begins to work forward rapidly, using smoke when the wind permits, to conceal their approach. When within range, they throw one or more incendiary grenades in front of the bunker embrasure. The intense light from the grenades prevents the occupants from seeing out.

b. "The charges are then quickly placed at critical points (corners, log joints, etc.) where tamping is easiest.

c. "As the charge is detonated the remainder of the squad moves in and mops up with grenades and bayonets.

245. Basic requirements. a. "Take plenty of time preparing the assault, searching out supporting weapons and distributing covering fires; but once the operation is begun, move with all possible speed.

b. "Against a coral or concrete bunker fire several grenades or rockets into a selected point to create a breach and pave the way for the final explosive.

246. Results. "This procedure, with the equipment listed in paragraph 243 b. above, has been effective against log, coral, or gasoline drum bunkers up to four feet thick and against reinforced concrete up to 18 inches thick."--First Marine Amphibious Corps, Southwest Pacific.

## II PREPARATION FOR THE ASSAULT.

247. Rehearsal of set plays. a. "Rehearse set plays against sample bunkers continually, until the men, through mutual confidence, have lost all fear of close supporting fires and of the explosion of nearby charges."--First Marine Amphibious Corps, Southwest Pacific.

b. "In training for Kwajalein, 16 men were chosen from each company and given training with flamethrowers and demolition charges under all possible conditions. This group was trained to act as a single team or as several small teams."--Maj L. E. Wellendorf, Kwajalein.

c. "There is, of course, danger of submachine gunners or grenadiers being injured by the fire of their own men, or by ricochets. Good marksmanship is important. The assault technique must be practiced over and over to develop close teamwork. Timing must be practiced to insure lifting of covering fires in time to avoid endangering the men closing in on the bunker."--3d Marine Regt, Bougainville.

248. Reconnaissance of position. a. (1) "Regardless of any arrangement of bunkers for mutual support, there is always a blind spot in the defense after supporting riflemen, in pits outside the bunker, are eliminated. The key to the attack of a bunker is to find this blind spot.

(2) "When a fire team (three or more men with one or more automatic weapons) discovers a bunker, all hands take cover. The leader then reconnoiters until he locates the blind spot--that is, a point near a fire bay or a door which is not subject to fire from the bunker under attack or from adjacent bunkers. The leader then tries to determine the location of enemy riflemen, whose fire may cover this blind spot."--3d Marine Regt, Bougainville.

b. "Reconnaissance must be immediate and aggressive the moment a bunker is discovered. The attack must start as quickly as possible. Jap defenders must not be given time to determine the location of the attackers. Daring execution of reconnaissance and attack was found less costly on Bougainville than slower and more cautious methods. Fifteen bunkers were destroyed on one occasion in two hours and 30 minutes. Our casualties were relatively light and 154 enemy were killed."--3d Marine Regt, Bougainville.

## III WEAPONS AGAINST PILLBOXES.

249. Bulldozers. a. "Pillboxes on the beach at Leyte were practically unharmed by our naval gunfire. I saw one earth and palm log pillbox undamaged and still occupied by seven or eight shouting, singing Japs after two hours of attack by a light tank, 75mm guns, M-10 tank destroyers, three-inch guns and a flamethrower. An engineer D-8 bulldozer finally buried it. They bury enemy pillboxes when all else fails."--Observer, Leyte.

b. "The bulldozer team is effective in reducing Jap fortifications. Bulldozer operators frequently raised the blade and overran Jap bunkers, enabling the infantry to move forward."--Report, Admiralty Islands.

250. Flamethrowers. a. "The infantry places great dependence on flamethrowers. Despite the destructive effect of the naval and air bombardment, many times on Kwajalein it was necessary for the doughboy to advance under the protection of the flamethrower, throw in phosphorus grenades and then breach the concrete structures with TNT."--Lt Gen R. C. Richardson, Marshall Islands.

b. "The 25th Division chemical officer and the Service Command at Guadalcanal have developed and recommend a mixture consisting of equal parts of gasoline and diesel oil gelatinized with 2½ pounds of Napalm per 10 gallons. This mix produces an intensely hot flame which will penetrate brush for ranges of 30-35 yards or more. The chemical officer, Americal Division, recommends a mixture of 15 gallons of regular gasoline, five gallons of diesel oil, and one can (5½ pounds) of Napalm. He reports that this has been used at ranges up to 40 yards."--Report, Southwest Pacific.

c. "An engineer combat battalion had the task of driving Japanese from well-established positions in caves and connecting tunnels. These caves were in a steep coral slope, 50 to 75 feet high, immediately in rear of the beach. Rifles, Thompson submachine guns, carbines, high explosives, bazookas, HE and WP M15 grenades, and flamethrowers were used. The flamethrower proved the most effective because the flame could follow the curves of the cave. The flamethrower was advanced to within effective range under heavy covering fire from rifles and machine guns. After the flamethrower went into action, supporting fire, still maintained, was shifted to enemy individuals as they appeared."--Report, Wake Island.

d. "On at least one occasion, indirect methods of firing the flamethrower were used. The flamethrower was operated from behind defilade and directed by an observer on the flank."--Report, Pacific.

251. Tank flamethrowers with auxiliary weapons. "Some American units on Saipan developed set drills. One for clearing small caves worked well. Fourteen men and one tank flamethrower were used. The men were divided into three groups of four each plus an observer group of two men. One group was made up of BAR men, one carried two bazookas and the third was used for tank protection. The observers had radio communication with the tank. The BAR group moved as close to the cave as practicable and covered the advance of the bazooka group which opened fire on the embrasure. Finally the tank, protected by its group, moved up and used its flame. The BAR group then moved into the cave and mopped up. Where tanks could not operate, portable flamethrowers, white phosphorus grenades and demolition charges were used instead."--Canadian Officers with 27th Inf Div, Saipan.

252. Bazookas. "Opinion as to the value of the bazooka against Jap pillboxes differed. Apparently, the difference depended upon whether units were attacking old or new bunkers. On old bunkers, well covered with vegetation, the attackers often could not see the firing slits until they were so close that a hand grenade could be easily thrown in. On the other hand slits of some of the new bunkers could be seen as far away as 25 yards. From that distance a good bazooka operator could place a rocket through a slit or right beside it. One unit which favored the bazooka knocked out 12 bunkers with it in one day."--AGF Board, Manus Island.

253. Grenades. a. "One weak point was noted in the Jap pillboxes at Buna. These dugouts always had an entrance at their rear and were vulnerable to attack with hand grenades from that direction."--Report, Buna.

b. "Rifle grenades were used with success against some enemy pillboxes."--43d Inf Div, Munda.

c. "The white phosphorus grenade was found particularly useful against pillboxes and caves. Its incendiary effect, as well as the choking effect of its smoke, made it effective where other grenades failed."--Canadian Officers with 27th Inf Div, Saipan.



d. "In some instances on Makin it was possible to make a dash for a shelter, jump to the roof, lean over the edge, and throw grenades into the entrance."--Col S. L. A. Marshall, Makin.

254. Demolitions. a. "The construction of Jap bombproof shelters on Kwajalein was such that they could be attacked successfully only with demolition charges. Flamethrowers couldn't get at them. Bazookas had no effect. Explosives in large and powerful doses were then tried. The 25-pound satchel charge worked very well; the engineer officers thought a 50-pound charge would have been still better.

b. "Our infantry wasted considerable explosives at Kwajalein before discovering that the Japs were catching the charges when they were heaved in and jerking the fuses loose. Thereafter, the fuses were wired on so that at least 10 seconds was required to strip them."--"Island Victory" (Kwajalein), Lt Col S. L. A. Marshall.

c. "On Makin each engineer squad carried the following equipment: One pole charge, with nine pounds TNT; a reserve supply of 40 pounds TNT (carried by the second man); 50 feet of bangalore torpedo (a four-man carry); two long and two short-handled shovels, and two axes. The squad leader carried the fuse lighters (in a waterproof box), non-electric caps, pliers and other electrical equipment."--Lt Col S. L. A. Marshall, Makin.

255. Tanks. a. "Light tanks have successfully fired 37mm high explosive through slits in pillboxes and bunkers. The medium tank, however, is preferred to the light as a support weapon where terrain permits its use."--Col Marion Carson, Southwest Pacific.

b. "Placing the fire of tank guns against the entrances of shelters and blockhouses was found to be unprofitable. It gave the Japs the choice of staying inside or charging directly into the cannon--not a difficult choice. Some time passed before the infantry company commander realized that if the fire was directed at the walls, the enemy would spill out of the entrances and could then be shot down."--"Island Victory" (Kwajalein), Lt Col S. L. A. Marshall.

c. "On the second day we adopted these tactics: The tanks moved right up with the infantry, under its control. When a strongpoint was encountered the tanks moved in close and blasted away with 75mms and machine guns. The infantry moved in with them, using grenades and rifles to ferret out Japs who were in foxholes. Following close on the heels of the infantry the engineers sealed up the entrances to the bombproof shelters using nine-pound TNT charges. We don't know how many Japs were buried alive, for it was suicide to enter the shelters. This process may have been a little slow, but it was steady and accomplished the task with a minimum loss of men."--Lt Col John F. McDonough, Makin.

#### IV MOPPING UP BUNKERS.

256. Japs hard to kill. a. "The blockhouse by the road was well battered when the tank ceased firing upon it. There were several gaping holes by the doorway--through which a dead Jap lay sprawled. One man tossed a couple of grenades inside and then the line passed on. Before the support got to it, Staff Sergeant Otis Laswell, Jr., saw a man from Company D shoot a second Jap as he stuck his head out the door. This made Laswell wonder if anyone had cleaned out the shelter and he went after a flamethrower. The flame was shot into all three entrances. The operator then climbed on top and shot the flame through a six-inch vent in the roof. 'There's no one in there now,' he said to Laswell and Laswell agreed. They started to walk away. Five Japs came out of the shelter with their hands up. Two had been wounded, but the other three hadn't been touched."--"Island Victory" (Kwajalein), Lt Col S. L. A. Marshall.

b. "On the first day, we blasted one of the bombproof shelters six times with a 75mm at a range of 20 feet, but made little visible impression. We then set off a nine-pound charge of TNT in the entrance. An hour later a mopping up crew had to enter and kill two Japs. Those fellows die hard."--Lt Col John F. McDonough, Makin.

c. "It would be impossible to overstate the tenacity with which the Japs clung to their prepared positions in Buna. There were many instances where dugouts were grenaded inside, covered with gasoline, burned and then sealed with dirt and sand, only later to yield Japs who came out fighting. One souvenir hunter, entering a dugout that had been sealed four days, was chased out by a Jap officer armed with a sword."--Report, Southwest Pacific.

257. Watch out for survivors. a. "To take care of survivors in the bunkers and keep the wounded Japs from firing on troops from the rear, the 1st Cavalry Division had flamethrowers and demolition squads follow immediately behind attacking troops. The flamethrowers would place fire into each bunker after which demolition men would blow it up. The flamethrower was a fast and effective mopping up weapon."--Lt Donald B. Henry, Admiralty Islands.

b. "When it was impossible to destroy a bunker immediately, a small guard was left to warn troops that Japanese might still be alive in the bunker. This saved many lives."--Maj Leonard E. Wellendorf, Kwajalein.

c. "Blockhouses should be reduced as you advance as the Japs stay in them until the first assault wave gets by and then either shoot men in the first wave in the back or snipe at your mopping-up waves."--Lt Col John F. McDonough, Makin.

258. Do not enter Jap pillboxes. "As soon as flamethrowers had finished a Jap bunker, two tanks and a bulldozer were brought forward. They crushed and filled in all bunkers, trenches and foxholes. No attempt was made to explore the interior of bunkers or count the enemy dead in them, because of danger from Jap survivors. All fortifications were demolished and covered to insure that there were no survivors and that no Japs infiltrated back into them."--ACF Board, Manus Island.

259. Don't linger at captured pillboxes. "Any assault party that stays too long at a captured Jap pillbox will draw fire even if they have cover from close-in Jap weapons originally sited to cover the pillbox. If the Japs have had time to roof foxholes and machine gun positions they have no qualms about bringing down upon them their own mortar and grenade discharger fire. A captured position must be regarded as an unhealthy place in which to remain."--British Report, Burma.

260. Move quickly to adjacent bunkers. "When one of several mutually supporting bunkers has been knocked out, it is generally found that adjacent bunkers are uncovered at several points, making possible a quick reduction of the entire position."--3d Marine Regt, Bougainville.

I N F A N T R Y   W E A P O N S   A G A I N S T   T H E   J A P A N E S E

I M O R T A R S.

261. In the jungle. a. "Mortar squads must have equipment and demolitions for topping trees and otherwise clearing fields of fire. However, reconnaissance will frequently locate small clearings from which one or more mortars may be fired, especially if the maximum number of increments is used.

b. "A quick way to test clearance is to fire a shell without removing the safety pin.

c. "The mortar observer must stay in the front line. Wire communication is necessary for firing both the 60mm and 81mm mortars.

d. "Frequently confusion was created by the simultaneous fire of artillery and mortars. This could usually be overcome by keeping artillery and mortar observers close together so they could decide between them who would shoot when.

e. "Except in hilly country and swamps, observers usually could gain little by climbing trees. Mortar observers occasionally needed tree climbers for locating targets and clearings in which to place the guns.

f. "Because jungle vegetation limits the effective radius of bursts, mortar concentrations can be placed very close to our own lines. Often 60mm mortars were adjusted to within 25 or 35 yards of our own troops."--3d Marine Regt, Bougainville.

g. "Adjusting 81mm mortar fire is difficult because of poor visibility--although smoke sometimes helps. Sensing is important, but difficult, because the sound of an exploding mortar shell travels poorly in the jungle. Sometimes it can scarcely be heard at 400 yards. Once adjusted, mortars can be used very close to our troops. I have seen our mortars fire at a target 30 yards in front of us firing at a range of 300 yards."--Lt, Bougainville.

262. Mortars on the march. a. "When moving toward the enemy, mortars are kept a designated distance from the point. At a halt they immediately go into firing position without orders. If they fire, the distance from the gun to the point is used as a limiting range. For initial direction, the approximate azimuth of the column is used."--Lt, Bougainville.

b. "When fighting along trails, always have your mortars within easy supporting distance of the lead scouts. Between 100 and 200 yards is about right."--Col Charles N. Hunter, Burma.

263. Fewer mortars, more ammunition. "The 81mm mortar was one of the most important weapons on Munda. Only two mortars were taken forward by each heavy weapons company. The balance of the personnel carried ammunition."--43d Div, Munda.

264. Use Jap ammunition. a. "Japanese mortar ammunition was found in large quantities and was fired by the American troops in their own 81mm mortar."--Canadian Os with 27th Inf Div, Saipan.

b. "Jap 81mm mortar ammunition was used extensively by the 3d Marine Division and proved very effective. Using our firing tables, the Jap rounds hit about 50 yards short."--Col H. D. Harris, USMC, Southwest Pacific.

265. Japs make good mortar targets. "The Japs still tend to bunch up and talk when partly defiladed, thus presenting fine targets for the 81mm mortar with super-quick fuze."--Marine Capt, New Britain.

266. Proper 60mm mortar targets. "The 60mm mortar was not effective against Jap pill-boxes, though it did help to demoralize occupants. We made much use of it, however, when the enemy was occupying shell craters."--43d Inf Div, Munda.

267. Advantage over artillery. "Our mortars can fire safely within 50 yards of our own lines if our men stay in their foxholes and keep their heads down. On several occasions when our artillery laid down a barrage, our men were pulled back several hundred yards for safety. Against Japs this is unsound because they will instantly follow up the withdrawal and we then shell empty real estate. We can't fire on the Japs in their new position because, again, they are too close to our lines. With mortars you need not pull your men back."--Lt Joseph W. Kiley, Makin.

268. In defense of perimeter. "During the assault some of the Japs reached the foxholes of the perimeter and hand-to-hand combat followed. However, 60mm mortar fire was placed so close to the perimeter that it disorganized the follow-up waves of the assault and the Japs could not regain coordination enough to sustain the attack. Enemy dead numbered 115; we had one killed and five wounded."--Report, Biak.

269. Firing with tube only. "Mortars without base plates and bipods are of great help as they can be fired at short range and while the enemy is pinned down. Without the base plates and bipods more ammunition can be carried. Carrying ammunition is quite a job in the jungle. Practice in using mortars in this manner should be given to all mortar men."--Lt, Bougainville.

## II USE OF 4.2 MORTARS ON BOUGAINVILLE.

270. Organization of positions. "In the Bougainville area we selected, prepared, and ranged in 26 positions for 4.2 mortars to cover the entire beachhead perimeter. During the Jap attack we had to use 16 of them. We emplaced the six mortars in each platoon to cover equal segments of a 600-mil sector, with stakes out for a similar sector on each flank. This permitted quick massing of mortar fires.

271. Smoke shells. "Once, when establishing a white phosphorous smoke screen on a hot afternoon the shells tumbled badly, even though they had been stored on end at the mortar position. After that when no natural shade was available, we kept white phosphorous under a double-decked roof.

272. Hints on operation. "Damage to our mortars was negligible. When it resulted it was chiefly from failure to follow instructions. Several tie-rods and hooks were broken when too many sand bags were used on the stand when attempting to stabilize the mortars on loose ground. Some forks were bent because of failure to provide substantial footing for base plates. When the base plate sinks from repeated firings it is better to pry it out and re-fill the hole rather than move to a new location. You then take advantage of the packing accomplished by previous firing.

273. Aiming stakes. "In the jungle tall aiming stakes usually are necessary. Make up a good supply and keep them with the guns."--Lt Col W. H. Shimonek, 4.2 Mortar Bn Comdr, Bougainville.

## III MACHINE GUNS.

274. Front lines. "There was no opportunity to use machine guns in distant support or to deliver fire by overhead or indirect fire methods. Direct support machine guns had to be right in the front lines."--3d Marine Regt, Bougainville.

275. Conflicting views on heavy machine guns on offense. a. "I recommend substituting the light machine gun for the heavy machine gun for offensive operations in the jungle. I am even considering substituting BARs for the light machine guns in the offense. The heavy machine guns, however, are very valuable in the defense."--Col, 5th Marine Regt.

b. "It pays to use the heavy machine guns when attacking in the jungle. There is a difference of opinion on this matter. It's hard work, yes, but don't overlook their value --morale and otherwise--and don't forget their high rate of fire."--Lt Col, 7th Marine Regt, Guadalcanal.

276. Heavy machine gun against snipers. "We supported jungle attacks with our heavy machine guns, raising their fire to tree-tops 50 to 100 yards to the front at the moment attacking troops passed through the front line. We maintained this fire until ricocheting bullets endangered our own men. The fire caused many casualties among Japs in trees overlooking our position."--3d Marine Regt, Bougainville.

#### IV GRENADERS.

277. Need for grenades. a. "Some of my men thought their hand grenades were too heavy and tossed them aside when no one was looking. Later they would have given six months pay for one hand grenade."--Plat Sgt H. R. Strong, 5th Marine Regt, Guadalcanal.

b. "We had to multiply by five our unit of fire in hand grenades."--Maj Buse, Marine Corps, Guadalcanal.

c. "Two ammunition pockets in the belt should be converted to grenade pockets. Each man should have two hand grenades."--Col, 5th Marine Regt, Guadalcanal.

278. Japs fear them. "The Japs have a deadly fear of our grenades because they are about twice the size of their own. Grenades will knock them out when nothing else will. Do not run down the offensive grenade. Take plenty. They will blow a Jap apart in a dugout when he could escape the fragments of fragmentation grenades."--Lt, Attu.

279. Rifle grenade effective. "The rifle grenade demoralizes the Jap. A Jap prisoner told me in English 'That caliber .30 cannon is terrible, sir'."--NCO, 7th Marine Regt, Guadalcanal.

280. Don't let Japs throw them back. "Don't forget to count, 'One Jap dead, two Japs dead' before throwing the grenade. We had a Marine killed because he forgot to count. A Jap picked up his hand grenade and threw it back."--7th Marine Regt, Guadalcanal.

281. Practice throwing in woods. "The hand grenade is a valuable weapon. Do you ever practice throwing it in wooded country?"--Maj, 5th Marines, Guadalcanal.

#### V BROWNING AUTOMATIC RIFLE.

282. "The BAR has high jungle mobility and fire power. Some of its uses are to reinforce the final protective fires at night, to establish trail blocks and to destroy snipers."--43d Inf Div, Munda.

#### VI THOMPSON SUBMACHINE GUN.

283. For specialized personnel. "In spite of its handicap of sounding like a Japanese .25 caliber light machine gun, the Thompson submachine gun was very satisfactory for specialized personnel such as linemen, forward observers, vehicle drivers and reconnaissance personnel. Its limited range made it especially useful for combat in rear areas."--43d Inf Div, Munda.



284. As a defensive weapon. "The Thompson submachine gun is very effective, because the Japs usually execute their attacks en masse."--7th Marine Regt, Guadalcanal.

#### VII 37MM GUN.

285. Weapon of opportunity. "The 37mm gun is admittedly a weapon of opportunity in the jungle. Once we disassembled a 37mm gun and carried it through heavy foliage. We assembled it under cover, moved it rapidly into the open and destroyed a Jap field piece and killed its crew. Once we used canister effectively against assault boats."--43d Inf Div, Munda.

286. Canister is devastating. "The 37mm canister proved to be a devastating type of ammunition."--1st Marine Div, Guadalcanal.

#### VIII FLAMETHROWER.

287. Infantry use of flamethrower. "Some commanders in the Southwest Pacific believe that flamethrower operators should be organic members of the infantry rifle squad or platoon. They should be trained in the operation and maintenance of the flamethrower, in addition to training with their basic weapon, the rifle. Training of the flamethrower operator should be continuous and conducted with the flamethrower he will use in combat. While it is not contemplated that the flamethrower be included as a weapon in the rifle squad or platoon, it should be immediately available."--USAFFE Board, Pacific.

288. British find flamethrowers valuable. "Four Lifebuoy flamethrower operators, each covered by a Sten gunner, advanced into a village and began to fire huts. Reaction was immediate; Japs came out of air raid shelters and a few started firing wildly. Several were hit by the flame and killed; others were shot by the Sten gunners and by members of a platoon on a hill over looking the village. The Lifebuoy operators attacked the air raid shelters at ranges of 15 to 20 yards. All four worked throughout the action. Flame shot into a Japanese bunker often causes the roof to collapse by burning away the timbers. Once a hut was set on fire at 70 yards range by skillful manipulation of the nozzle."--British Report, Burma.

289. Useful on defense. "The flamethrower was sometimes employed for defensive fire against personnel. On one occasion movement in the brush on a flank of a company defensive position was detected and a flamethrower operator fired a burst in the direction of the sound. The flame flushed five Japs who tried to run. Several riflemen fired--and the flamethrower operator fired another burst of flame. When the smoke had cleared, three dead Japs were found burned and shot. Since two were unaccounted for another long burst of flame was fired in the direction the Japs had been running. Thereupon, three more, all aflame, jumped up and were killed by rifle fire."--Report, Biak.

290. Choose strong operators. "Because of the weight of the flamethrower fuel tanks, individuals who are strong physically should be selected to use them. They need special training in stealthy movement through woods."--Observer, Manus Island.

291. Fire anti-sniper weapon. "Eliminating Jap snipers in trees by means of rifle fire is slow. The sniper is often tied in a tree and our troops cannot be certain he is killed. We used automatic fire to cover a flamethrower and let him direct a flame on the tree. The charred body of the sniper and the smoldering ropes tumbled to the ground."--British Report, Burma.

## IX BAZOOKAS AND RIFLE GRENADES

292. "On Biak, bazookas and rifle grenades were employed very satisfactorily against small caves or pockets in the sheer coral walls."--Report, Biak.

## X BAYONET.

293. "We used the bayonet very little. When you have a loaded rifle why stop to stick somebody when you can simply pull the trigger? Sometimes, however, the bayonet is useful. In one case 18 or 20 Japs got out of a pocket and started to run to the rear. A patrol was sent out to kill them. The Japs didn't know they were coming and got strung out. The patrol leader used exceptionally good sense. When the patrol caught up with the Japs, they decided not to fire on them but instead, starting with the rearmost enemy, killed them one or two at a time with bayonets."--Report, Pacific.

## XI MISCELLANEOUS.

294. Care of weapons. "Our operations in the Pacific taught us these points:

- a. "Daily cleaning on transport is vital as sea air quickly rusts the weapons. Frequent inspection by officers is necessary.
- b. "A 'pliofilm' bag was issued to each man for his weapon and spare ones issued for other equipment, such as maps. A weapon should not be kept in one of these bags very long, because it will sweat.
- c. "Rifles can be kept dry at night by placing them on sticks several inches off the ground and covering them with banana leaves."--Lt, Bougainville.
- d. "Captured Jap oil was effective in prevention of rust."--Canadian Os with 27th Inf Div, Saipan.
- e. "One battalion at Tarawa had an excellent method of keeping rifles in operation. Four men were assigned to do nothing but pick up rifles of the wounded and the dead, clean and repair them, and reissue them to front line troops."--Lt Gen, USMC.

295. Weapons training for Pacific warfare. a. "Weapons training cannot be emphasized too much and should include:

- (1) "Hip firing and rapid firing at short range.
  - (2) "Pistol firing for all ranks who may use this weapon.
  - (3) "Handling and practice firing of enemy weapons.
  - (4) "Detecting the direction and caliber of enemy fire."--Canadian Os with 27th Inf Div, Saipan.
- b. "Training in the operation of Japanese weapons proved its merit with one task force. Several types of Japanese weapons were made available for familiarization firing. Good use was later made of captured weapons to bolster defenses."--Hq, Sixth Army.

## Chapter Nine

# ARTILLERY AGAINST THE JAPANESE

### I USEFUL EQUIPMENT.

296. A-frames on DUKWs. "A-frames erected on the rear of the DUKWs facilitated the loading and unloading of artillery pieces in the Marshall Islands assault. In one rehearsal for the operation the weapons of an entire battalion were taken from DUKWs and placed in firing position within 11 minutes. The gun crew and the ammunition were carried in the DUKW with each gun. The DUKWs were so loaded in the LSTs as to be immediately available for their missions."--Lt Gen Robert C. Richardson, Marshall Islands.

297. Amphibious tractors. "At one landing, tractors and howitzers bogged down in a swamp just behind the landing beach. It was only with amphibious tractors that weapons, prime movers and ammunition reached their positions. In many operations in this theater, terrain conditions can't be foreseen. It is important that amphibious tractors be landed along with artillery combat equipment."--Hq, Sixth Army.

298. Liaison planes. a. "Where ground observation may be limited, liaison planes should be landed with the artillery."--Hq, Sixth Army.

b. "The Admiralty Islands operation proved the value of including cub planes in equipment brought in on D-Day."--USAFFE Board, Admiralty Islands.

299. Communication equipment. "Wire was hard to install and maintain. It was necessary to lay lines cross-country and on trees, high overhead. The only lines which remained constantly in use were those laid under water from island to island. Some of these operated for 20 days. The sound-powered telephone was favored for the battery executive--chief of section net and for use between the forward observer and his radio. The LE-8 telephone has been satisfactory, but it was necessary to disconnect the bell, as the noise drew Jap fire."--USAFFE Board, Southwest Pacific.

### II EMBLACEMENT.

300. "It was sometimes necessary to construct firing platforms for the 105mm howitzers to prevent the wheels sinking in the sand. One battalion used split coconut logs laid flat side up and bound together with boards from ammunition crates."--USAFFE Board, Southwest Pacific.

### III FORWARD OBSERVERS AND ADJUSTMENT.

301. Number of forward observers. "Three forward observer parties per battery were useful. Companies and even platoons of infantry followed separate routes. Vision is limited in the jungle and a forward observer should accompany each column.

302. Orienting forward observers. "Forward observers should keep oriented as they move forward. By keeping track of compass directions and pacing distances a close approximation to the location can be obtained. Accurate traverse to forward areas, when time permits, is advocated by some field artillery officers."--USAFFE Board, Southwest Pacific.



303. Adjustment of fire in jungle. a. "In all operations, due to limited visibility, most adjustments of fire were by forward observers and often only by sound. Forward observers must develop facility in locating bursts by sound."--Hq, Sixth Army.

b. "Bracket adjustment of observed fires in support of troops advancing in the jungle is seldom possible. It is necessary to 'creep' fire backward from an initial range which is obviously over."--AGF Observer, Southwest Pacific.

c. "Observers had to start adjustments well in front of the infantry and walk the fires back. Smoke was used to obtain initial adjustments on new terrain."--XIV Corps, Solomon Islands.

304. Harassing fires. "Our harassing fires were by battalion volleys. These fires were often based on an estimation of a Japanese location by observers who could hear but could not see them. A dawn patrol was conducted by an air observer. Often, smoke from cooking fires was spotted and a concentration fired. On one such location, eight Jap bodies were found grouped around their breakfast."--USAFFE Board, Southwest Pacific.

305. A tip on targets. "The Jap's well-established custom of preparing evening meals just at dusk and morning meals at dawn offers an opportunity for catching them in known bivouac areas with concentrated artillery fire."--Report, Southwest Pacific.

#### IV SURVEY.

306. Photomap as a firing chart. "The photomap was used as a firing chart. It was found to have only an error of 35 yards per thousand for range and to have practically no deflection error. Horizontal corrections were determined by survey and vertical corrections were taken from the map. Position area survey only was used in all cases, except one, in which the positions were on an island. A long base was set up to tie the position area to the mainland and the registration was limited to one high burst adjustment before daylight."--USAFFE Board, Southwest Pacific.

307. Vertical control. "Once an altitude of 300 yards was used on a hillside although the shore line was only a short distance from the initial point. As a result, vertical control had to be carried long distances. The use of the shore line as zero altitude would have simplified procedure and avoided assignment of absurd altitudes to targets along the coastal plain."--Hq, Sixth Army.

#### V FUZE SELECTION.

308. "Because of trees and thick undergrowth there were many tree bursts. They were not too effective because overhead cover was so thick. To bring the burst close to the ground delay fuzes were used."--USAFFE Board, Admiralty Islands.

#### VI SECURITY.

309. How the Jap harasses artillery units. a. "Artillery battalions on Leyte were constantly subjected to sniper fire and in a few instances to small enemy raids. Personnel of the batteries had to protect themselves."--AGF Observer, Leyte.

b. "In Burma, the Japanese have made little use of artillery for counterbattery. They have used infantry attacks on gun positions. Examples include;

(1) "Twenty to 30 Japanese infiltrated through infantry posts, and, from a small hill, attacked four artillery sections at night, firing grenade dischargers and machine guns sighted on fixed lines. The attack ended with a bayonet charge, which was repulsed.

(2) "A battery was in a position where one gun was not visible from the other three. At night about 20 Japanese attacked the separated gun with grenade dischargers and bayonets. After neutralizing this section, the Japanese attacked the remaining sections, but were driven off.

(3) "A Jap crept through the jungle at night and was attaching a sticky grenade to a gun tube when he was discovered and killed."--Report, Burma.

c. "Invariably the Japs will try to infiltrate through our lines at night to attack artillery positions. On Manus Island our ammunition carriers found Japs walking beside them between gun positions and the ammunition dump."--USAFFL Board, Admiralty Islands.

d. "Need for security at battery positions was apparent in all operations. Once even after the occupied areas had been cleaned out, the enemy killed several officers and men in battery areas."--Hq, Sixth Army.

e. "A Japanese document said: 'During the early part of the Buna battle, a raiding party was to destroy an enemy gun position. It concealed itself during the day and approached the enemy by night. When discovered, the party withdrew and changed the route of advance. The party waited for the enemy to leave their guns for the purpose of eating. It then made a successful attack.'"--Report, Southwest Pacific.

f. "A Japanese document captured by the British described a party formed by the Japanese to raid a four-gun battery:

(1) Demolition section. "Five groups of three men each, one group to each gun and one in reserve.

(2) Reinforcement section. "One section of riflemen to act as a reserve for the demolition section.

(3) Covering section. "One section of riflemen to protect the flanks."--Report, Burma.

g. "A captured Japanese document gave these instructions to raiding parties who came upon artillery positions: 'To demolish a gun, blow up the barrel, breech block or the recoil buffer. It will be very effective if the sight, breech block and the hinge are temporarily destroyed and if the recoil fluid is drained.'"--Navy Report, South Pacific Base Command.

310. Security methods. a. "A British artillery officer recommends these rules for protecting gun positions at night in the jungle:

(1) "An artillery battery must install wire around its position--approximately 40 to 50 yards out from gun positions. Panjis (sharpened bamboo stakes, secured in the ground and slanted toward the perimeter), booby traps, bells, and low wire should be installed in depth just inside the perimeter wire.

(2) "About five yards from and around each gun section, wire and panjis should be placed to prevent close-in bayonet charges.

(3) "At least two men, one on each side and next to the piece, should be awake as sentries at all times.

(4) "All other members of the gun section must sleep in slit trenches as close as possible to the piece.

(5) "Sentries at the piece must be able, by using pull wires, to wake the members of the section without leaving their posts.

(6) "Inflammable material should be removed from the gun at night."--Report, Burma.

b. "Coordinated defense must be set up by neighboring artillery units. The system which worked best was to establish outposts in pairs about 50 yards to the rear and flanks of the position area. Men in these outposts were armed with submachine guns."--USAFFE Board, Southwest Pacific.

c. "Howitzers in diamond formation facilitated perimeter defense and permitted all-round fire. Sufficient personnel must accompany initial echelons to insure unit security."--Hq, Sixth Army.

311. Infantry training needed. "Artillery was usually well behind infantry front lines and had to provide its own local security--set up its own outposts and run its own patrols. An artilleryman in the Pacific should understand scouting and patrolling, organization of defensive positions, terrain appreciation and squad tactics. Men must know how to use machine guns, mortars, grenades and land mines. More training than an appreciation course is needed."--Lt Melvin C. Monroe, FA, Southwest Pacific.

#### VII JAP ARTILLERY PRACTICES.

312. Wasted on Leyte. a. "Although the Japs had a full artillery regiment on Leyte, their methods of employing it were surprising. Only once, on the beach from H plus 60 to H plus 90 minutes, were four guns used together. Thereafter, guns were found sited singly, usually with machine guns and snipers, along roads. Our artillery and mortars knocked them out without damage to us. Many members of the Jap artillery regiment fought dismounted as infantry. Artillery was wasted by the Japs. Frequently it was used half-heartedly in direct fire."--Report, Leyte.

b. "One night on the Admiralty Islands a lone Jap worked his way to the top of a re-entrant surrounding a squadron command post. He fired three tracers straight up in the air before he could be stopped. Within a very short time three Jap artillery shells exploded, a few seconds apart, just a short distance from the command post. The three tracers apparently had given it the exact azimuth but the range was 50 yards too long."--AGF Observer, Admiralty Islands.

313. Sometimes emplaced on flanks. "Although the Japs like to place their artillery behind the center of their line, jungle conditions frequently force them to put it on the flanks. They report this permits placing fire closer to their advancing infantry."--Report, Pacific.

#### VIII JAPS EMPLOY GERMAN TRICK.

314. "We would try to help our neighbors but no matter how carefully we coordinated our fires and obtained clearances, someone was certain to yell: 'For God sakes, quit! You are shooting up my troops.' Generally this was due to the Jap practice of firing mortars at any located point in our area whenever any of our concentrations were brought down. Our new troops were unable to distinguish this from our own artillery and the result was just what the enemy wanted--all our artillery would be stopped until every gun could be checked."--Regt'l Comdr, New Georgia.

## Chapter Ten

### T A N K O P E R A T I O N S

#### I METHODS OF EMPLOYMENT.

315. Light tank patrols. a. "A light tank company was used on Guam ahead of the infantry. On one occasion the tanks destroyed a light machine gun and crew, cleared a village, destroyed three Jap supply trucks, knocked out a makeshift roadblock, and by-passed a pillbox before they hit their first real opposition. They were fired on by a 20mm gun and attacked with grenades by a company of Jap riflemen who swarmed out from a defensive position. At this point our infantry arrived and made a successful attack against the company whose position had been disclosed by the tanks.

b. "Advance tank patrols were not fool-proof. Jap machine gunners once remained in well-concealed positions astride a road while tanks passed between them. They then opened up on the following infantry."--77th Inf Div, Guam.

316. Clearing fields of fire. "Tank fire was excellent for clearing fields of fire and for thinning out vegetation to disclose enemy strong points. Canister was good for this purpose. Artillery and mortar fire also was frequently used to uncover enemy positions for a tank attack."--Report, Southwest Pacific.

317. Mediums against bunkers. "The use of medium tanks in direct fire support of all bunker reducing operations is strongly recommended by all experienced personnel."--Report, Pacific.

318. Against jungle strong point. "A platoon of six Marine tanks was brought up and moved into position to launch an attack against a strong Jap position on Arundel Island. In the jungle, tanks can be moved close to the enemy undetected because the vegetation muffles the sound and there is no dust. The general plan of attack was a penetration by two waves of three tanks each. The second wave protected the first from Japs attempting to use bangalore torpedoes or magnetic mines. The following infantry was to be out of the heavy small arms fire which a tank attack against the Jap invariably meets, but still close enough to maintain contact with the tanks. Plans were for the infantry to notify a tank of the second wave if a machine gun opened up with flanking fire so this tank could pull out of the formation, knock out the gun, and return. The attack proceeded as planned and smashed about half of the Jap position."--Infantry Journal Report.

319. Holding captured positions. "Tanks were used to hold positions immediately after the Japs had been ejected because their armor gave adequate protection from the mortar and grenade fire with which the Japs retaliate."--British Report, Burma.

#### II TANK--INFANTRY TEAM.

320. In jungle operations. "In most jungle operations from three to six tanks were used with each infantry battalion. It was found that not more than three tanks could be effectively controlled. Best results were obtained when an infantry commander followed the tank commander close enough to permit direct communication by walkie-talkie radio or by passing messages through the rear pistol port of the tanks."--Report, Pacific.

321. Bridge artillery--infantry gap. "The gap between the end of the artillery concentration and the arrival of the infantry on the objective was filled by 75mm fire from

tanks, directed by forward observers. The infantry could close to within 20 yards of the tank high explosive fire, if tanks and infantry were operating on the same axis. If the infantry was advancing on a different axis, they could safely close to within 10 yards when tank gunners substituted armor-piercing ammunition for high explosive on the forward edge of the objective. Other tanks continued to fire high explosive on the flanks and rear."--British Report, Burma.

322. Where should infantry be? "Tank--infantry tactics were worked out after it was realized that infantry advancing in the immediate vicinity of its own tanks were quite vulnerable to the small-arms fire which the tanks drew. We then saw to it that advancing infantry always took advantage of all folds in the ground as well as the dead space immediately behind the tanks. A better plan was to have the infantry advance on a separate route but still close enough to the tanks to cover the rear and flanks. It was a little time before tank commanders felt confident that their rear and flanks were protected when they could not see the infantry. This feeling, and the resulting hesitation, vanished when the tankers finally realized that the infantry never let them down."--British Report, Burma.

323. Danger of promiscuous firing. "The tanks fanned out ahead of the infantry. The infantry company commander had told them to move up slowly, using all guns, and firing at every target in sight. Under cover of this fire the infantry was to follow and attack the enemy works with satchel charges. Sound though these instructions may seem, many company leaders learned the hard way that such general directions may result in a quick expenditure of tank ammunition and a withdrawal of the tanks to the rear for replenishment."--"Island Victory" (Kwajalein), Lt Col S. L. A. Marshall.

324. Tank--infantry communication. a. "For communication between tanks and infantry a reel of field wire was inclosed in a box and mounted on the rear of the tank. A field phone was attached to one end of the wire and installed in the tank while the other end of the wire dragged free behind the tank. Each infantry squad carried a EE-8 field phone to hook on the wire. A switch and a light operated by the ringer circuit were installed in the tank. This system worked, though a number of reel boxes were damaged and infantrymen sometimes had to expose themselves to connect their phones."--Maj, Kwajalein.

b. "During the initial phases of one operation tanks had difficulty locating targets. Rifle squads were following the tanks and infantry--tank communications were difficult. Later, infantry scouts and patrols preceded the tanks, determined the nature and location of targets, and informed the tank commander. The tanks then buttoned up and attacked with the infantry following close behind."--Report, Pacific.

325. Tank--bulldozer combination. "D-7 bulldozers helped the tanks stay with the infantry. The tanks would overwatch the dozer while it cleared a roadway. The tank then advanced to the next obstacle and the operation was repeated."--AGF Observer, Southwest Pacific.

### III TANK--INFANTRY--ENGINEER TEAM IN THE BOUGAINVILLE JUNGLE.

326. Organization. "The basic unit is one platoon of tanks and one platoon of infantry with engineer specialists attached. This team is organized into an assault wave of three tanks; a support wave of two tanks, each followed by an infantry squad with attached engineer demolition and flamethrower crews; and the reserve wave of one tank with the remaining foot troops.

327. Preparation for attack. "Early reconnaissance by infantry, tank, artillery, engineer and communication officers is essential. Bulldozers may be needed to make a trail

to the attack position. Artillery fire is valuable in clearing jungle growth.

328. Duration of the attack. "Tanks can operate continuously only about four hours in the jungle. Usually two and a half hours should be the maximum for any tank. They must be withdrawn before dark.

329. Communications. "Telephone communication between the tank and its infantry squad is essential. We placed an EE-8A telephone inside the tank turret and a handset with 20 feet of cable on the outside. The handset switch was wired to a light signal in the tank. The assistant squad leader normally carried the handset and transmitted messages between the infantry and the tank.

330. Target designation. "Infantry squad leaders must point out obstacles to the tank and designate targets. Tracer fire has been found unsatisfactory, but colored smoke grenades, with the charge reduced one half, are satisfactory. When rifle-projected, the smoke grenade should be activated by hand before it is launched so the tank commander can observe the smoke trail.

331. Conduct of the attack. "The line of infantry--tank teams advances slowly. The assault tanks fire on likely enemy positions, such as tree roots, piles of brush, and fallen logs. Support tanks follow closely and pay particular attention to Japs who may attempt to attack the assault tanks on foot. The infantry behind the support tanks must be alert to locate enemy weapons and direct tank fire on them. Flamethrowers and demolitions are used freely.

332. Comparison of light and medium tanks. "The medium tank is superior in jungle warfare. Its size and armor make it almost invulnerable to Japanese antitank weapons so far encountered. The light tank has jungle mobility and its canister ammunition has been very effective, but it does not always have sufficient power to drive through jungle undergrowth."--Report, Pacific.

#### IV JAP ANTITANK METHODS.

333. Antitank obstacles. a. "Surrounding a portion of the beaches on Kwajalein was a perimeter of concrete, three to four feet high--but it was not sufficient to stop our tanks."--Lt Gen Robert C. Richardson, Marshall Islands.

b. "On Leyte, ditches about 30 feet wide and 15 feet deep were dug about 200 yards from the beach in one sector. They were not defended or supported by fire. A few tank obstacles, made of clusters of two or three palm logs sunk in the earth, with about four feet protruding, were also found in likely tank lines of approach between swamps. Sometimes dummy tanks of fabric on a bamboo frame were placed near tank obstacles to lead attackers to believe the obstacles were covered by fire."--Report, Leyte.

334. Antitank mines. a. Locations. (1) "The Japs often send patrols inside British lines at night to lay mines. They are likely to lay them under the wooden ramps leading up to trestle bridges; under the edges of the bamboo corduroying at fords; in all roads, and in dry fields which might be used as tank parks."--British Report, Burma.

(2) "Japanese rarely lay mines in depth along the probable lines of a British advance. Their practice is rather to lay mines immediately in front of the advance, or along lines of communication in rear of hostile advance elements. For example, if the Japanese think the line of advance will be from A to B to C, they do not lay mines at the same time along the entire route. Instead, they lay mines first from A to B. When the British reach B, the Japanese begin to lay mines from B to C, and also infiltrate behind the line of advance from A to B to lay other mines there. They hope that rear echelons moving forward will be less mine-conscious than the vanguard."--British Report, Burma.

(3) "In jungle areas where infiltration by large bodies is always possible, an area cannot be assumed to be free of mines once it has been cleared. Japanese night patrols repeatedly have laid mines in areas cleared only the day before."--Report, Pacific.

(4) "Once in the Admiralties, Japanese infiltrated behind U. S. troops and tanks, and planted mines on the road over which the armored vehicles would have to return after the battle."--Report, Pacific.

b. How laid. "Partially to overcome mine deficiencies, the Japanese lay one mine on top of another or even place a supplementary charge under two mines so laid. They sometimes put boards above and below mines so a larger and more stable surface receives the vehicle pressure."--Report, Pacific.

c. Pottery mine. "A Japanese pottery mine, designed to evade detection by instruments, was found on Leyte. The mine is brown, fading into white around the fuze pocket, and is eight inches in diameter and four inches high. The fuze is detonated by pressure or by pull. Because of its color and unglazed surface it may be camouflaged easily in almost any terrain."--Report, Leyte.

335. American detectors effective. "Land mines used by the Japs in the Biak operation were easily detected by American mine detectors."--Engineer Officer, Biak.

336. Jungle limits antitank guns. "The effectiveness of Jap antitank weapons is limited in the jungle. The Japs have knocked out tanks with antitank guns but the limited fields of fire make these occasions rare indeed."--Infantry Journal Report, Arundel Island.

#### V JAP "TANK FIGHTERS".

337. Technique. a. Organized teams. "Antitank assault teams are used by the Japanese to attack tanks in battle or to infiltrate into and raid tank parks. Each infantry platoon may have one of these units. They are armed with demolition equipment, incendiaries, and mines.

b. Terrain suitable. "The jungle is ideal for these units. Where tanks must move slowly through heavy vegetation, they may be more easily approached, particularly when infantry fails to keep up with them.

c. Critical points. "Because it is hard to assault a tank moving more than 10 miles an hour, Japanese teams are taught to select ambush points such as fords, steep inclines, or rough trails through the jungle.

d. Command vehicles spotted. "Assault teams may concentrate on the command vehicle or attack several tanks simultaneously.

e. Specific missions. "Each member of the team has a specific mission. One man will try to place an antitank mine or demolition charge under a tread, either by tossing it or by placing it there by hand or with a pole; the second may throw a Molotov cocktail or an incendiary. If these fail, the assault team may try to mount the tank and attack through the ports with grenades and small arms fire.

f. Use of smoke. "Smoke grenades or candles may be used to blind the tank crew, to force them out with the fumes, or to hide the tank from its infantry. Assault teams will not try to mount a tank except as a last resort, because that makes them vulnerable to the fire of supporting infantry. A team may receive support from its own small arms to blind the tank as the team approaches it."--Report, Pacific.

338. Set plays. "Japanese tank fighters may work individually or in pairs. They sometimes crawl to within the dead space of the tank's guns. Various techniques employed include:

a. "Drawing mine attached to ropes across the path of the tank.

b. "Attaching a magnetic mine to the tank.

c. "Smoking out the tank crew with smoke grenades."--Report, Pacific.

339. Suicide missions. a. With magnetic mine. "Jap doctrine urges each soldier to dig and camouflage a foxhole in the middle of likely tank routes. It is recommended that, as a tank passes over the foxhole, the soldier reach out with a magnetic mine, attach it to the belly of the tank, and 'hope for the best'. This is better, Japanese teaching suggests, than committing hara-kiri."--Report, Pacific.

b. With demolition charge. "One Japanese prisoner explained that his job was to climb on a tank and hold a demolition charge against its side until it exploded. He said he did not approve of this tactic!"--Report, Pacific.

c. With "lunge" mine. "A document captured on Leyte revealed that the Japs have developed a 'lunge' mine. It is a conical shaped mine which is thrust against tanks. The charge weighs about 6.6 pounds and the complete mine 14 pounds. To the charge is attached a wooden handle about five feet long. Japanese publications speak of handling it somewhat as a bayonet would be handled. Apparently it can be thrown a short distance, but its primary purpose seems to be as a suicide weapon. Instructions for its use state: 'When lunging forward thrust the handle with sufficient force to insure certain explosion. However, make contact squarely. Considerable skill is necessary in the lunging operation because of the weight of the mine. The best method is to make a suicide attack!'--USAFFE Board, Southwest Pacific.

340. Canvas thwarts magnetic mines. "It was found that canvas or other neutral materials on the outside of the tank prevented the magnetic mines from sticking."--Report, Pacific.

341. Wire screen used in Burma. "To meet the threat of Jap magnetic mines, tankers in Burma use a shield of steel wire net hung about four inches from the tank on iron brackets. The net normally used for emergency landing strips is satisfactory. Trials have shown that this is effective. However, since portions of the screen will be destroyed by the explosion of one mine, the tank must be further protected, usually by sandbags, to insure that a second mine cannot be placed against the armor through a hole in the net. Since the hatches must be left free to operate, the top of the turret remains vulnerable and must be greased or covered with canvas."--Report, Burma.

342. Infiltrate into tank park. "The Japs were unable to stop the American armor on Biak by using their own tanks and ordinary antitank methods. One evening at twilight eight or ten Japanese, holding a conversation in English, strolled into the tank park. They stopped near some tanks and talked about horse racing at Santa Anita. Then they continued through the bivouac area, arousing no suspicion. This apparently was only a reconnaissance and they tried to return later. The Japs fled as soon as their deception was discovered, leaving behind several demolition charges."--Report, Biak.

343. Wore American uniform. "In a battle on Biak, a tank momentarily lost the fire protection of its supporting tank. At that moment a Jap in American uniform climbed on the tank and dropped a grenade inside."--Report, Biak.

## VI JAP USE OF TANKS.

344. On Saipan. a. "The Japs used about 100 tanks on Saipan. The majority weighed about 15 tons loaded and were armed with two machine guns and either a 57mm or a 47mm gun. Some weighed about nine tons--others were amphibious tanks weighing about 16 tons, including pontons. The light and the amphibious tanks each had two machine guns and one 37mm gun.

b. "The Japanese tank commanders, who apparently were trained in the open spaces of Manchuria, were in difficulties from the start. Heavy fire was laid on their line of communications and the terrain made alternate cross country travel almost impossible. These



factors, however, do not excuse the poor tactics employed. Captured documents show that Jap instruction gave much sounder operating doctrines than those used.

c. "Their operations included the following practices:

(1) "Tanks were used piecemeal. Individual tanks emerged from camouflaged positions and began firing just as American troops came upon them. Night attacks were often made by solitary tanks.

(2) "The Japs frequently allowed their tanks to remain stationary and used them only as pillboxes. Many of these positions were well camouflaged but the tanks were not well emplaced.

(3) "In some cases tanks were kept under cover and fire held until American troops had passed."--British Report, Saipan.

345. Not used on Leyte. "On Leyte, tanks were frequently reported but our junior officers and enlisted men were prone to refer to any track-laying vehicle, either ours or enemy, as a tank. I saw no tank action as such by the Japanese."--Observer, Leyte.

346. On Tarawa. a. "The Japs had six or seven light tanks, Model 2595, on Tarawa. This tank is vulnerable to close-in attack by sticky grenades and Molotov cocktails. It can be set afire easily. No weapon in the tank can be depressed lower than 20 degrees. This left a dead space for the tank weapons 23 feet in all directions from the tank.

b. "In every strategic area on Tarawa, the Japs built tank revetments from which to fire stationary tanks. Most revetments were mutually supporting with emplacements. The coconut log sides extended about four feet above ground. The tanks were driven forward into the revetments, permitting the 37mm guns to fire to the front. To get into action elsewhere, they had to back out.

c. "Only two tanks on Tarawa tried to fight American tanks. After American forces had captured the airport, it was bombed by the Japanese. A Jap tank came out of its revetment, apparently to determine what damage the bombing had done. Flying the Rising Sun flag, it approached two American medium tanks and fired two rounds. Missing its target, it turned around and fled. In another engagement, an armor-piercing shell from an American medium tank tore the turret from a Jap light tank and put it out of action. All other Jap tanks on Tarawa were destroyed either by naval or other gunfire."--Report, Pacific.

HEALTH AND SANITATION

MALARIA, THE GREATEST MENACE

"Malaria remains the greatest obstacle to the success of military operations in the tropics. In some combat areas ten men have been rendered non-effective by malaria for each battle casualty."--Report, Pacific.

FACTS ABOUT MALARIA AND HOW TO COMBAT IT

(Summarized from a publication of the Office of the Surgeon General.)

Malaria is serious and may cause chronic invalidism.

Malaria is transmitted only by mosquitoes.

Prior good physical condition is no preventive of malaria.

Things you can do to combat malaria:

- (1) Sleep only under a mosquito-tight net.
- (2) Keep your skin covered. Don't wear shorts, remove your shirt, or roll up your sleeves. When on guard at night, wear gloves and a head net.
- (3) Use mosquito repellent lotions on exposed flesh and where clothing fits tightly.
- (4) Stay away from native villages, except on duty.
- (5) Take your atabrine as directed.

I THE BIGGEST PROBLEM--KEEPING FIT TO FIGHT.

347. Even advancing unopposed. "The need for extreme fitness in the jungle was again brought out. An unopposed advance of from four to six miles in a day, or even of two miles in really bad country, taxed the stamina of the troops to the utmost."--Australian Report, New Guinea.

348. Wears troops down. "On Makin when it was not raining the heat was intense. The humidity, rather than exertion against the enemy, wore our troops down. After a three or four-mile march, their energy was sapped even though they were in first-class condition."--Lt Col S. L. A. Marshall, Makin.

349. Matching the "man-monkeys". "The Japs are 'man-monkeys' and run around considerably. To compete with these 'man-monkeys' you've got to be in excellent shape. I mean you've really got to be tough."--Master Gunnery Sgt R. M. Fowle, 7th Marine Regt, Guadalcanal.

350. Calls for "toughness". "One important factor in jungle operations is the toughness of the individual. By toughness I mean the ability to live with nothing except the bare essentials; to dig a foxhole and be able to stay in it without tearing down all of

the natural camouflage to make a bed; to retain a fighting attitude during continuous rain and not lay your weapon down in 18 inches of muck while you try to rig a shelter over a hole which is to be your home for the moment. Our men must learn that their natural desire for personal comfort will impair their fighting efficiency. They must be made so tough that thoughts of personal comfort can be set aside completely during combat."--Regtl Comdr, New Georgia.

351. In Guadalcanal days. a. "Records of our early divisions on Guadalcanal--before we learned what we now know of tropical diseases--will show that of two divisions on the island, one Marine and one Army, 80 per cent of the men had had malaria by the end of three months. Of the remainder, some had had dysentery and some dengue.

b. "The Japanese had the same sicknesses. We learned later that they had even more trouble with malaria, dysentery, and dengue. They also had beri-beri from improper diet."--Maj Gen Robert L. Spragins, Guadalcanal.

352. Care for your feet. "Care of the feet, including daily inspection by junior officers, is particularly essential in jungle warfare. One battalion had 159 ineffectives due to minor and avoidable foot ailments."--Marine Report, Guadalcanal.

## II MALARIA

353. Training and discipline. a. "The three main diseases in New Guinea were malaria, scrub typhus, and diarrhea; of these, malaria was by far the greatest menace. Volumes have been written on malaria--but all the literature is useless without thorough and continuous training. Antimalarial training should begin so early that all personal and unit antimalarial measures become a matter of routine."--Australian Report, New Guinea.

b. "During the Finschhafen operations many men were sleeping in the shade by day without shirts. The high incidence of sickness was ascribed to inadequate water and malarial discipline."--Australian Report, New Guinea.

c. "Many units relaxed malarial discipline on entering combat. A major reason for this was a false sense of security. Few mosquitoes were observed, possibly because not much attention was paid to them during combat."--XIV Corps, New Georgia.

354. Antimalarial precautions. a. "These factors are usually behind increased malaria:

(1) "Locating bivouac areas too near mosquito breeding places, such as swamps or sluggish streams.

(2) "Creating artificial breeding places, such as rain barrels, discarded helmets, tin cans, bottles, broken coconuts, water-filled bomb craters and foxholes, and sagging tarpaulins.

(3) "Failure of the individual to observe malarial discipline--such as rolling up shirt sleeves, going without shirts or other articles of clothing, and neglecting to use mosquito bars after nightfall."--XIV Corps, New Georgia.

b. "If possible, select camp sites on wind-swept ground away from areas infested with mosquitoes and far-removed (at least 1½ miles) from native villages."--Office of the Surgeon General.

c. "All natives have chronic malaria, and, in consequence, camps for employed natives should not be sited within a mile of areas occupied by our troops. Between dusk and dawn natives should be strictly segregated."--Australian Report, Southwest Pacific.

d. "The use of unscreened pit latrines and straddle trenches in malarial regions means certain trouble. Some units have used the standard mosquito net over a four-foot straddle trench. The sides of the net are weighted with strips of wood, so they will fall to the ground after being lifted. This same net can also be used in a similar manner over a standard box seat on a pit latrine."--Report, Pacific.

e. "To prevent malaria, those who can should sleep in screened rooms or under mosquito nets. Inspect screens, doors and mosquito nets at regular intervals and search for live mosquitoes inside houses or nets--particularly where there is little light. After dark stay indoors as much as possible. When you must be out after dark, move about continually."--Office of the Surgeon General.

f. "Mosquito repellent should be rubbed on hands and face and places where clothing is tight. In addition, a rag thoroughly saturated with insect repellent and tied around the neck helps to keep mosquitoes away."--Report, Pacific.

g. "Liquid soap dispensers have been used to issue mosquito repellent to all soldiers attending outdoor movies or similar gatherings."--Report, Pacific.

355. Use of atabrine. a. "We did not start taking quinine and atabrine soon enough on Guadalcanal. We are paying for this now."--Lt Col N. H. Hannekan, 7th Marine Regt, Guadalcanal.

b. "By proper atabrine treatment it has been possible to halt abruptly recurrent attacks of malaria, even during intensive training. Two types of doses have proved satisfactory--0.5 gram of atabrine on Mondays and Fridays or 0.4 gram every other day. The first method is the more practicable from an administrative point of view. The most important factor is the enforcement of strict discipline in administering the drug. It should be given by roster with proper safeguards to insure that every individual is required to take the prescribed dosage."--Lt Col George G. Duncan, Med Corps, Southwest Pacific.

c. "There is a mistaken idea that atabrine may produce impotence. That is not true, but chronic malaria may well do so."--Australian Report, Southwest Pacific.

356. Symptoms. "One type of malaria may give rise to strange symptoms, entirely different from the usual chills and fever. It is advisable, when living in or traveling from a malarial area to suspect malaria, when ill, regardless of whether or not there is fever. Consult a medical officer and tell him of the possibility of exposure to malaria."--Office of the Surgeon General.

### III SANITATION.

357. "Sanitation--I know it is right! To violate it causes billions of flies and much sickness. Some lousy, undisciplined recruits defecated in foxholes. We also learned that individual cans should be buried. Some of the recruits threw empty cans in the creek. When the next battalion came along and went in swimming, the men cut their feet. When you occupy a position for several days in the tropics, the sanitation problem becomes tremendous. The young officers and noncommissioned officers must get after this at the start--and keep after it at all times."--Master Gunnery Sgt R. M. Fowle, 7th Marine Regt, Guadalcanal.

### IV WATER DISCIPLINE.

358. Amount and purification. "Strict water discipline is of prime importance in the jungle. This includes both the amount of water consumed and purification of all water with halazone tablets."--Lt S. C. Murray, New Guinea.

359. Use of halazone. "Halazone treatment of water was satisfactory when springs or swift-flowing streams were used. When Chinese troops were using a sluggish stream, dysentery was a problem. The Chinese soldier bathes wherever and whenever the opportunity offers. We could not be sure that somewhere upstream a Chinese unit was not polluting the water. We made our surgeon responsible for choosing water points, and we immediately placed them under constant guard. In the jungle it is not always possible to build a fire to boil water."--Col Charles N. Hunter, Burma.

## V BEATING THE HEAT.

360. Salt tablets. "The men have been taught to take salt tablets, but the leaders don't see to it. Result--heat exhaustion."--Col B. E. Moore, 164th Inf Regt, Guadalcanal.

361. Cool pad for helmet. "Each man should fix up some sort of a pad which can be soaked with water and insert it inside his helmet liner to keep his head cool. Steel helmets are extremely hot in tropical sun."--Observer, 81st Inf Div, Palau.

362. Sweat pads for tank crews. "Eye strain among Australian tank crews fighting in New Guinea was a handicap, frequently causing bad gunnery. One of the causes of eye strain was excessive perspiration from the forehead running into the eyes. A sweat pad around the forehead proved invaluable."--Australian Report, New Guinea.

## VI MEDICAL AID KIT.

363. "Each man was furnished an individual jungle medical kit containing iodine, aspirin, atabrine, a first-aid packet, vitamin pills, bandaids, mosquito repellent, and halazone tablets. This kit was excellent. A standard medical air-drop, containing drugs and other medical supplies, was adopted."--Col Charles N. Hunter, Burma.

## VII SNAKES.

364. Precautions against snake bite. "Poisonous snakes are found throughout tropical and temperate Asia. The majority of them do not attack unless disturbed. If in a snake-infested area, take these precautions:

- a. "Wear boots when required to walk through infested areas.
- b. "Avoid carelessly touching shrubs, brush, trees, and tree branches, or walking near ledges where snakes may be hidden.
- c. "Examine clothing and shoes before getting dressed, and always look in cupboards, drawers, and other dark places before reaching into them.
- d. "Have a flashlight available, so the floor may be examined before getting out of bed at night."--Office of the Surgeon General.

365. First aid. "The following procedure is recommended if bitten by a snake:

- a. "Immediately apply pressure or a tourniquet above the bite, making it no tighter than a snug garter. The tourniquet should be released for a few seconds every 10 or 15 minutes to permit some circulation.
- b. "Under field conditions and in the absence of medical care, do not make an incision. Instead place a three or four-inch square sheet of thin rubber (prophylactic rubber or similar material) over the fang punctures and, vigorously sucking and kneading with the teeth for five minutes, remove as much venom as possible. The rubber sheeting will prevent sucking the venom into the mouth. Wash the wound and the rubber sheeting and repeat the sucking and kneading at frequent intervals while removing the patient to the nearest medical officer. If no rubber sheeting is available, blood from the fang punctures may be sucked into the mouth directly. The person sucking should rinse out his mouth with water at frequent intervals.
- c. "If practicable, kill the snake and take it to the physician for inspection.
- d. "Whisky or other alcoholic drinks must not be given.
- e. "Keep the patient from exerting himself."--Office of the Surgeon General.

VIII MISCELLANEOUS.

366. Minor wounds. "Wounds do not heal rapidly in tropical climate, and infection is likely to take place. Minor wounds, such as cuts, scratches, abrasions, and insect bites, should be treated by application of iodine or other antiseptics. All wounds should receive medical attention as soon as practicable."--Office of the Surgeon General.

367. How to remove ticks. "Examine the skin and clothing for ticks at least twice daily. Remove all ticks and kill them. Never squash a tick on the skin or attempt to pull it out. Cover the tick with a good coating of oil, vaseline, gasoline, paraffin, or even spit. After a few moments the tick will let go and be easy to remove. The area of the tick bite should be cleaned and treated with an antiseptic, such as iodine or alcohol."--Office of the Surgeon General.

## Chapter Twelve

### S U P P L Y, M A I N T E N A N C E, E V A C U A T I O N

#### A N D A D M I N I S T R A T I O N

##### I R A T I O N S.

368. Rations in the jungle. a. "On Guadalcanal we used only K and C rations in the front lines. Where supply was by hand carry, K rations were issued. Where jeep supply was possible we used C rations. As front line troops rarely were more than 100 yards from the Japs, the spoon was the only mess equipment the men kept. This was to reduce both noise and sickness. Boiling water could not be carried to the front lines--and raw water carried dysentery. Improper washing and flies both would have contaminated the mess gear. Our troops got tired of C and K rations, but it simply couldn't be helped."--Maj Gen Robert L. Spragens, Guadalcanal.

b. "Field rations were used by the infantry during the entire Saipan operation. It was found inadvisable to use field kitchens where they could not be fly-proofed. This could be done only when the unit was stationary."--Canadian Officers with 27th Inf Div, Saipan.

369. Captured Japanese rations. a. "The Quartermaster General advises the fullest use of captured Japanese rations--after inspection and approval by competent personnel. It is most important that an American medical officer inspect enemy food supplies before they are eaten. Under emergency circumstances, if competent medical personnel is not available, canned goods are usually considered safe if the can does not bulge, is not seriously rusted and the contents do not have a questionable odor.

b. "Many Japanese foods such as canned crabmeat, salmon, tuna, mandarin orange sections, canned pineapple, rice, tea and sugar are familiar to Americans. Certain other Japanese foods including dried fish, seaweed, pickled radishes and precooked rice flour may be eaten if the medical officer approves them."--Intelligence Bulletin.

370. Issued in sandbags. "On our expedition into Burma, rations were frequently packed in sandbags in two-day and three-day combinations. This facilitated issue because it was necessary merely to hand each man one or two bags. This plan also provided each man with sandbags for field fortifications."--Col Charles N. Hunter, Burma.

371. Improvised oil drum stove. "Army bakers on a South Pacific Island improvised ovens from discarded oil drums. These drums have a baking capacity of eight loaves. They are made as follows:

- a. "Cut out the front of the drum.
- b. "Weld in a steel plate as a baking shelf.
- c. "Devise a door to close the front (don't hinge horizontally as it will tip more easily).
- d. "provide slots for heat flow in the shelf, cut steam outlets in the back of the oven, and install crossed metal bars on which to rest the oven.
- e. "Place two or three inches of water in the lower compartment next to the fire to keep the metal from burning out.
- f. "Place the completed oven over a shallow fire trench."--Report, Pacific.

## II WATER SUPPLY.

372. Most critical item. "Continual reconnaissance was made for water supply points along the route of advance. Water was the most critical supply item for front line troops and had a definite relation to the progress of any advance. We caught water in tarpaulins and other receptacles even after water dumps were established."--XIV Corps, Solomon Islands.

373. pilfering must be stopped. "Water distribution must be rigidly controlled. Pilfering of water intended for front line units by individuals along the supply route must be prevented. Water requirements should have first priority in carrying parties. Experience has proved that over 50 per cent of a carrying party is usually required for water supply."--Report, Pacific.

374. Water supply on Makin. "When the 27th Inf Div invaded Makin, equipment included water distillation devices to produce three gallons of water per man per day. Additional canteens were drawn so every man could go ashore with two full canteens. In addition one five-gallon can of water per man was carried as an emergency supply until the distilling equipment began working."--Lt Col S. L. A. Marshall, Makin.

375. Two canteens per man. "Two canteens per man are essential. The usual plan was to deliver two canteens of water late in the day, then another two before the jump-off in the morning."--Canadian officers with 27th Inf Div, Saipan.

376. Canteen refill before combat. "No matter how urgent the need, men should not be sent into combat without a refill of the canteen. Heat exhaustion and fatigue soon overcome those inadequately supplied with water, making vigorous advances impossible. More casualties are caused by heat exhaustion from lack of water than by enemy fire."--Report, Southwest Pacific.

## III VEHICLES.

377. The 3/4-ton truck. a. "Our operations proved the 3/4-ton weapons carrier the best all-round wheeled vehicle for use in very muddy and difficult terrain. With its flotation and high clearance it was able to negotiate areas where 2 1/2-ton and 4-ton vehicles bogged down."--Hq, Sixth Army.

b. "The 3/4-ton weapons carrier proved the most satisfactory vehicle in the initial stages of an amphibious operation. It has more power and maneuverability than the 1/2-ton, and three times the capacity. When moving towed 37mm guns in the jungle it often was found better to load them in 3/4-ton trucks than to tow them."--XIV Corps, Solomon Islands.

378. DUKW. a. "Unloading chutes, cargo nets, etc., should be included in the equipment of each DUKW.

b. "DUKWs are excellent for moving supplies from one beach to another as troops advance along the coast after the initial landing."--XIV Corps, Solomon Islands.

379. Bullock carts used. "Some troops made much use of bullock carts and bullocks which were scattered throughout the island."--Canadian Officers with 27th Inf Div, Saipan.

380. Use of Jap vehicles. "Most Jap gasoline-driven vehicles captured by American forces can be operated with American gasoline and lubricants. American diesel fuel is not always suitable for Jap diesel engines. Sometimes Jap engines can be operated by a mixture of diesel oil and gasoline. Tests indicate that the diesel oil used in Jap tanks can be duplicated by blending 50 per cent No. 2 U. S. diesel oil with 50 per cent Bunker 'C' U. S. fuel oil."--Report, Pacific.



381. Maintenance. a. "Maintenance of vehicles on a coral island included:

(1) "Changing the grease in the wheels as soon as possible after landing.

(2) "Checking all nuts and bolts frequently.

(3) "Cleaning the oil filter and air cleaner daily.

(4) "Cleaning battery top after landing.

(5) "Changing oil frequently. Because transportation is so busy during the day it may be necessary to erect a blackout tent in which work of this sort can be done."--Canadian Officers with 27th Inf Div, Saipan.

b. "Excessive wear on brake linings caused by abrasive action of deep mud and salt water resulted in the early consumption of all available brake material and brake fluid."--XIV Corps, Solomon Islands.

c. "The use of methyl alcohol and commercial ether was much faster and more thorough than baking for cleaning electrical parts after contamination by sea water. A set of electrical metal-screened leads from distributor to plugs which have been damaged by sea water and are shorting badly can be cleaned by washing them in fresh water, dipping them in ordinary methyl alcohol, allowing them to dry and then finally dipping them in commercial ether. Baking is likely to damage insulation and when heat is used the salt deposit still remains. When the air gets damp, fresh absorption of water by the salt occurs and the electrical breakdown is repeated."--Report, Pacific.

382. Chains. "All vehicles must be equipped with chains for all wheels."--Hq, Sixth Army.

383. Vehicles too early. "There is a tendency in amphibious operations to bring in motor transportation at a rate far in excess of requirements. Without adequate roads only a small proportion can be used. The remainder adds to the difficulties of the landing forces."--Hq, Sixth Army.

#### IV EVACUATION AND MEDICAL SUPPLY.

384. Handling of wounded. a. "These methods of evacuation of the wounded were used in the jungle:

(1) By litter. "Evacuation by litter was difficult and often involved distances up to five and six miles. Litter carry in many cases was over almost impossible terrain, requiring as high as 16 carriers per patient. Litter carriers frequently had to cut paths through the jungle.

(2) By jeep. "Jeep ambulances were invaluable. They should be kept as far forward as possible.

(3) By water. "All units must keep on the alert to evacuate as many patients as possible by water. It is more efficient and more comfortable for the patient than any other means.

(4) By slides. "Improvised slides were used to lower patients down steep hillsides to jeep trails or waterheads."--XIV Corps, Solomon Islands.

b. "Establishment of a small infirmary along with the aid station enabled us to hold many cases that would otherwise have had to be evacuated. Especially at night the ambulance was valuable as a mobile aid station. Heavy cardboard was placed over the windows giving a warm, dry, well-lit and blacked-out interior suitable for first aid and giving plasma."--Report, Munda.

c. "All medical personnel had a maroon cross painted on four sides of the helmet so they could be readily identified by friendly troops. It was not large enough to be identified by the enemy. Red Cross arm bands and brassards were not worn. Medical personnel sometimes were attacked while moving patients."--Observer, with 81st Inf Div in Palau area.

d. "It was necessary to store medical supplies very carefully to prevent their ruin by dampness, ants, insects and rats."--Report, Munda.

385. Medical strength ratio. "The ratio of medical strength on Makin was one enlisted man to every 10 soldiers. Casualties did not have to be moved more than 100 yards to receive medical attention. The medical detachments carried their combat supplies on their backs and one-day reserve followed in quarter-ton trucks. The collecting platoon duplicated this. All echelons were resupplied from the navy stores established by the beach party."--Lt Col S. L. A. Marshall, Makin.

386. Prisoners of war. a. "Saipan was the first experience in handling large numbers of Jap prisoners. One Marine regiment in 30 days captured 3,076 civilians and 79 military prisoners. It was planned that each assault battalion would establish an enclosure. This worked well initially but distance soon made this unworkable and a stockade was established at the division command post. Lack of transportation frequently made it necessary to leave large groups of prisoners with assault troops overnight."--Marine Regt, Saipan.

387. Burial of enemy dead. "Burial parties were kept busy in the Marshalls locating enemy dead and dragging them to the edge of the road where they could be picked up by trucks. The dead were sprayed with sodium arsenate, which prevents flies and also kills the stench. In contrast to the conditions at Tarawa there was very little odor from the dead bodies."--Lt Gen Robert C. Richardson, Marshall Islands.

#### Y SUPPLY BY AIR.

388. Wingate expedition. "Considerable supplies were sent in by air to the Wingate expedition in Burma.

a. Air ground communication. "The main problem in flying supplies to the columns in the jungle was locating the drop area. Forty-eight hours before delivery, Wingate's men sent a radio message to the base. This gave, in code, their position by longitude and latitude, and the azimuth and distance from some terrain feature. A second message was sent 12 hours before delivery, giving exact time and place of the scheduled drop.

b. Preparation of the dropping site. "High, open ground was favored as a dropping site. Most satisfactory was a dry stream bed 50 to 100 yards wide. If delivery was to be by day, a strip 350 by 50 yards was cleared and preparation made for smoke signals at 100-yard intervals. Dropping by night was more satisfactory. A dropping area 600 by 100 yards was marked by fires at 100-yard intervals. Fires were not lighted until planes were overhead. The jungle was so dense that Japs had to be within 300 yards to see the fires.

c. Preparation at the base. "Parachutes capable of supporting 120 pounds were attached to 'breakables', such as radio batteries, ammunition and explosives. 'Unbreakables', such as grain and clothing, were packed in triple sacks about two-thirds full.

d. Method of dropping. "Planes came in at 200 feet by day and 400 feet by night. They dropped five free bundles or five parachutes on each run. Goods dropped free and by parachute could not be released on the same run. Free bundles overshot the mark. Parachute bundles usually dropped straight down.

e. Action after drop. "Once down, the supplies were distributed quickly and the raiders moved out of the area."--Report, Burma.

389. Use of liaison planes. "Liaison planes, largely L-1's and L-5's played a vital role in major operations in Burma. On one occasion they flew 900 sorties in a period of two weeks. Less than a dozen liaison planes evacuated some 700 casualties without loss. During the Wingate expedition, approximately a dozen light planes were maintained constantly at air fields behind the Jap lines. Flying at treetop height to avoid enemy detection, and landing in jungle clearings, these planes evacuated several thousand sick and wounded."--Report, Burma.

390. Code numbers for items and individuals. "Because we were being supplied entirely by air, code numbers were made up for ordering various supplies by radio. The system did not

have to be used too much because large miscellaneous requisitions were usually transmitted by liaison plane messenger. Before the expedition started, extra dentures and extra glasses for all individuals using them were placed in warehouses."--Col Charles N. Hunter, Burma.

391. Jap methods of supply by air. a. Marking dropping point. "When a supply plane is expected lookouts in tree-tops notify a smoke grenade operator to set off a tree-top grenade.
- b. Troop dispersion during drop. "Supplies should be dropped as close as possible to the source of the smoke. The plane should fly either upwind or downwind in order to cut down the lateral spread of the supplies in falling. Troops should be dispersed accordingly. There is one exception to flying the plane upwind or downwind. If supplies are to be dropped upon a steep hillside they should be dropped in a line approximately following the contour of the ground at the signal point. The receiving ground troops should be dispersed in this manner.
- c. Safety precaution. "To avoid being hit by falling packages, each soldier should stand behind a tree trunk and away from the direction of the approaching plane.
- d. Tip for locating bundles. "Important packages dropped in the jungle should have a long white streamer which will trail behind as the bundle falls."--Captured Jap document.

## VI DEFENSE OF SUPPLY UNITS.

392. Tip service not enough. "When fighting the Jap, it is not sufficient simply to pay lip service to the necessity for administrative and service units being able to defend themselves and their supplies. They must be trained to a degree that will enable them to take their place on a defensive perimeter and withstand fierce attack."--Observer, Burma.

393. Use of listening posts. "Listening posts were used habitually around dumps, supply points and bivouac areas of supply units. Each was connected to the quartermaster command post by telephone. Walking sentries only invite disaster in the jungles."--Capt Martin E. Griner, QMC, Southwest Pacific.

## VII BRITISH SALVAGE OPERATIONS IN BURMA.

394. General setup. "Salvage operations are particularly important when air supply is employed on a large scale. Mobile parachute servicing units come into the area to reclaim used parachutes. In Burma, salvage units were set up behind division fronts and in nearly every area where air-supply drops were made. Each salvage unit sets up its own workshops and three subdepots:

- a. "One subdepot collects and assorts ammunition cases.
- b. "A second handles scrap metal, rubber, canvas, tin cans, leather and similar materials.
- c. "The third collects all damaged weapons, all clothing and all captured enemy materials.

395. Operation. "At one time on the Arakan front about 2000 tons of salvage was collected each month. From 200 to 300 tons were repaired at these front line depots and returned to the lines. The remainder was shipped back to rear area shops.

396. Parachute salvage. "In one three-week period, 45,000 parachutes were used to supply one division. Over 40,000 of these chutes were recovered. At the time of the survey 8500 of the recovered parachutes had been found serviceable, without repair, and had been returned to air depots; 12,000 needed only minor repairs and only 7500 were either unserviceable or needed major repairs. The remaining 12,000 had not yet been inspected. In general, supply parachutes, if recovery can begin promptly, usually run in these percentages; 20 per cent serviceable without repairs, 65 per cent serviceable after repair, 10 per cent unserviceable and 5 per cent lost."--British Report, Burma.

## VIII MISCELLANEOUS.

397. Three equipment tips on tropical operations. a. Rubber poncho. "The rubber poncho is too heavy, especially for assault troops.

b. Blankets. "No blankets should be carried by assault troops.

c. Jungle hammocks. "If the unit is to continue to occupy the area after the assault phase is over, jungle hammocks should be issued one per man."--Observer with 81st Inf Div, Palau area.

398. Supply may cut fighting strength. "All the coast natives had fled to the hills and it was impossible to muster sufficient porters. A large number of troops therefore had to be employed in carrying duties. This factor must be allowed for in planning, and may absorb up to 25 per cent of the fighting strength."--Australian Report, New Guinea.

399. In one basket. "When on one occasion, all medical supplies were temporarily placed in one shell crater, they were destroyed by a direct hit from the air. This resulted in a critical shortage of blood plasma and other medical supplies and equipment. Supplies must be dispersed to protect against destruction of the entire stock."--Hq, Sixth Army.

400. Road maintenance tip. "Repair maintenance on the road from Madzab to Lae provided a full-time job for a field company and three pioneer platoons. Much of the track required corduroy. The most important part of the road maintenance, however, was the clearing of trees and undergrowth so the sun could dry the tracks after a rain."--Australian Report, New Guinea.

401. Use of cables. "In some cases cables with trolleys was the only method we could use to send up supplies or evacuate the wounded."--XIV Corps, Solomon Islands.

402. Jungle rough on clothing. "In the Admiralty invasion, instances were reported in which herringbone twill suits lasted only five days. None lasted longer than 21 days."--USAFFE Board, Pacific.

403. Need for gloves. "You must have gloves adequate for handling barbed wire. You cannot put up a barbed wire fence in a hurry with bare hands."--Lt Col M. H. Hannekan, 7th Marine Regt, Guadalcanal.

## Chapter Thirteen

### C O M M U N I C A T I O N

#### I MOISTUREPROOFING AGAINST JUNGLE DAMPNES.

404. Signal Corps spray treatment. "A spray treatment developed by the Signal Corps protects communication equipment against both moisture and the various fungus growths common to the tropics. Kit MK-2/GSM, containing lacquer, spray guns, infrared drying lamps, and instructions, is available on requisition. All equipment now being manufactured will be completely 'tropical-ized' regardless of its ultimate destination."--Operations Division Information Bulletin.

405. Waterproofing training important. "All radio personnel must be trained in preventive maintenance, waterproofing and selection of transmitting sites for radio sets. Frequent radio failures were caused by moisture. Radio batteries were damaged both by moisture and by rough handling. In one operation 55 SCR-511s were functioning on D-Day; by D plus 8 there were only three. This was attributed to poor preventive maintenance and, especially, inadequate waterproofing. In one area the SCR-399 gave good service except for two filament transformers that burned out because of moisture. Covering radios with waterproofed bags during landings helped keep them dry. The use of tarpaulins and shelter halves to condense the heat generated by kerosene or gasoline lanterns was effective for drying radio equipment."--Hq, Sixth Army.

#### II WIRE.

406. Sound-powered telephones. a. "The sound-powered telephone proved reliable on Manus Island. It was liked because it was difficult for the enemy to tap and because conversations could be carried on in a low voice."--Observer, Manus Island.

b. "The sound-powered phones were the best for forward observers. They are light and require no ringing--ringing gives away the position. Of all communication equipment they were least affected by dampness."--Artillery Report, Munda.

407. Full use of wire. "In the jungle attack we always use telephone communication between the regiment and the battalions. The wire is, of course, supplemented by radio. If we get held up, wire goes right out to companies from battalion."--Maj Lou Walt, Bn Comdr, 5th Marines, Guadalcanal.

408. Stringing wire in the jungle. a. "One fast method of getting W-130 wire off the ground was to slash trees at about shoulder height and lay wire in the gash between the trunk and the bark. This kept us from having to make a tie--the greatest cause of wire shorts. When W-130 wire was laid on the ground, it shorted out or was broken within a few hours. It was sometimes valuable for lines to forward observers, but it went out quickly if it was handled or touched."--Artillery Report, Munda.

b. "It is important that wire be elevated initially and tied to trees that do not border the road."--USAFPE Board, Admiralty Islands.

409. Underwater wire. "Underwater cable was laid from landing craft and required practically no care. W-110 wire was laid under water in early stages, and stayed in good

operating order. The longest underwater lines were approximately one mile in length and were working well when abandoned after three weeks' use. When laying wire under water thirty to fifty percent slack was allowed and lines were not weighted down. Care had to be exercised in cases where wire passed over coral formations and edges of reefs. Lines also had to be kept clear of boat channels and landing beaches."--Artillery Report, Munda.

410. Protecting wire from Japs. a. "The Japanese placed emphasis on disruption of our communication facilities. Our soldiers could traverse wide areas known to be infested by enemy snipers without being fired upon, but when a soldier stopped to repair a telephone wire, snipers' bullets would whine all around him. In the final all-out enemy attack, bayonets severed our wires in certain areas at an average interval of 20 feet. In some cases the enemy scratched the insulation off the wires to ground the circuits."--Report, Attu.

b. "Recently the Japanese in Burma evolved a new technique of cutting British telephone lines. They cut them so there is no interference with the ringing of the bells, and yet, when a conversation is begun, the voices are so faint they are likely to be unintelligible. It is done as follows: A  $\frac{1}{2}$ -inch section is cut from all but two strands of a seven strand wire. The remaining two are left intact. Insulation tape then is wrapped around the wire to suggest that an ordinary splice had been made by British linemen."--British Report, Burma.

c. "In two instances in Burma, the Japs cut British telephone lines and attempted to hide the breaks by binding the cut ends with insulating tape."--Report, Burma.

### III RADIO.

411. Functioning in jungle. a. "Expect radios to fail to function in the jungle. Halts will often have to be made to permit radio contact under favorable conditions. Reception and transmission is best in North Burma during the middle of the day.

b. "Communication for this task force (Merrill's Marauders) was entirely by radio or liaison-type planes until the airfield at Myitkyina was taken. Radios used were the SCR-536, 300, 284, and 177. The SCR-536 was not satisfactory due to the type of terrain and the distances between units. The SCR-300 proved very satisfactory but is heavy and uncomfortable to carry for long distances. To lighten the load, the battery sometimes can be carried by another soldier and plugged in when needed. The SCR-284 was found suitable for air-ground work and for working in the regimental net. It also was used between battalions and reconnaissance platoons."--Col Charles N. Hunter, Burma.

412. Jap interception. "No sooner was our radio communication system set up on Kwajalein than the Japs began to intercept our messages. Many of them spoke good English over the radio."--Soldier, Southwest Pacific.

413. A security method, if available. "We used two American Indians as 'talkers' on the telephone or voice radio when we wanted to transmit important secret messages."--7th Marines, Guadalcanal.

### IV PIGEONS.

414. With each task force. "Pigeons proved valuable in obtaining information from distant patrols. Pigeon detachments should be included with each task force."--HQ, Sixth Army.

415. Train personnel to handle them. "Personnel in each organization should be trained in handling pigeons. Reconnaissance patrols often found pigeons the only means of communication."--Report, Pacific.

V AIR--GROUND LIAISON.

416. How one corps worked it. "The air liaison officer lived at division headquarters and when air support was indicated made personal visits to front line units to determine exactly what air support was wanted. He often would go back and lead the air formation to assure that bombs were accurately placed."--XIV Corps, Solomon Islands.

417. Use of flamethrower to mark front lines. "One division experimented with flamethrowers to assist in marking front lines for air observers. They used short bursts of flame to indicate advance elements. The puffs of the heavy, black smoke went slowly up through the thick trees and were not carried away too quickly by the wind. The smoke was easily seen from the air. The division was not able to complete its tests but believed the method has merit."--Observer, Southwest Pacific.

418. Colored smoke for marking targets. a. "The best target marker for high and medium level bombardment is colored smoke laid by mortars.

b. "For minimum-altitude attacks, a good target marker is a cluster of nine M-16 colored smoke grenades fastened in the top of a tree. Bombing is done on a prearranged bearing from behind friendly lines, and bombs are released at a specified interval after passing the smoke marker."--Army Air Forces Board.

419. White phosphorus grenades. "White phosphorus grenades were used successfully by forward observers to mark front lines and as a signal to lift artillery fire."--USAFFE Board, Admiralty Islands.

## Chapter Fourteen

### I N T E L L I G E N C E

"The greatest problem confronting a commander in this country is to find out what is happening. The fog of war is nowhere more dense than in the jungle. Commanders, from section leaders up, must keep those above them informed of their location and what is happening."  
--Australian Report, New Guinea.

#### I PHOTO RECONNAISSANCE.

420. Don't count on air alone. a. "One week prior to D-Day, aerial reconnaissance of the Los Negros and Manus Islands indicated that no enemy was present. A ground reconnaissance patrol several days later returned with the information that a large enemy force occupied the islands, and indications were that they had been there for some time. Aerial reconnaissance can be used to supplement ground reconnaissance but cannot be depended upon as the sole source of information on which to plan an operation."--USAFFE Board, Admiralty Islands.

b. "Good air photographs, though deemed sufficient by the Navy for selecting landing beaches, did not give the information necessary for ground troops, because the thick jungle growth hides the points of particular interest. Oblique photographs can be of real assistance to water patrols operating from shore to shore in short jumps."--Hq, Sixth Army.

421. Interpretation difficult. a. "Interpretation of photos of jungle areas is difficult. Jungle forests can completely conceal large forces or extensive stores. Even along a shore line fringed with tropical jungle, vertical photographs are of little value. Obliques, unless taken at very low altitudes and from several angles, will not disclose complete details. Artillery positions can usually be detected, but if advantage is taken of breaks in the heavier trees and inequalities of the ground, mortar positions can be completely concealed."--Observer, Arawe.

b. "Photo coverage of the area of operation was made on four occasions prior to the landing. These were semicontrolled mosaics of an approximate scale of 1:7,500 and low-angle obliques. They furnished good information on enemy activities and on the location and nature of water and beach obstacles, but practically all installations inland were camouflaged and could not be seen. There was also a rough change of elevation immediately back of one beach which no interpreter discovered. Photographs were taken both at high and low tide and gave accurate information of reefs and coral shelves."--Observer with 81st Inf Div, Palau.

422. Increase in value during operation. "Oblique air photographs are necessary and increase in value as vegetation is thinned out by bombing or shell fire."--Col Charles N. Hunter, Burma.

#### II AIR OBSERVATION.

423. Use on Saipan. a. "The great value of air observations was evident on Saipan. Reports came in throughout the entire period. Air photographs, however, were not received frequently enough.

b. "The air liaison party constantly received information from the supporting air command over the air liaison net and transmitted it to the regimental S-2.

c. "After an airstrip was in operation, the division air observer went on the air on



the division reconnaissance net. He was available to perform observation missions for the regimental combat teams when not otherwise employed. The system was used effectively several times. The regimental S-2 generally listened to the air observer when he was over the regimental battle zone."--Marine Regt, Saipan.

### III PRE-LANDING PATROLS.

424. "Reconnaissance parties going to an enemy-held island prior to an invasion must be thoroughly briefed; have air photographs available for study; confer with former residents of the area; and conduct intensive landing rehearsals with craft scheduled to assist them. To insure the correct rendezvous the same boat that lands the party should pick it up. It was found that little information of value could be obtained from natives, because they were not permitted to enter the areas of Japanese activity."--Hq, Sixth Army.

### IV JAP PRISONERS.

425. The Jap will talk. a. "Difficulty was experienced in taking prisoners, but G-2 felt that more could have been taken. Valuable information of enemy strength and disposition was obtained from one prisoner. The few prisoners who were taken talked willingly."--Observer with 81st Inf Div, Palau.

b. "A Jap prisoner is valuable but hard to get. We took about 300 all told. They are brought up to think that we are heathen; that we punish, tear and cut to pieces all our prisoners. However, once captured, they talk quite freely. If they don't talk, ask them questions such as: 'What's your name?' and 'Where do you come from?' Generally they will answer correctly, but if we find later that they are not speaking truthfully, we tell them we will send their names back to Japan. Then they open up, for they know that if this happens their families will be punished and persecuted for the disgrace caused by the surrender of father, brother, or son. In general we had to take able-bodied prisoners by force. You don't need many but a trickling of prisoners is necessary from all over the front in order to locate enemy dispositions."--Maj Gen Robert L. Spragins, Guadalcanal.

c. "The threat of physical violence has no effect on a Jap prisoner. The threat of sending his name back to Japan is much more effective. I have seen more than one prisoner who was very belligerent become cooperative after being threatened with having his name sent back to Japan."--Report, Guadalcanal.

d. "Military prisoners were captured in small numbers throughout the Saipan operation. Their interrogation included: name, rank, and unit; locations, plans, effective personnel, equipment, and supplies of own and other units; location and number of artillery pieces, guns, and tanks; information concerning civilians."--Marine Regt, Saipan.

e. "The few Jap officers captured by our unit talked freely and much information was obtained from them."--Report, Guadalcanal.

f. "Take Jap prisoners if possible. They all talk. Most of them will volunteer to work for you if treated half decently."--Col Charles N. Hunter, Burma.

g. "Much to our surprise, Jap prisoners showed no resentment at being questioned by Nisei. They talked as freely to them as to Japanese-speaking white officers."--Report, Guadalcanal.

426. Proper conditions for questioning. "When a Jap prisoner is embarrassed, he does not react too well to questioning. It was found that letting him smoke cigarettes during questioning tended to keep him at ease. Photographing of prisoners should be discouraged until questioning is finished. The number of onlookers during questioning should be held to a minimum."--Report, Attu.

427. Jap civilian prisoners. "It soon became evident that captured civilians on Saipan had little tactical information wanted by regimental S-2's. Their questioning was therefore confined to general subjects including number and location of other civilians or service personnel and general information concerning movements and activities. Because of shortage of time and personnel we questioned only one or two civilians from each group." --Marine Regt, Saipan.

428. And don't forget their diaries. "Jap prisoners give accurate information freely when treated well. A great many Japs keep diaries and a great many notes and military papers are frequently found on their persons. To avoid delay in questioning prisoners, particularly in jungle terrain where evacuation of wounded prisoners may be slow, interrogation teams should be attached to front line units."--Report, Southwest Pacific.

#### V USE OF PROPAGANDA.

429. Loudspeakers valuable. a. "A large percentage of prisoners had to be persuaded by interpreters to come out of caves, dugouts, and other hiding places. This became more effective with the use of public address systems. These had good range and made the work safer for the interpreters. In some cases prisoners volunteered either to talk over the public address systems or go back into caves after their friends. Both methods worked." --Marine Regt, Saipan.

b. "Loudspeaker surrender propaganda was attempted once on Guadalcanal over a three-day period. Thirteen Japs responded. At the time this was considered disappointing. Later we got a better slant on its value. Out of 358 prisoners taken from the time the broadcasts started until the campaign ended, 50 per cent came from units to which the broadcasts were made. Less than 10 per cent of the Japs were where the broadcasts could be heard."--Report, Guadalcanal.

c. "After the bombardment we placed a loudspeaker on the hill and made a speech in Japanese, telling the Japs they were surrounded and that we had given them only a little taste of the bombardment. We told them they now had a chance to surrender and would be treated kindly. One man sneaked out of the pocket and surrendered. Only one man--but he was very valuable. He verified the position of every Jap unit shown on a map we had captured and gave us many other details."--Maj Gen Robert L. Spragins, Guadalcanal.

430. Propaganda leaflets. "While morale was not a determining factor on Saipan, the unprecedented number of prisoners indicate that propaganda does affect the Japs. Many military prisoners had read propaganda leaflets. Almost all said they believed them. Many reported other Japs wanted to surrender but feared their own officers or noncommissioned officers too much to do so. Propaganda leaflets found a ready reception among Koreans, natives of the island and Japanese who were not natives of the main island of Japan. The fact that a number of officers were taken alive reflects some credit on the leaflets."--Marine Report, Saipan.

#### VI VALUE OF INTERPRETERS.

431. Nisei close to front. "Some of the most valuable men in the unit were Nisei--American-born Japanese--who worked as interpreters with the platoons in contact with the enemy. The Japanese sometimes talk loudly before they attack, and on several occasions the Nisei, by telling us exactly what the enemy were shouting, enabled us to get ready for an attack from a particular direction. Once a Nisei lured the Japanese into a trap by shouting orders to them."--Report, Pacific.

432. Not so far forward here. "Ten Nisei were with the division. Initially two were attached to each regimental combat team and four retained at division. Each Nisei was guard-

ed continuously by two men and was not permitted to go forward of the regimental command post. Soon after the operation started, all Nisei were recalled to the division command post, since it was considered too hazardous to have them even as far forward as regiment. This worked well because the island was small. Nisei also used microphones at the mouths of caves to induce Japs to come out."--Observer, 81st Inf Div, Palau.

433. Listened to Jap orders. "When the Jap counterattacks, hit him with everything you have. Our Nisei interpreters were invaluable and when placed in the front lines could invariably predict the point and time of the next Jap assault by listening to the Jap officers shouting orders."--Col Charles N. Hunter, Burma.

434. With forward units. "A qualified Japanese interpreter with forward brigades was found essential for questioning prisoners and examining documents. Documents which contained the Japanese plan for the evacuation of Lae had to be sent back to division headquarters for examination, and the information did not reach the brigade commander for many hours."--Australian Report, New Guinea.

435. Nisei very fast. "There is not one white translator in a hundred who can even begin to compete with the better qualified Nisei in the rapid study of Jap documents. Both their ability and relationship with other personnel have been most satisfactory."--1st Marine Div, Southwest Pacific.

#### VII JAP DOCUMENTS.

436. Plentiful supply. "The Japanese had little chance to destroy vast quantities of documents, and some were found in or near almost every house on the island. Several captured enemy headquarters yielded many documents. All personnel had been thoroughly schooled on the importance of turning over captured documents and material, and cooperation was excellent. Personnel were taught that maps, overlays, and documents which were bound, bordered, or stamped in red were particularly sought. It was impossible for language personnel at regiment to evaluate thoroughly all documents turned in. Important documents were sent immediately to division, and documents of lesser importance only as transportation became available."--Marine Regt, Saipan.

437. Route markers. "On unfamiliar terrain, the Japanese send out small reconnaissance units far in advance of the main body. These units select the route and mark it with signs, usually written on message blanks. Japanese characters on these signs always mention a unit and indicate the route it is to follow, with an arrow showing the direction. The signs often are found at trail junctions. The Japs did this throughout the Aitape campaign. These scraps of paper can give useful information. Patrols should bring back all such signs, noting by grid coordinates where they were found, the direction of the arrow, and a brief description of the surroundings."--Report, Pacific.

#### VIII REGIMENTAL INTELLIGENCE ACTIVITIES.

438. Observation posts. "Our OP team was made up of an officer, four scouts and observers, and one radioman carrying an SCR-300. This team was small enough to conceal itself and yet large enough to afford itself protection."--Marine Regt, Saipan.

439. Patrols. a. Why needed. "It soon became evident on Saipan that a roving patrol from the regimental S-2 section was necessary to trace down and confirm reports of enemy weapons, installations and dead; to cover terrain not covered by observation posts; to supply interpreters for questioning and 'calling out' prisoners; to confirm front line locations; and to provide information of the terrain ahead.

b. Composition. "These intelligence patrols usually included an officer, at least one interpreter, from two to four scouts and observers and at least one photographer. They often used the regimental OP as a base of operations. Communication with intelligence patrols should be the best--radio is essential. The SCR-300 worked well for the job."--Marine Regt, Saipan.

440. Accompany other patrols. "I find it helpful to have each patrol going into enemy territory accompanied by one member each from the battalion intelligence section and the regimental intelligence section. These men submit separate reports on details of the patrol's movements and other activities."--Regtl Comdr, Bougainville.

441. Training program for S-2 personnel. "In preparation for Saipan following the Marshall Islands' operation, map reading, scouting and patrolling, and observation post procedure were given the greatest stress in our training. Approximately 70 per cent of the training hours were devoted to the three subjects. At least 50 per cent of the training took place in the field away from camp. A man cannot be trained in camp for the rigors of campaign. In field work, use of the compass, map orientation, sketching, observation of simulated enemy activity, and patrolling in jungle, mountain and open country had a high priority."--Marine Regt, Saipan.

442. Training for all officers. "Lack of knowledge of map reading and terrain appreciation shown by some officers and noncommissioned officers on Saipan was inexcusable. These subjects should be doubly emphasized in all intelligence schools."--Marine Regt, Saipan.

443. Training in identifying landing craft. "On one occasion the Japanese landed a small force just outside the beachhead. It was unopposed even though under the guns of a tank platoon, because members of the platoon failed to recognize the boats as Japanese. Training in identification of landing craft is essential for all antitank elements inasmuch as they are often used for beach defense. Such training is also valuable for anti-aircraft batteries which frequently are on a beach and could help an anti-boat defense."--3d Marine Regt, Bougainville.

## IX SOUVENIR HUNTING.

444. The problem. a. "Souvenir hunting continues to be a problem. It is hard for some men to realize that a scrap of paper or a metal plate with a few foreign words on it can be of military significance.

b. "Souvenir hunters often carried away or destroyed much material of value. Almost all enemy documents, personal papers, weapons, and equipment were so rummaged through and scattered about that their eventual salvage was delayed or made impossible. Souvenir hunting was not confined to any one unit but was also undertaken by construction battalions, defense forces and ship crews who came ashore after the assault was over. By midafternoon of the first day, considerable damage had been done. Houses and barracks were stripped almost as fast as they were taken.

445. One solution. "The brighter side of the picture is illustrated by a statement of a high-ranking American officer who fought the Japanese on Rendova: 'If handled properly, souvenir collecting pays dividends; if not, it hurts morale and ruins an excellent source of information. Our rule was that a soldier could keep a souvenir if he were given clearance by his company commander, the intelligence officer and the ordnance officer. The men cooperated, and it was through souvenirs brought in by collectors that we knew, two hours after we reached Rendova, the enemy's strength and dispositions over the previous two months period.'"--Report, Pacific.

446. Use of "grab bag". "Establishing a 'grab bag' was effective in getting troops to turn in Jap documents and equipment. This 'grab bag' contained items of no intelligence value but did contain material suitable for Japanese souvenirs, such as post cards, stationery, shoes, caps and propaganda literature. This propaganda literature was prized because the troops got a good laugh at the 'corny' pictures and verses. Here's the way the 'grab bag' worked: Soldiers showed all their captured material to members of the intelligence section. If it had no intelligence value they were allowed to keep it. If it did have value, they turned it in and in return were permitted to make a selection from the 'grab bag'."--Report, Admiralty Islands.

#### X INFORMATION FROM NATIVES.

447. Two conflicting reports from Burma. a. "Information furnished by natives was generally reliable though not always accurate in detail. Its accuracy usually depended on the type of native reporting, the interpreter through whom the information was transmitted, the length of time the native had to gather the information and the delay in our receiving it. I can recall no instance when natives reported Japanese that the Japanese were not found at the place reported. However, the size of the force sometimes had been incorrectly estimated."--Col Charles N. Hunter, Burma.

b. "Security precautions should be taken with regard to natives in Burma. We have found ammunition and arms in baskets carried by coolies who had passed through our lines enroute to rice fields. Neither refugees nor natives should be permitted to approach our positions at any time. Officers and men must be careful not to allow Jap spies to enter camp disguised as natives offering their services. An illiterate-looking native may understand English very well, but not give you the slightest indication he does. We believe that the natives have done a lot of signaling at night by fires. They must have fires, of course, but we have noticed that sometimes these have been very large and have burned well into the night--unusual occurrences in native villages. Planes flying overhead or patrols from the hills can get information from fire signals."--British Report, Burma.

448. Remember native standards. "Evaluate native intelligence thoroughly but don't hesitate to act on it. Remember that a native thinks that any trail he can get over in wet weather is a good trail."--Col Charles N. Hunter, Burma.

449. Natives as scouts. "We made much use of native scouts. We would send two or three natives out together but question them independently on their return."--New Zealand Report, Vella Lavella.

#### XI MISCELLANEOUS.

450. Distribute information early. "All material relating to an operation and which is available prior to departure from the base should be distributed so as to be certain it reaches all personnel. This does not violate security. The uncertainty of destroyer transfer of documents at sea cannot be overemphasized."--Marine Regt, Saipan.

451. One security plan. "As a security measure, officers were identified by their first or last name. This practice was started aboard ship to familiarize troops with the names of officers, and was used throughout the operation. We think this method is detrimental to discipline. We feel a system of code names for commanders would be more satisfactory and just as effective."--Canadian Officers with 27th Inf Div, Saipan.

452. A tip and a warning. "Due to the amount of vital information we had taken from captured Japanese message centers we decided we wouldn't make the same mistake. Command

post installations were usually in the foxhole of the unit commander. Papers of possible value to the enemy were destroyed or sent to the rear."--1st Marine Div. Guadalcanal.

453. Jap removal of dead. "The Jap's fanatical insistence on removing his dead makes it difficult to estimate remaining Jap strength during an engagement. They will crawl to within a few yards of our positions to remove a wounded man or a corpse. The dead are cremated or buried."--Report, New Guinea.

454. Moving of supplies at night. "The Jap in Burma is very conscious of the need for secrecy in moving supplies. Two major Jap offensives were launched undetected despite practically continuous Allied air reconnaissance. No movement or forward concentration of supplies were noticed. This was accomplished by moving supplies, whether on motor transport, carts, pack animals, coolies or river craft, at night only. During one six-months period in the Arakan the enemy was supplying a division. Yet only two motor transports were reported by air reconnaissance during this period."--Report, Burma.

## Chapter Fifteen

### M I S C E L L A N E O U S

#### I EFFECT OF THE JUNGLE ON OPERATIONS.

455. Advance in the jungle. a. "In jungle advances, distances are greatly reduced. Advance guards often operate from 50 to 100 yards in front of the main body with connecting files correspondingly as close. It is almost impossible to provide protection for any one column. Advance through the jungle on a wide front requires the use of multiple columns with men in each column moving single file."--XIV Corps, Solomon Islands.

b. "The steep hills and the dense vegetation and swamps somewhat 'canalize' our advance. Flank security is much reduced. It is difficult to send units more than a few hundred yards to the flank and maintain contact with them. It is nearly impossible to have flank security patrolling abreast of moving columns. If we are to make any headway we must take that risk. This means shorter distances between units and reduced fronts."--Inf Regt1 Comdr, Southwest Pacific.

c. "Don't put troops in a skirmish line until actual physical contact is made. Keep them in squad columns with two scouts in front of each squad."--Maj Lou Walt, 5th Marines, Guadalcanal.

d. "In one advance the Japanese let us come through and then rose up out of covered foxholes--which are easily camouflaged in the jungle--and shot us in the back. The best cure for that is a rear guard looking towards the rear."--Sgt. O. J. Marion, 5th Marines, Guadalcanal.

456. Jungle marches. a. "When on jungle trails, we have some men at the rear of each platoon carry light loads so they can get their weapons into action quickly against ambush fire from the rear."--Plat Sgt J. C. L. Hollingsworth, 5th Marines, Guadalcanal.

b. "Here is a practical means of controlling a march on a winding trail in this hot country. Marches in the jungle take a lot out of the men. The weak ones will say, when the march gets tough: 'Hold it up!' This will be passed on up to the front and the column will stop when you don't want it to. So we use the letter 'H' plus a numeral code meaning to halt. Only the leaders and the point know what numeral we will use, and we change the numeral. For example, we will use 'H 2' the first two hours, then 'H 7', etc."--Lt Col N. H. Hannekan, 7th Marines, Guadalcanal.

c. "Remember that in jungle terrain even cautious scouts leading an advance may move too rapidly for the men carrying heavy weapon loads in the rear. Leaders must constantly check the rate of advance or some impatient and over-heated man may pass the order up the line to 'hold it down,' or by making a noise give the unit's position away."--Report, Bougainville.

d. "All units, especially infantry, should be jungle navigators. They must be able, by surveying methods, to tell where they are in the jungle at all times. They must be able to go to a point on the ground which is pointed out to them on an air photograph or map."--Maj Gen Robert L. Spragins, Guadalcanal.

457. Jungle attacks. a. "Jungle attacks are habitually limited objective attacks for many reasons. Time must be taken to determine enemy dispositions, to reorganize, and to build roads and bridges."--Maj Gen Robert L. Spragins, Guadalcanal.

b. "In the jungle we require all platoon leaders to designate an objective every 100 yards. They work to it, reorganize, and don't push off for the next objective until they get the word from the company commander. I control my companies the same way."--Maj Lou Walt, Bn Comdr, 5th Marines, Guadalcanal.

c. "Boundaries in the jungle are often impossible to designate. Compass directions, frontages, base units and connecting groups between units are necessary substitutes."--Maj Gen R. L. Spragins, Guadalcanal.

458. Jungle withdrawals. "I will never again tell my platoon to withdraw--especially in the jungle--without telling it where to go. I had a hell of a time getting them together."--Report, Southwest Pacific.

459. Get off the trails. "Most of our casualties have been inflicted by machine guns covering trails. Units that move slowly and carefully, off trails, have been successful in driving the enemy out of his positions and inflicting heavy casualties."--Report, Southwest Pacific.

460. Jungle leadership. "In the jungle the platoon leader can't see all his platoon, and the squad leader can't see all his squad. It is often desirable for the squad leader to split his squad and give half to his second in command and keep half himself. There is no type of warfare that puts such a premium on the junior commander. No higher commander can help when small units are out there in the jungle by themselves. Their leaders are on their own and have to control their men."--Maj Gen Robert L. Spragins, Guadalcanal.

461. Don't give your position away. a. "Individuals and small units, well-screened from observation by jungle growth, frequently gave their positions away by movement of trees and bushes. Soldiers must learn not to pull up or brake themselves by grasping trees, bushes and vines when climbing or coming down steep jungle inclines."--Report, New Guinea.

b. "The Japs in the jungle often made the mistake of brushing against small trees and shrubs. I teach my men to move in dry brush and bamboo only when the wind is blowing, if possible."--Lt, Bougainville.

462. Snipers. a. "In arranging for our men to act as jungle snipers; we first paired them up and instructed one man to observe and the other to snipe. But since then I have found that this second man can be better used if he acts as a rear guard for the sniper rather than as an observer-assistant. I have found that this gives the men more confidence and results in less fatigue and surer shots, since watching in all directions is a considerable strain."--Lt, Bougainville.

b. "Whenever we occupied a new position in the jungle we immediately sent out a sniper screen of three men per platoon. Camouflaged, they went out about 40 or 50 yards and covered the most likely avenues of approach throughout the hours of daylight."--British Report, Burma.

463. Booby traps. a. "Booby traps should be used at night, but all the normal precautions listed in the field manuals must be taken. Green troops suffer casualties from their own booby traps, particularly if they move forward after putting them out. This is especially true in the jungle because they cannot find them to remove them even when they think they know where they are."--Col Charles N. Hunter, Burma.

b. "Electric detonators were not satisfactory for booby traps laid in the jungle unless all parts of the system were completely waterproof."--Report, Biak.

c. "The practice of stretching three or four conspicuous wires across the trail and not



attaching booby traps to them has worked against the Jap. It tends to make him less cautious when he comes up to real booby traps."--Report, Biak.

464. Jungle noises. a. "Get used to weird noises at night. The land crabs and lizards make a hell of a noise rustling leaves and there is a bird here that sounds like a man banging two blocks of wood together. There is another bird that makes a noise like a dog barking."--Cpl E. J. Byrne, 5th Marines, Guadalcanal.

b. "In the jungle, the noise made by operation of the bolt on the Japanese caliber .25 rifle is usually not heard more than 15 feet away."--Report, Pacific.

465. Sketching in jungle fighting. "One of the most helpful things I have learned about jungle fighting is how to make a map. I have each platoon leader make a rough sketch of the terrain to the immediate front of his platoon. The company commander then consolidates these platoon sketches and the battalion consolidates the company's work. I do not believe it practicable to have maps consolidated by units larger than a battalion. We have found these consolidated sketches to be more valuable than air photographs, which usually just disclose a mass of trees, or issue maps, which give little detailed information. These consolidated sketches not only give me the information needed for use of infantry but are very valuable when employing tanks."--Task Force Comdr, Southwest Pacific.

466. Orienting front line units. "In dense jungles, front line units are often unable to determine their ground position on the map. Prearranged artillery fire--either by a battery or a single gun--has been used to orient units."--Observer, Southwest Pacific.

467. How Japs mark trails at night. "To aid night movements in the jungle, the Japs use phosphorescent wood, vines and ropes. Phosphorescent wood and vines are plentiful in the jungles. Jap soldiers usually carry a length of rope. How they use these materials is indicated in the following enemy instructions:

a. "Materials for marking should be prepared during daytime; luminous wooden markers, however, will be prepared the night before.

b. "Luminous wooden markers should be placed higher than a man's head. Vines and ropes should be placed hip high. The wooden markers should be tied to a tree or inserted between the thick vines that surround the trees.

c. "Steep cliffs, holes and other places of danger should be blocked off with vines and ropes and marked by luminous markers.

d. "When the marker is dried out by the sun, illumination will decrease; therefore, it is necessary during the daytime to place it on moist ground and in the evening to dip it in water."--Report, Pacific.

## II GENERAL NOTES ON ATTACK.

468. Unusual use of air support. "A novel method of air support was used by the British when attacking a hill in the Arakan. Two attacks, preceded and supported by heavy and accurate artillery fire and dive bombing, had failed to carry the position. On the third assault, a dummy strike against the position was made by six Vengeance aircraft. The first plane dived at H-hour and dropped no bombs. When the Japs took cover the infantry walked into the position, covered by the dummy dives of the remaining five aircraft. The previous use of delay-action bombs also contributed to the success of the ruse."--Observer, Burma.

469. Fire power will keep Nips down. "In fast action riflemen are inclined to forget that our BARs and rifles frighten the Nips as much as their light .25 caliber machine gun frightens us. Often they duck when the Japs are shooting and fail to return the fire. The

Jap keeps plenty low and his fire is ineffective when he is under concentrated fire power."  
--Lt, Bougainville.

470. How to move forward. a. "When advancing through the coconut palms the matter of keeping contact seemed to worry the men the most. If they thought they were getting too far ahead of the line, they had a tendency to stop in their tracks. A high percentage of the men shot by Jap snipers were hit when standing still.

b. "Better tactics for an advance when not moving against fortifications were these: Advance by individual rushes from one tree or cover to another, going into the new cover in a head-and-rifle first dive. Then lie there a few moments to recover wind, make a careful examination overhead, check the positions of the file on the right and left, and get ready to cover them with fire when they rush forward. Then grenade any bush in the immediate foreground that looks very dangerous and quickly rush forward again when the situation is clear.

c. "Some skirmish lines moved forward at what looked like a stealthy pace. Yet it was not stealthy because they rarely hit the dirt unless they heard a rifle crack--which meant that the enemy usually got in the first shot. In short, the advance did not adhere to the principle of a minimum exposure for the smallest possible time, and it did not result in careful searching."--Lt Col S. L. A. Marshall, Makin.

471. Meeting Jap delaying tactics. "We began to meet resistance from close range. The limit of visibility at this point was about 100 yards. The Japs waited until we came just into vision limit, fired five or six rounds, retreated 100 or 200 yards and repeated the performance. Their marksmanship was awful and none of us was touched, but they were holding us up. Finally, I placed the platoon in a formation of two squads forward and one in support. The leading squads were in a skirmish line, and the support squad was in a squad column. We all took turns being bait. Acting as scouts, one or two men advanced ahead of the platoon about 60 yards. When the Japs fired on them, they simply hit the ground and lay quiet. The rest of the platoon immediately fired on the sound of the Jap guns. I was surprised at the number we knocked off in this manner. In about one hour we either had killed them or they had definitely retreated. I feel that if a continuous advance is made against the Jap he becomes confused and doesn't quite know what to do next."--Lt, Attu.

472. Don't be "trigger happy". "One element of confusion on Makin was the tendency of our men to fire indiscriminately and without order at trees in the immediate foreground. When men in one group would fire ahead of them, another group slightly off to the flank would mistake the crack of their carbines for the fire of enemy snipers. They would then return the fire, and the group which had opened up the exchange would believe it had flushed some game."--Lt Col S. L. A. Marshall, Makin.

(NOTE: There are numerous occasions in which soldiers should fire on suspected enemy strong points without seeing a definite target. For example, many instances have been reported of firing into trees to stop snipers. This fire is planned and is a definite part of the method of operation. Wild and confused firing without plan is another matter.)

473. A mopping up plan. "When operating in country such as Makin--keeping in mind the Japanese habit of harassing advancing troops with sniper fire from the rear--mopping up becomes of extreme importance. One colonel on Makin felt that two waves, each of company strength, beating the bushes and searching all cover minutely behind the assaulting company might prove the most profitable method of distributing troops."--Lt Col S. L. A. Marshall, Makin.

### III JAP WEAPONS.

474. Jap grenades. a. "Japanese fragmentation grenades are supposed to break into fragments when fired but frequently they split into only two pieces. The dispersal area was never greater than 20 feet. The Jap grenade does not make a 'pop' sound when the fuze ignites but it usually shows smoke and makes a hissing sound about three seconds before exploding."--Report, New Guinea.

b. "The Jap invariably starts lobbing hand grenades when we get close to his position. If we halt or retreat, we get as many casualties as if we go forward with all possible speed. Wounds caused by Jap grenades frequently are very slight. I saw 50 men wounded by grenades in one small action and almost every wound was superficial. The Jap grenades simply do not have the power and fragmentation that British, American and Australian grenades have."--Observer, Burma.

c. "A new Jap hand grenade, the size and shape of a baseball, was found on Leyte. The grenade body is made of white porcelain or glazed pottery and is covered with a close-fitting tan rubber cover. The thrower must be careful not to strike nearby hard objects as the porcelain shatters easily. This grenade is ignited by removing a rubber fuze cover and scratching the exposed striker block across an attached match-head composition. It also seems possible to light the fuze with a cigarette. The grenade should be thrown as soon as the fuze is lighted."--Report, Leyte.

475. Machine guns inaccurate. "The Jap heavy machine gun is slow firing and is not as good as our heavy gun. Nor is their light machine gun as good as our light one. At 30 or 40 yards their light machine gun shoots a pattern the size of a big wastebasket. It has a high cyclic rate and sounds much like our Thompson submachine gun."--Maj Gen Robert L. Spragins, Guadalcanal.

476. Sound of Jap weapons. a. "In training, fire some captured .25 caliber ammunition in captured rifles and machine guns to let American soldiers know the sound."--Maj Ben J. Northridge, 164th Inf Regt, Guadalcanal.

b. "Inexperienced soldiers on Guadalcanal had difficulty in distinguishing between the sound of the Japanese caliber .25 (6.5mm) rifle and that of the American caliber .45 tommy gun or pistol. However, after a little experience, they discovered that the Jap rifle has a slightly sharper crack."--Report, Southwest Pacific.

477. The "knee mortar". "One thing that impressed me was the accuracy of the Japs with their grenade discharger (knee mortar). Our machine gunners will live longer if they change positions frequently."--Sgt, Attu.

### IV EFFECT OF JAP WEAPONS.

478. "Most of the wounds our forces received in the Solomon Islands were not serious. Unless a vital spot is hit, the Japanese .25 caliber weapons do not inflict bad wounds."--Report, Solomon Islands.

### V TRICKS WITH GRENADES.

479. A last-ditch ruse that worked. "A party of nine men in Burma found themselves cut off and surrounded by a Jap force. The section commander gave orders for every man to throw a grenade without pulling the pin and, yelling as much as possible, to dash through the Japanese while the Japanese hit the ground to take cover. This ruse worked like a charm and the seven managed to break through the net. The remaining two were captured; of these, one died of wounds and the other seized an opportunity to bayonet his sentry and escape."--British Report, Burma.

480. Leaving a grenade behind. "One night a Jap jumped into one of our sergeant's fox-holes. The sergeant pulled the pin of a hand grenade and jumped out. There was a hell of an explosion and one less Nip."--Cpl Fred Carter, 5th Marines, Guadalcanal.

#### VI TROOP ERRORS.

481. Must be aggressive. "It is easy for the advance to be held up for 24 hours or more if forward troops are 'sticky'. On occasion, a few bursts of automatic fire pinned companies to the ground and caused them to form perimeter defenses early in the afternoon. Swift action, using practiced battle drills, might have cleared the enemy post and allowed an advance the same afternoon."--Australian Report, New Guinea.

482. Too much high firing. "The men in my squad fire low at the base of the trees. There is too much high firing going on."--Cpl J. S. Stankus, 5th Marines, Guadalcanal.

#### VII TRAINING SCOUTS AND SNIPERS.

483. Selection of personnel. "When selecting men to be trained as snipers, care must be taken to choose soldiers capable of acting on their own. This means steady nerves, physical strength, agility and patience. They must have good eyesight and be natural marksmen.

484. Training. "In training one group of snipers, I used a difficult 'snap' course with targets camouflaged and concealed. I also had a stalking exercise. I placed two men 100 yards apart, indicated a direction of advance toward each other and limited them to a 30 yard front. The first one to see his opponent would 'snap shoot' (using blank ammunition, of course) if necessary. However, if he was sure he was not seen, he would take cover and wait for an accurate well-aimed shot. Then I worked groups of five men against five. The competition was keen and sometimes the men were practically face to face before seeing or hearing each other. I believe this is one of the best ways to train snipers, scouts, and even riflemen."--Lt Raymond H. Ross, Bourgainville.

#### VIII WORKING WITH CHINESE UNITS.

Source: Col Charles N. Hunter, Burma. (NOTE: Col Hunter was second-in-command and at times commanded the task force popularly known as Merrill's Marauders.)

485. Estimating unit sizes. "A Chinese unit on the march looks large compared to an American unit of the same potential fire power due to the large number of coolies. The coolie, uniformed as a soldier, carries no arms and is not expected to fight.

486. Personal characteristics of a Chinese soldier. a. "The Chinese soldier is brave to the point of rashness. He is a fatalist and seems to show no fear.

b. "The Chinese have been fighting the Japanese for over seven years. They resent advice and instruction from Americans without combat experience.

c. "'Saving face' is important among the Chinese. For example:

(1) "Some officers establish their command posts on the highest ground in the vicinity for the purpose of making face, even though this is not always the best place to be.

(2) "American soldiers gladly carry Chinese wounded, but Chinese soldiers lose face if forced to carry American wounded. This is coolie work.

(3) "Chinese lose face if assistance is offered. One soldier does not offer to carry another struggling soldier's pack--the struggling soldier would not accept the offer. This custom is carried over into tactics. If a unit is in difficulty, an adjacent unit will not

help it out, unless strong pressure is brought to bear. The principle of mutual support and coordination of effort is hard to put across.

d. "The Chinese soldier is a great scavenger and picks up everything on the ground. This is not considered stealing and is difficult to cope with, as it is a constant source of friction. Never having owned any property of his own the Chinese soldier has little respect for the property of others. Also he believes Americans have a never-ending source of supplies of all types.

487. Typical military technique. a. "Food supply is of especial importance. Chinese units will not move forward if they are not fed.

b. "Chinese have a liking for night firing and have a tendency to fire all night. One division commander ordered a certain amount of ammunition fired at 2000, 2300 and 0200 hours nightly.

c. "Chinese do not combine fire and movement. The Chinese system seems to be fire, then move. The Japanese know this and stay down while the firing phase is going on, then meet the advancing Chinese with plenty of automatic fire.

d. "Good Chinese soldiers and units are not committed where they will be shot up badly. A Chinese battalion commander, asked why he had his cooks up where his point should have been, answered: 'But they are very bad cooks.'

e. "A Chinese regimental commander in moving forward to the attack removed his telephone from Force Headquarters and took up his wire. It was his only means of communication to the rear. Telephones and telephone orderlies seem to go together, and if an orderly leaves, his telephone is liable to disappear with him.

f. "Map reading ability is not good among Chinese officers and is practically non-existent among noncommissioned officers."

#### IX IS HE JAP OR CHINESE?

488. "The similarities between Japanese and certain Chinese make it almost impossible for Americans to positively identify disguised Japanese. These rules may be of some aid in doubtful cases:

a. "Japanese tend to have heavy beards and much body hair in contrast to the particularly beardless South Chinese whom they most resemble.

b. "Japs usually have poor teeth. They frequently have much dental repair with gold fillings.

c. "The Jap language contains no equivalent of the letter 'l'. Practically no Chinese have any difficulty with the 'l' sounds. Try a suspect with a sentence such as 'Robin left the lousy rug.' A Chinese from North or Central China normally would say it much as originally given. A South Chinese would tend to say, 'Lobin left the lousy lug.' A Jap would likely say, 'Robin reft the rous-sy rug.' In addition to his trouble with 'l' the Jap tends to hiss the 's' sound. Japs habitually inhale quickly through their teeth at intervals when talking.

d. "The suspect's underwear may be an indication. If he is merely a Jap soldier in disguise and not a well-trained agent, he may wear a loin cloth of light cotton material, similar to our athletic supporter. He might be wearing a 'belt of a thousand stitches'-- a wide, embroidered, cloth belt supposed to bring luck in battle."--Intelligence Bulletin.

#### X JAP USE OF DOGS.

489. On scouting parties. "The Japs used dogs on the Burma front. They looked like ordinary village mongrels. In the daytime these dogs were seen coming up to our forward defended positions and when they discovered our men, they barked and went back. This may have been simply a coincidence. Once a dog and two Japs formed a scouting party, the dog

preceding the man. When the dog smelled our nearby troops he was seen to run back and warn the approaching Japanese scouts. Once, six Japanese in an open glade halted and their leader barked like a dog. Several minutes later a dog appeared with a scrap of paper, probably a note, tied to his neck. After looking at the piece of paper the patrol set off again accompanied by the dog."--Report, Burma.

490. Don't fire on dogs. "Japs often use dogs to attract fire to locate the positions of our automatic weapons. American troops should avoid firing at dogs."--Merrill's Marauders, Burma.

#### XI WORKING WITH PACK ANIMALS.

491. Animals must be dug in. "When working with animals it must be remembered that the animals must be dug in when the unit takes up a defensive position."--Col Charles N. Hunter, Burma.

492. Off trail in pairs. "When ordered to get mules off a trail quickly, take them off in pairs. They go more willingly and do not bray so much."--Merrill's Marauders, Burma.

#### XII TIP ON LOCATING ENEMY.

493. "Sudden flights of birds or animal noises may indicate the presence of enemy, and the birds' direction of flight may indicate the enemy's direction of approach."--Report, New Guinea.

#### XIII MARKING FLANKS FOR COVERING FIRE.

494. "A platoon had to be withdrawn across a river under covering fire of another platoon on the opposite bank. To let those covering know just where they could fire, the lieutenant of the withdrawing platoon had his men take off their undershirts and put them on the river bank to mark the flanks of the crossing."--Maj John Jones, Burma.

#### XIV CUTTING RIBBON WIRE.

495. "Ribbon wire, resembling ordinary box strapping, was strung between rows of Jap barbed wire. Although not particularly tough it cannot be cut by wire cutters because when the cutters are closed the blades are still a fraction of an inch apart. Troops have had to blow it apart with bangalores or bazookas. It can be cut easily with tin snips or heavy shears."--Report, Pacific.

#### XV JAP SNIPERS COVER THEIR DEAD.

496. "The Japanese make strenuous efforts to recover their dead. On one occasion our men attempted to bring in a Jap body for identification. They quickly discovered that a Jap sniper had been posted with the sole object of keeping our men away. This Jap desire to recover bodies can be exploited. Covering bodies with fire may pay dividends."--British Report, Burma.

#### XVI JAPS BURY EQUIPMENT.

497. "Sometimes the Japs buried their equipment. We discovered whole piles of it covered with dirt. They had the stuff well oiled and greased. At night they crept in, dug up the equipment and used it on us."--Soldier, Southwest Pacific.

## XVII GOOD BOOBY TRAP "BATT".

498. "The Japs were very fond of our machine guns and 'tommy' guns and made great efforts to capture them. Because of the Japs' fondness for our equipment, we found that booby traps could be successfully baited with our guns and grenades."--Cavalryman, Admiralty Islands.

## XVIII JAP FALLS FOR DUMMIES.

499. "The Jap usually confines his night air activities to small nuisance raids. The judicious use of dummies in obvious locations has been valuable. During one night raid a Jap bomber dropped two flares and saw a dummy LCV anchored in a natural position in the harbor. That dummy was the objective of a lot of his bombs."--Observer, Arawe.

## XIX USE OF FIELD GLASSES.

500. "It is helpful, when using field glasses in this tropical sun, to cup your hand over the front end to keep out the glare."--Cpl J. S. Stankus, 5th Marines, Guadalcanal.

## XX GUIDES IN PAIRS.

501. "Guides frequently were used to take troops forward to a new position. In many cases only one guide was available and he alone knew the route. Had he become a casualty much confusion could have resulted. Guides should be sent out at least in pairs and should carry a road chart or map showing the route and location of the new area."--Canadian Officers with 27th Inf Div, Saipan.

## XXI DON'T TAMPER WITH JAP AMMUNITION.

502. Explosive bullets. "Three types of explosive and incendiary small-arms ammunition have been captured from the Japanese. Serious injuries have resulted when soldiers have tampered with it out of ignorance or curiosity."--Report, Pacific.

503. Mortar duds. "Some of our men were killed when they examined Jap mortar shells. Hundreds of them turned out to be duds, but some were not. Result--instant death."--Master Gunnery Sgt R. M. Fowle, 7th Marine Regt, Guadalcanal.

## XXII SHOUTING COMMANDS IN JAPANESE.

504. "British-Indian units in many cases have learned a few Jap words and have found it is an excellent ruse to shout commands at Jap attackers to create confusion."--British Report, Burma.

## XXIII NIGHT TRAINING IMPORTANT.

505. "Troops who intend to fight the Japs must be trained so they can do anything at night that they can do by day. An occasional night exercise is not sufficient. Units must be made to operate all night for many consecutive nights. They must be trained to be quiet at night in forward areas. A prisoner told us that Jap night patrols have no trouble avoiding our positions and gather valuable information by simply listening to our troops talk."--Observer, Burma.

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