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OCTOBER, 1945



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THIS MONTH'S COVER shows a white-painted, camouflaged 155-mm gun firing a Tac R mission with the aid of a Spitfire near Loiano, Italy, last winter.

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The Field Artillery Journal

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A Field Artilleryman as Superintendent of the U. S. M. A.

Maxwell Davenport Taylor

Maj. Gen. Maxwell D. Taylor was born in Keytesville, Missouri, on August 26, 1900. He attended the Kansas City Junior College, Missouri; was graduated from the United States Military Academy, West Point, New York, on June 12, 1922; and on the same date was commissioned a second lieutenant, Corps of Engineers.

PROMOTIONS

On July 7, 1926, he transferred to Field Artillery. On February 2, 1927, he was promoted to the rank of first lieutenant; to captain on August 1, 1935; to major on July 1, 1940; to lieutenant colonel (temporary) on December 24, 1941; to colonel (temporary) on February 1, 1942; to brigadier general (temporary) on December 4, 1942; to major general (temporary) on May 31, 1944.

SERVICE

He was first assigned to Fort Humphreys, Virginia, where he enrolled in the Engineering School. Upon completion of this course in March 1923 he was transferred to Camp Meade and joined the 17th Engineers. In May 1923 he proceeded to Schofield Barracks for duty with the 3d Engineers. He became Aide to Maj. Gen. William R. Smith, Commanding General of the Hawaiian Division and of Schofield Barracks in July 1925. In June 1926 he returned to the United States and was stationed at Camp Lewis with the 6th Engineers. He transferred to the Field Artillery in July 1926 and served with the 10th Field Artillery until June 1927, when he sailed for Paris, France, to study the French language.

Returning to the United States the following September, he was ordered to West Point, N. Y., as an instructor of French and Spanish at the United States Military Academy. In August 1932 he enrolled in the Field Artillery School at Fort Sill. In August 1933 he was ordered to Fort Leavenworth to attend the Command and General Staff School. Upon graduation from the two-year course in June 1935 he sailed for Japan, and the following November was stationed with the American Embassy at Tokyo as a student of the Japanese language. At this time he completed a tour of inspection of Japanese Army Units.

In September 1937 he was detached for duty at Peking, China, as Assistant Military Attache, and in December of that same year returned to his post at Tokyo. In June 1939 he sailed for the United States, where he enrolled in the Army War College, Washington, D. C. At the completion of this course in June 1940 he proceeded on a special mission to the Latin American countries.

In December 1940 he was assigned to Fort Sam Houston for duty with the 12th Field Artillery. In July 1941 he returned to



Washington for duty in the Office of the Secretary of the General Staff, where he remained until July 1942 when he was transferred to Fort Bragg as Assistant Division Artillery Commander, 82nd Airborne Infantry Division. He went overseas in March 1943, and a year later, in March 1944, became Commanding General, 101st Airborne Division, in the European Theater of Operations.

In August 1945 he was assigned to be Superintendent of the United States Military Academy, West Point, N. Y., this order being effective 1 September 1945.

DECORATIONS

In July 1944 he was awarded the Distinguished Service Cross, with the following citation:

"For extraordinary heroism in action against the enemy on 6 June 1944, in France. Landing with his parachute unit in enemy territory and in the face of intense enemy fire, General Taylor quickly organized the control elements of the Division Headquarters. Perceiving that the important causeway at * * * could not be taken by the unit assigned that mission, General Taylor personally led elements of the Division Headquarters and other special troops in an attack on the causeway. General Taylor led the successful assault and seized the causeway, thereby clearing the way for the advance of seaborne units. The courage and outstanding leadership displayed by General Taylor reflects great credit on himself and is in keeping with the highest traditions of the Armed Forces."

He was awarded the Silver Star in September 1943 for volunteering for a mission "with complete disregard of the imminent danger involved and without thought of personal safety," in connection with the conference with Marshal Badoglio in Rome, behind the German lines, before Italy's surrender.



Field Artillery Groups

By Maj. Gen. John A. Crane, USA

ADMINISTRATIVE FUNCTIONS OF GROUPS

By the provisions of Circular 439, 1944, administration within the group is the responsibility of the group headquarters. The circular stated that, whenever practicable, continuity of command would be encouraged by "the retention of assignment of battalions to groups." At first glance it seemed that the old regiment was being restored under another name. The field artillery regiment gave its battalions a legitimate home without sacrificing tactical flexibility entirely. Additional battalions were attached as the situation decreed, or assigned battalions were detached from their own regiment and attached to another, or to some division or task force. There was even some horse-trading of battalions between brigades and corps. To heighten the resemblance of the new group headquarters to the former regimental headquarters, administrative sections were added to their T/O & E's.

In practice, at least in the Mediterranean Theater, the resemblance proved more apparent than real. Group commanders accepted the new adjutant and the additional personnel thankfully, because the volume of incidental paperwork in connection with their attached battalions had in many cases tied down group executives and limited their tactical duties. But the new administrative functions of groups, authorized in general terms in Circular 439, were not laid down

in detail and did not materialize. Because group headquarters were organized largely as tactical headquarters, and because the operational situation frequently demands the employment of non-divisional battalions in various areas and under various commands, field artillery battalions in the Mediterranean Theater continued to be attached, rather than assigned, to group headquarters.

This administrative discussion is theoretical to the extent that the system of having battalions assigned to groups was not tried. To the extent that we recognized very clearly the need of a home for battalions and were not able to assign battalions to groups, our experience is valid.

The administrative functions of a group with battalions attached are not especially important.

Group commanders may not arbitrarily issue orders reassigning personnel from one attached unit to another. A group commander could, after obtaining the concurrence of the battalion commanders concerned and Army's approval, publish such an order, but it was the policy of Fifth Army that Army Headquarters issue the orders.

Article of War No. 9 governs the appointing of special courts-martial. A group commander, unless the battalions were assigned to the group, would only appoint special courts for the personnel of his headquarters. The commanders eligible to appoint investigating officers and boards of officers depend on the type of investigation or board proceeding to be conducted. This is governed by AR 420-5 and the AR immediately relative to the type of investigation or board proceedings, but in practice the battalions did this work themselves.

Group commanders, if battalions are attached, comment on and recommend approval or disapproval of such problems as promotions, awards, assignments, etc., but before group headquarters may take any action the battalion commanders concerned and the command to which the battalions are assigned have to give concurrence in all actions not covered by specific regulations. Except where modified by theater or army headquarters, a group commander having battalions assigned would have full administrative control over his battalions. An example of the type of restrictions an army may impose was Fifth Army's Supply Directive, which specifically forbade the consolidation of requisitions by intermediate headquarters.

It is pointed out that most of Circular 439 deals with battalions assigned to groups, which arrangement would appear to be more appropriate with non-combat units than with combat units.

In Fifth Army, the Army Engineer believed that the present engineer group headquarters is designed to function as the regimental headquarters used to do. He made every effort to have it work that way. His group commanders exercised considerable powers over their attached battalions, on the theory that administrative authority is a function of command. They handled transfers, temporary

AUTHOR'S NOTE

Corps artillery was utilized in seven official campaigns in the Mediterranean Theater of Operations. For three of these, non-divisional artillery was organized as regiments, and for four of them it was organized as independent battalions under field artillery groups. Both types of organization, then, were thoroughly tested.

My own combat experience in this war was with the 13th Field Artillery Brigade, to which was assigned all general-support artillery participating in the Tunisian and Sicilian Campaigns. In Italy the Brigade controlled at one time as many as 13 battalions. This personal experience, coupled with my subsequent observations as Artillery Officer, MTOUSA, lead me to believe that the old regimental organization produced certain results which the group cannot achieve. Independent battalions are assigned to an impersonal general headquarters at Army and are constantly being attached to first one group headquarters and then another. The present administrative gap between battalions and Army is too large. Battalions come to regard themselves as orphans.

It was clearly the intention of the War Department to set right this state of affairs in Circular 439, 14 November 1944, "Administrative Functions of Group Headquarters." This circular made the group an "administrative and tactical unit" to which "normally, three or four battalions . . . will be assigned . . ." and additional battalions may be attached. My intention in this article is to show that while Circular 439 acknowledges that independent field artillery battalions are orphans, it does not set the matter right. My ideas or how the problem might be solved are presented for what they are worth.

duty, recommendations for office promotions, awards, etc.; they appointed special courts and boards and boards of officers; they screened supply requisitions. To a lesser degree, Signal and Ordnance groups in Fifth Army stressed their administrative roles. Their battalions did, however, take their supply problems direct to Army. The Fifth Army AA Officer, on the other hand, believed that the administrative function of group headquarters was supervisory. AA groups in MTOUSA helped battalions plan their paper work and saw to it that all records were in order, but did no battalion work themselves.

There is no doubt that non-divisional field artillery battalions should feel that they belong somewhere and are being looked after by someone. It is no less clear that in an active theater a field artillery group will not be able to keep in touch with any one set of battalions. Tactical considerations are paramount, and battalions will be shifted from group to group wherever they are needed most. Where this is true, there can be no stable administration by a group headquarters.

TACTICAL FUNCTIONS OF GROUPS

The question of why Field Artillery groups in combat are like kaleidoscopes, why their battalions must change so frequently, is answered only by examining their tactical functions.

There is some argument as to what constitutes the greatest forward step in field artillery during the present war. There are those who say that self-propelled artillery is the greatest single advance we have made; others consider organic air observation a bigger stride; some regard recent fuze designs as outstanding; and still others feel that such unperfected developments as rockets or ground application of radar are still more important. Not one of these, to my mind, is as important as the improvements we have made in controlling large quantities of artillery and in rapid and accurate massing of fires. These improvements have been brought about by increased centralization of control. The center of gravity of the artillery has swung back; it is no longer in the combat team, but in the corps. Recognition of the tactical importance of the field artillery group has increased markedly and is still growing.

The previous experience of corps artillery officers and task force artillery officers in Italy made them reluctant, in the final campaign, to attach corps artillery to divisions. Field artillery is always considered the most flexible reserve at a commander's disposal. In a fixed or semi-stabilized situation the problem is simply one of coordination. No one questions the value of the massed fire which centralized control provides. In a fluid situation the problem is to keep supporting artillery well forward. Division artillery staffs think and act, rightfully, in terms of close support to their own infantry. They have a pretty big job handling their organic artillery. They need the help of general support artillery for counterbattery, harassing missions, thickening of division fires, long range assistance, demolitions, etc. Divisional artillery staffs must worry about the displacement, ammunition, communications, and other problems of attached battalions.

Reinforcing artillery handles these matters for itself. When the situation moves too fast for the corps artillery headquarters to stay abreast of the situation, groups and groupments take over. Under such conditions it is a great mistake for a corps headquarters to hang on too long, beyond its ability to keep communications in. Then is the time to decentralize. Groups and groupments should be attached to division artilleries, and not merely placed in support, when very close control is made necessary by a limited road net, by terrain offering few positions, or by other special circumstances. Even then an attachment should be regarded as abnormal and should be terminated as soon as conditions permit. Reinforcing artillery gives divisions the assistance they need without imposing the burden of attachments.

Similar views suggested themselves in ETOUSA. A group commander who landed in France shortly after D-day and fought throughout the campaign wrote to me as follows:

"It might be worth while to go more fully into the reasons why the corps should generally be the tactical unit for the handling of artillery in any fixed or semi-fixed situation, whether in the attack or defense. First, most attacks are corps attacks, and most defenses are planned on at least a corps level. . . . The corps artillery commander, as adviser to the corps commander, is in a position to see that his desires are carried out and not over-ridden by considerations on a lower or division level. . . . Plans of interdiction and harassing fires fall into the same category. It is more than possible that each division in a corps in planning its harassing and interdiction schedule leaves areas not properly covered by fire, and important supply routes that the enemy is using undisturbed. Each division may also follow a harassing and interdiction policy so different from his neighboring division's as to render such fires largely useless. As an example, some divisions use TOTs as interdictions; others use continuous rate on road junctions; others use scattered harassing rounds at various times. Counterbattery must also be handled on the same corps basis with such liaison between adjacent corps counterbattery units to assure that there is no loss of effective fire on enemy targets. One important reason for the necessity of this is the German practice of enfilading fire or cross-corps fire whenever possible. It is also necessary to make full use of auxiliary weapons . . . tanks and TDs, for indirect harassing missions.

"Coordination can not be accomplished without some degree of control, and it is idle to consider that it can. The same thing is true of observation, both ground and air. Allotment of position areas for artillery comes under similar conditions. Without it over-crowding and conflicts between divisional and corps artillery units often may result. Ammunition supply is similarly a question which can only be solved on a corps level. Survey control and metro corrections are also corps functions that must be controlled and disseminated on that level.

"In the past months of operations in Europe, it might be found that divisions have been among the least enthusiastic exponents of such a pattern of artillery control on a

corps level. While the corps should have been the unit in artillery, it has been the division which all too frequently has been the highest tactical unit controlling the fire of American artillery. Except in regard to counterbattery, which has been on the whole a well-run corps function, the corps artillery commander has commanded not the artillery with the corps, but only the corps artillery. And even here the practice of attaching a good proportion of the corps artillery to divisions has meant that even this artillery is lost to corps control. While divisions have often been overloaded with additional corps artillery battalions, the reverse process has gone on with the groups. These headquarters, capable of handling from three to five battalions on the same basis as the British AGRA, have been extremely rigidly controlled. They may have battalions attached and detached many times in a month. They may be limited to fires received from corps artillery FDC. This procedure has a tendency to waste the talents of the groups and to ignore their tactical functions. Corps artillery has tended to become a rigid brigade or super-group that limits its function in regard to division artillery and insists on functions it might be better if it did not assume toward its own corps groups."

Based on experience in Italy, the tactical functions of the field artillery group appear to me to be, in the order of their importance:

(1) *Reconnaissance for battalion areas in moving situations.* At such times battalion commanders are too busy fighting from their present positions to look for future ones. Selection of areas by the group commander is based on the corps plan and includes coordination of fields of fire, observation, routes, and facilities.

(2) *Centralized Air OP operations.* Suitable air strips were almost always lacking in Africa, in Sicily, and in Italy. Engineer assistance in the preparation of strips was SOP, and decentralized battalion fields were out of the question. The increased efficiency and economy of centralized Air OP operation was amply proved. The field artillery group makes an important contribution to the effectiveness of its battalions when it gives them a good Air OP strip and runs it efficiently. In my view, more housekeeping personnel and equipment are needed on division artillery and group air strips than current T/O and E's provide.

(3) *Communications.* General support battalions in Italy rarely had direct lines to corps or brigade; group lines formed this link. Group frequently borrowed battalion wire facilities for lateral lines. By pooling the facilities with the group, the burden on each battalion was cut down far below what it would have been for groupments or single battalions. Single groups at times maintained 100 miles of wire. Group radio sets provided useful monitoring services, additional communications, and valuable stand-by equipment.

(4) *Liaison to supported and lateral units.* Again, battalion personnel were utilized in many cases, but the burden on individual battalions was lightened. I certainly think that the group should have at least one liaison section of its own, with adequate transportation and radio equipment.

For a great deal of the fighting in Italy, Fifth Army had but two field artillery groups per corps. It was necessary to shift group headquarters from corps to corps to meet changing requirements, and even more necessary to move general support battalions from group to group. Sometimes eight to ten battalions a month passed through the hands of a single group commander. To my knowledge, sixteen different battalions served under one group headquarters in ETO within one month, and this figure may have been exceeded. While the drawbacks to such a rapid turnover are too obvious to deserve stress, it is flaunting the experience of this war to pretend that a field artillery group headquarters will in battle consistently command a few battalions, with whom it is well acquainted. General support artillery units are reserves, and reserves should be flexible.

RECOMMENDATIONS

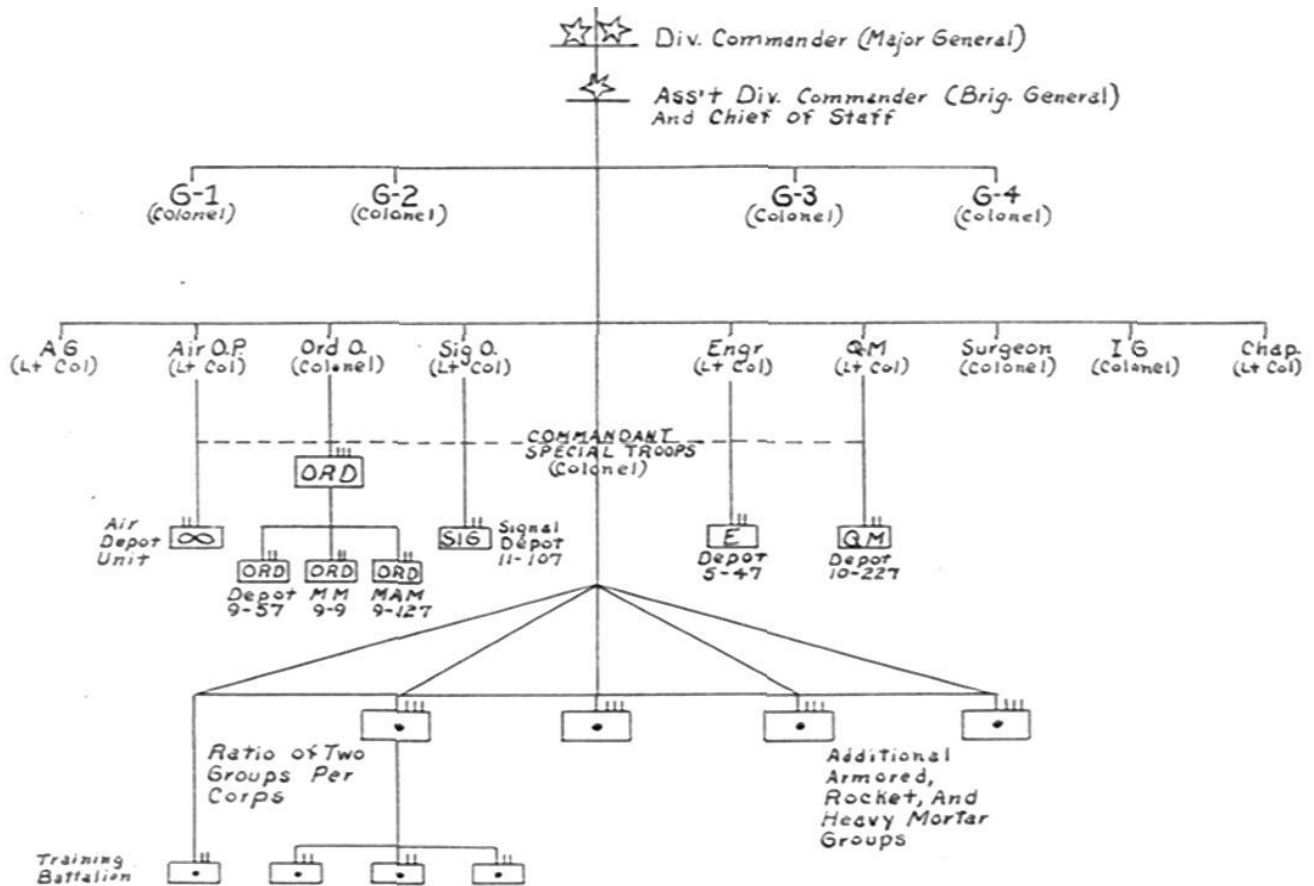
It would appear highly desirable to me to assign battalions to field artillery groups in peacetime. To have formally recognized "affiliated battalions," identified with a group and entitled to wear its insignia, might be desirable in war. Then, when no strong reason existed for these battalions to be somewhere else, they should serve with their own group headquarters. In this way a group staff would be allowed to develop special familiarity with the specific type of artillery with which it normally worked, such as armored artillery or "super-heavy" calibers. This would be possible without entailing the rigidity and red tape of assignments, and would permit flexible attachments as at present.

The problem of finding someone to look after the non-divisional battalions with an Army would not be solved by simply announcing them as members of specific groups. In wartime there is too little stability at either group or corps to permit sound administration of assigned battalions. Their nearest home is at Army.

The present artillery section of an Army Headquarters is a tactical, not an administrative, unit, although by working overtime the Artillery Section of Fifth Army (and, I presume, of other armies) was able to give non-divisional battalions a lot of help in "trouble shooting" personnel and supply problems and generally doing administrative work which it was neither staffed nor required to do.

To my mind the idea of an artillery division, such as that in the Russian Army, has much to recommend it. Parenthetically, the Germans thought so, and made belated attempts to adopt such an organization in the final phase of the European War. Such a formation would be adequately staffed to administer all non-divisional field artillery units with the Army (see chart). Under the major general commanding the division would be the service units needed to keep the artillery firing, and there would be a training battalion to provide replacements with the polish which only theater training can give. Resting and rotation of units, with adequate attention to their needs in rear areas, could be arranged more easily. Adjustment of personnel between units, such as was possible in field artillery regiments, could be effected within such a framework.

PROPOSED ARTILLERY DIVISION



Generally non-divisional units in the Mediterranean Theater were in action without relief for month after month, and the months would sometimes reach a year and still keep mounting. When individuals left for rest periods, the burden on those remaining in line was increased. Divisions were rested much more often.

In corps artillery units, deserving personnel would be blocked from promotion for lack of T/O vacancies in one unit while less qualified personnel would be advanced in another. Back at Army, the GI could not even know the battalion commanders by name.

American officers and men will accept the risks and hardships of fighting with unsurpassed fortitude. They are, however, quick to resent any treatment which they think unfair. The orphan status of independent battalions would end with their assignment to a powerful parent unit such as the artillery division would provide.

The objection will be raised that the distances between army headquarters and each of the 15 or 20 battalion CPs would be thirty to forty miles or more, and that this would hamper administration too much. Any solution must be a compromise. Corps or group administration would be working at shorter

range, but there would be endless upheavals when units were transferred. The artillery division would have to work at greater distances, but its administration would be stable. On balance, the artillery division appears to me to provide the better solution.

This view may be colored somewhat by my belief in centralized control of artillery. As I have pointed out in these pages before, we are only making full use of field artillery when we can fire at any target every gun within range. Division and corps boundaries should not greatly hamper the maneuver of fires. An artillery division would give better coordination of corps artilleries. In this artillery division, groups would play to the full the part they have shown they can play. They would reconnoiter, coordinate tactical dispositions, run flying fields, help with communications and liaison, and generally fight. When there is no war going on a group may be able to administer assigned artillery battalions very well; in the middle of a campaign I do not think it should be asked to try. The present field artillery group is a great invention. Under a good commander it can pull its battalions along like a sail on a boat. The sail should not be reefed too tightly with red tape.

A Field Artillery sergeant says, "As a result of constant care, wheel bearing failures were few and far between." *Constant care* is just another way of saying *Preventive Maintenance*. Whichever term you use—use it!



PERIMETERS in PARA GRAPHS



(BASED UPON LATEST INFORMATION AVAILABLE AT DATE OF WRITING, AND SUBJECT TO CORRECTION AS MORE COMPLETE REPORTS ARE RECEIVED.)

By Col. Conrad H. Lanza

HOW JAPAN SURRENDERED

Exactly when the Japanese Government first began to consider surrender is not yet known. The daily broadcasts from the Tokyo radio station breathed defiance to the last. They continued to describe astounding preparations made for resisting and defeating an invasion. It is now certain, however, that first steps to accept unconditional surrender were taken at least two months before the first open measures were taken.

On 4 June the Minister of the Imperial Household resigned. The Empress had requested him to do so. This may seem to have been unusual, for Tsuneo Matsudaira was an accomplished diplomat. He had represented Japan both at Washington and at London. His daughter had been educated in Washington and later married the Emperor's brother, Prince Chichibu. Through that marriage Matsudaira became intimately connected with the Imperial family. In addition to other duties, he was the manager of the private fortunes of the Emperor and his family.

So the Empress on this occasion spoke to him plainly and intimately. What she wanted was to bring about a peace. She believed that if her brother-in-law was out of the cabinet and had no official position, he would be in a better position to undertake the necessary preliminary work to form a peace party. Should he succeed, a new pro-peace government might, at the proper time, replace the current government of Baron Suzuki.

Suzuki was a strong man, physically and morally. He was not to be lightly overlooked. In 1934, being then a Minister of the Government, his quarters had been invaded by assassins who sought a *coup d'etat* by killing Prince Saito and other prominent officials. On that occasion Suzuki quietly received the assassins, and after listening to their tales told them he had nothing to say and to proceed with their errand. He was thereupon shot and believed to have been killed. However, he hadn't been killed, and recovered to finally become the head of the Japanese Government.

Who backed the Empress isn't yet known. It is possible that she acted on her own initiative. It is equally possible that she was the go-between representing either the Emperor or Baron Suzuki. The Emperor had had a European education, and had traveled in Europe. He was well acquainted with America and Europe. Perhaps he had become convinced that peace had to come somehow, and adopted this means to bring it about. Anyway, Matsudaira resigned as a Minister in compliance with the Empress's suggestion, and went to work to organize a peace party.

Matsudaira's labors haven't yet come to light. Just four weeks later, however, on 28 June, Baron Suzuki convened the Elder Statesmen to discuss peace. This suggests that perhaps it was Suzuki who had the original idea to surrender. Certainly his position as Premier had enabled him to fully appreciate the position in which Japan found herself.

At the end of June Okinawa had fallen. From that island strong American air forces were operating and savagely bombing western

Japan. From Iwo the American superbombers were attacking central Japan. From the Tokyo radio broadcasts it is known that the program to move industrial establishments underground, or away to Manchukuo, was far advanced as to plans, but that little real moving had been done.

What remained of the industries was quickly disappearing in fire and flames. So were the great cities. The American bombs were largely of the incendiary types, and caused a rapid destruction of dwellings over extensive areas. At the end of June over four million Japanese were reported as homeless.

The inhabited part of Japan consists of restricted areas of relatively level ground, and does not exceed 30,000 square miles. On this comparatively small area, equal to about one-sixth the size of California, live some 70,000,000 people. On the same ground all food products are raised and all but few of the industrial plants are located. The bombing of these restricted areas not only caused a refugee problem but also destroyed the food supplies and the factories.

Transportation between the various densely inhabited areas normally was by sea for freight and by rail for passengers. The American bombing had broken up the sea transportation by sinking a great number of boats and had interrupted the rail service by destroying main line bridges and shooting up locomotives. To increase food difficulties further, American air and naval patrols scoured the seas and sank every fishing craft that could be found.

Japan could not stop the bombing. She had too few planes left—just about enough for reconnaissance, and for an occasional raid around Okinawa. Such air raids, largely by Kamikaze units who crash-dived on the target, caused material losses to the American forces. But these forces were so huge that the losses in no way altered the crushing superiority of American arms.

Statements had been broadcast during June by American officials, including President Truman and General Arnold, of the intent to absolutely destroy Japan. Preparations for a vast invasion by ground forces were openly being made.

All these facts were known to Baron Suzuki, and presumably he transmitted the information to the Elder Statesmen. The latter probably knew Japan's condition without having to be told. More important, it now appears that Suzuki told the Elder Statesmen that Russia would soon enter the war.

Russia had denounced its non-aggression treaty with Japan on 13 April. That treaty specified that either party could denounce it at any time, but that this would not be effective until one year afterward. Although Russia did not directly say so, the wording of her communication was such as to make it clear that she would not wait that year.

From what is known, the Russian invasion of Manchukuo, which later occurred in August, was on such a vast scale that considerable

preparations must have been made. If the Japanese Army in Manchukuo had even a reasonably efficient G-2, that section could not have failed to have observed Russian preliminary moves.

Who argued for a peace before the Elder Statesmen isn't known. It might have been Matsudaira; if not, someone coached by him—for the Empress was still busy behind the scenes urging peace, and Matsudaira was her right-hand man. The Elder Statesmen, as their name indicates, are retired former Premiers and high distinguished officials of all parties. They usually invite one or more members of the Imperial family to sit with them.

At their meeting on 28 June, the Elder Statesmen were not convinced as to unconditional surrender. They were convinced that peace was desirable. Their decision was to seek peace at the forthcoming Potsdam Conference, asking Marshal Stalin to present that subject.

In compliance with this, the Japanese Foreign Office thereupon instructed its ambassador at Moscow to approach Marshal Stalin and ask him to arrange, if possible, for a peace between Japan and the Allies, at Potsdam. As far as is known no conditions as to a peace were given, and there was no inkling allowed to escape that Japan's condition was a critical one.

What Marshal Stalin did about this hasn't yet been released. In the declaration of war against Japan the Russian Foreign Commissar mentioned having received the Japanese proposition.

The Potsdam Conference met on 17 July. On that day President Truman received a message announcing the success of the trial of the new atomic bomb held in New Mexico. He communicated this information to Marshal Stalin. Although great expectations were held as to the atomic bomb, there was no feeling that it would end the war. Instructions were issued to use it; atomic bombs were forwarded by fast cruiser to the Far East. Without depending upon this in any way, the Chiefs of Staff of the United States, the British Empire, and Russia, in Potsdam worked out an elaborate invasion plan of Japan and its outlying possessions. When the conference adjourned on 2 August it was announced that the invasion plans had been completed.

In the meantime a Potsdam Declaration had been issued on 26 July, in the name of the United States, the British Empire, and China. This stated

The prodigious land, sea, and air forces of the United States, the British Empire, and of China, many times reinforced by their armies and air fleets from the west, are poised to strike the final blows upon Japan. This military power is sustained and inspired by the determination of all the Allied nations to prosecute the war against Japan until she ceases to exist.

The Declaration then went on to declare that the Japanese sovereignty would be limited to the islands of Honshu, Hokkaido, Kyushu, Shikoku, and some minor ones. Stern justice was to be meted out to all war criminals; disarmament and elimination of the military parties were of course required. Unconditional surrender was demanded, or else the "prompt and utter destruction" of Japan was to follow.

It was later claimed that the term "prompt and utter destruction" referred to the coming employment of the atomic bomb. The Declaration itself, however, explains at length the steps for an invasion by overwhelming forces, stated to be on the way from the west. In fact such forces were on the way, and on a very large scale.

The Potsdam Declaration made it clear to Japan that nothing would come of the peace proposals which had been sent to Marshal Stalin. Baron Suzuki thereupon again convened the Elder Statesmen. The exact date of their meeting is unknown. A partial report states that they considered the final destruction of the Japanese fleet. This had occurred on 28 July, and subsequent events indicate that the meeting was on or about 30 July.

Again the Empress indirectly had much influence. She had made visits to prominent persons in Japan. It is presumed Matsudaira did also. He may have advised the Empress as to what to say. By this time the situation of Japan had deteriorated materially.

Bombing had been extended. As much as 6,000 tons of bombs were being dropped in a day. The Allied Fleet had appeared off Honshu;

from its strong aircraft carrier Task Force, its planes reached into north Honshu and Hokkaido. Every part of the four Japanese main islands was under daily and constant ferocious attack.

The Elder Statesmen, who were aided by the Emperor's brother Prince Chichibu, the son-in-law of Matsudaira, decided that surrender was indeed necessary. They decided to submit a proposition accepting the Potsdam Declaration, which included in its provisions acceptance of the prior Cairo Declaration, subject to certain reservations which they believed might be accepted.

The reservations were:

1. **The Emperor to continue to be the head of the Government.**
2. **Japan to retain an army and navy, but restricted as to size, as might be directed by the Allies.**
3. **War criminals, instead of being brought to trial, would upon designation by the Allies commit suicide.**
4. **Japan to retain Formosa and Korea as essential to her economic resistance.**

War with Russia was expected. As it hadn't yet started, the Japanese Foreign Office undertook to submit the new proposals, which were concrete, once more through Marshal Stalin.

Russia appears to have made an answer to the Japanese surrender offer, but this has not been released. Whatever it was, the Elder Statesmen were once more convened on 8 August to consider it. By this date the first atomic bomb had fallen on Hiroshima, which incidentally had previously been badly damaged by superbombers from Iwo.

Although Russia declared war on 8 August the Elder Statesmen did not know this at the time of their meeting. The Russian declaration came at 2000 hours, Moscow time. This would be 0300 hours on 9 August at Tokyo. Russian troops started to attack at about 0100 hours, 9 August, Tokyo time. This was probably known before news of the declaration could have arrived from Moscow.

Ignorant of the outbreak of war, Japan prepared a new letter to Russia. The Foreign Office on 9 August, finding communication with Moscow broken, endeavored to deliver the letter to the Russian ambassador at Tokyo. Efforts through him to reestablish communication directly with Moscow failed.

In view of this situation Japan on 10 August turned to the Swiss Government and requested it to transmit to the Allies the offer for peace. It isn't known whether this was based on the decision of the Elder Statesmen and the letter to Russia of 9 August, but it seems probable that it was. The second atomic bomb fell on Nagasaki on the 9th, and was of course known of at once.

Japan's last offer was to accept the Potsdam Declaration with one reservation—to keep their Emperor. The other three former reservations were abandoned. The precaution was taken to broadcast the surrender offer as soon as it was decided to deliver it to the Swiss representative. The entire world learned of the surrender before the official letter arrived in Washington.

On 11 August the United States accepted the Japanese surrender offer, subject to the understanding that the Emperor would authorize and insure the signature by the Japanese Government and Japanese GHQ of such orders as might be received from the Supreme Allied Commander.

On 14 August Japan accepted the United States' letter of the 11th, and the long World War came officially to an end.

It seems probable that the Japanese Imperial family was the prime mover in bringing about a peace. Whether Baron Suzuki favored it or not, is not yet known. His hand may have been forced. He was immediately relieved as Prime Minister and on 16 August replaced by a member of the Imperial Family, Prince Higashi-Kuni, uncle of the Empress and presumably one of her party who had favored peace. It is known that the Elder Statesmen at their meeting about 30 July had recommended that the Emperor personally take over the Government, through his own chosen Ministers. In following that recommendation, the Emperor copied the democratic procedure of the United States, where the head of the government selects his own Ministers (or Secretaries, as they are known in this country).

THE WAR IN JAPAN (19 July to 16 Aug 45)

On 19 July the following forces were engaged in attack against the main Japanese islands:

Under Gen. Douglas MacArthur (CP at Manila, P. I.)—Far Eastern Air Force under Gen. George C. Kenney, with the 5th, 7th, and 13th Air Forces.

Under Adm. Nimitz (CP at Guam)—Pacific Fleet, with attached 11th Air Force and 1st, 2nd, and 4th Marine Aircraft Wings.

Under Gen. Carl Spaatz (CP at Iwo)—8th and 20th Air Forces, constituting the Strategic Air Force.

The three commands were mutually independent, but co-operated.

The Far Eastern Air Force had an advanced base at Okinawa. It also was charged with blockading and raiding the East Asia coast from Korea to Malaya, and with aiding the Australian forces in the Netherland Indies. Only a part of its forces were available against Japan. These were directed against Korea, Kyushu, west Honshu, and west Shikoku.

The Far Eastern Air Force was based on the Marianas Islands. The 20th Air Force was composed of super-bombers. The 8th Air Force was en route from Europe, and during the period was not available for operational duty. The superbombers attacked central Honshu and east Shikoku.

The Pacific Fleet had the 3d Fleet, to which British units were attached. Including in all 9 battleships, 25 cruisers, and 79 destroyers, it operated off north Honshu and Hokkaido. Twenty aircraft carriers were attached. The naval ships shelled the coast, while the planes from

the carriers covered inland targets. The Marine Aircraft Wings operated among the Ryukyu, Caroline, and Marshall Islands; the 11th Air Force against the Kurile Islands.

Among the three commands, all parts of the Japanese home islands were subject to attack by air or sea or both. The plan was to destroy completely all industrial establishments, cities, and lines of communication, and make life impossible. Thereby the Japanese will to resist was to be broken down.

At the beginning of the period opinions were divided as to whether the plan would succeed. Some high ranking admirals and generals thought it would; others believed that it would be necessary to invade Japan by an operation which would entail severe losses. The invasion was prepared for, and imposing forces were in transit to report to General MacArthur for the prospective invasion. As these forces could not be ready until late autumn, the shelling and bombing attack was meanwhile intensified with the hope that it might succeed and thereby avoid necessity for an invasion.

OPERATIONS DURING JULY

July is a period of rains. It also is the typhoon season. Weather unsuitable for flying and accurate bombing occurs frequently. On 19 July, on account of the adverse weather, scheduled attacks by the 5th and 7th Air Forces were cancelled, except for attacks on Kiroshima and Miyazaki, the south parts of Kyushu. The enemy air force raided

Okinawa and crashed three planes against unspecified targets, doing some damage.

The weather improving next day, about 600 super-bombers from the 20th Air Force attacked the coastal area east and northeast of Tokyo between Hitachi and Choshi. Main targets were food supplies, the towns mentioned being fish centers. It is presumed that fishing boats and equipment were included in the targets, on which over 3,500 tons of bombs were expended. SAF (Strategic Air Force) fighters attacked Osaka and Nagoya, the 5th and 7th AFs airdromes in Kyushu, southwest Honshu, and Formosa.

On 21 July the Pacific Fleet Air Wings Nos. 1 and 18 commenced operations respectively against the Tsushima Strait sector and off south Honshu. The 2nd Marine Aircraft Wing operated against the Sakishima Islands. Enemy shipping were primary objectives.

On the 24th the 3d Fleet made a major air attack on Kure, on the Inland Sea, with main target enemy naval ships. This appears to have been highly successful. From photographs taken subsequently it was ascertained that the enemy had lost sunk or badly damaged 3 battleships, 3 cruisers, 5 aircraft carriers, 4 destroyers, and 20 cargo ships. 70 enemy planes were reported as destroyed on the ground. The air attack



Near the end of July destroyers of the Third Fleet entered Suruga Bay and bombarded Shimizu (1 and A on inset). Army planes from Okinawa (3) blasted Japanese warships at the Kure naval base, vessels off Korea, and installations on Kyushu (2). They also hit targets on and around Formosa (4) and in Indo-China (5). Chinese troops pierced Japanese lines at Shuikow (6), and British forces in Burma (7) continued whittling away the enemy there. Planes of the British Fleet (8) attacked many targets in Malaya. Australian fliers and ground forces hammered at the foe on Bornco (9).



As July ended, superfortresses dropped leaflets on 12 Japanese industrial centers announcing they were about to be pulverized. For eight (designated 1) it was their first warning; for four (designated 2) it was the second, while Koriyama (3) was threatened the first time but not the second. Six of the previously warned cities (crosses) had been devastated in a sudden attack. Meanwhile, carrier planes of the Third Fleet shifted their assault to airfields around Nagoya and shipping at the minor naval base of Maizuru, one of the imminent B-29 targets.

was commenced at 0600 hours by 30 bombers and 180 fighters attacking airfields. At 0930 hours 200 bombers and fighters attacked the ships found at anchor. This attack was continued on the 25th, but as the weather turned bad it was not very effective. The flank of this attack was covered by the 2nd MAW (Marine Aircraft Wing), which neutralized airfields on Kyushu.

On 27 July the SAF commenced to drop leaflets listing cities intended to be attacked. It was believed that the psychological effect of such action would be considerable and further, that there was nothing the Japanese could do about it. Their navy and air forces had already been reduced to such small limits as to be no longer of much importance.

On 28 July the 3d Fleet renewed the attack against the Inland Sea, which had been interrupted by adverse weather. The SAF aided. There were destroyed (or severely damaged) 17 destroyers and 43 cargo ships, besides a large number of small craft. 115 enemy planes were destroyed on the ground and 21 were downed in air fights, including 6 which had reached the vicinity of our ships at sea. On land considerable destruction against railroads had been accomplished. An enemy air counterattack torpedoed a transport at anchor off Ie, near Okinawa.

On the 29th adverse weather reduced operations to attacks on shipping; 7 enemy ships were reported as sunk. In the early morning Japanese planes sank an American light naval unit off Okinawa. During the following night, the weather clearing, the 3d Fleet shelled Hamamatsu, firing over 1,000 tons of ammunition; there was no resistance.

When morning came the Fleet's planes attacked Tokyo, Maizuru, and Nagoya. Shipping was also attacked. British planes had the

greatest success, sinking one and damaging three enemy destroyers. Our own losses for this day are given as 11 American and 3 British planes.

On the night of 30/31 July, 3d Fleet destroyers shelled Shimuzu and there sank one ship.

During the latter half of July the air patrol and blockade of the Japanese home islands and of Tsushima Strait was continued night and day. Daily attacks were also made on Formosa and the Sakishima islands, to neutralize enemy airfields.

OPERATIONS BETWEEN 1 AND 10 AUGUST (ATOMIC BOMB ATTACKS)

The month was ushered in by bad weather. On the first day operations were limited to the FEAF, which bombed Nagasaki, major port of Kyushu and for many years a U.S. detached QM port.

On 2 August about 800 superbombers of the 20th AF attacked six cities in central Honshu, dropping almost 6,000 tons of bombs, the heaviest weight to date. The cities included Hachioji and Mito on the Pacific side, and Nakaoka and Toyama on the Sea of Japan side.

Adverse weather interfered with further operations until 6 August, when one atomic bomb was dropped on Hiroshima. This is a city on the Inland Sea covering about 7 square miles with 310,000 people. No detailed information as to the effects obtained has yet been received. Photographs taken on the 8th showed that about 4 square miles seemed to have been obliterated. Enemy accounts stated that most of the town had been completely destroyed, and that the dead were too numerous to count. A blinding flash, approximating in brightness sunlight, was followed by a terrific explosion which in addition to obliterating the four square miles caused extensive damage beyond. According to unofficial news reports this bomb is reported as an air burst, but the height of burst is unknown. The devastated area appears to have been a circle with a radius of about 1¼ miles.

On the same day 580 superbombers of the 20th AF attacked with 3,850 tons of bombs 9 cities in central Honshu between the two coasts. Including the atomic bomb, the destruction caused this day seems to have been the maximum to date. Only one American bomber was reported as lost.

On 7 August 121 superbombers plus 97 fighters (SAF) attacked around Tokyo. This attack was continued on the next day by 63 superbombers which used 400 tons of bombs. At the same time 233 other superbombers dropped 1,400 tons of bombs on Yawata.

On 9 August the 3d Fleet attacked the north end of Honshu over a distance of 160 miles. About 1,100 planes from carriers attacked inland in waves between 0530 and 1400 hours, while a part of the Fleet from 1250 hours until 1400 hours attacked Kaimishi. This city is built about a steel plant, the ore being mined in the immediate vicinity. Enemy planes counterattacked and damaged by a crash dive a light unit (presumably a destroyer) for a total loss of 11 enemy planes. Allied plane loss was 14, evenly divided between Americans and British.

On this same day a second atomic bomb was dropped on Nagasaki. This city was not the prescribed target, which was missed. The plane came from Iwo and was unable to identify the target on account of the weather. Gasoline being low and barely able to enable the plane to reach Okinawa, nearest available field, Nagasaki was selected as an alternate target. It was partially concealed by clouds.

According to the few reports available and photographs taken later, about one square mile out of the 3½ square miles which the city covered had been destroyed. At date of writing no reliable reports exist as to the exact damage inflicted. The area devastated at Hiroshima was, according to air photographs, four times as large as that at Nagasaki. Whether this was due to a difference in size of the bombs or to the nature of the burst or to some other reason, is not yet known.

Also on the 9th, 92 superbombers from the Marianas dropped over 500 tons of incendiaries on Fukuyama. In all this day was a very destructive one to Japan.

On 10 August the 3d Fleet continued to ravage extensively the coast of Honshu north of Yokohama. Superbombers with fighter

escort attacked the Tokyo area, and laid mines in adjacent enemy harbors. Japanese planes made a pre-dawn attack on Okinawa, causing some damage.

FINAL OPERATIONS

On 11 August the FEAF attacked with incendiaries Kumamoto and Oita, seaports on Kyushu. Due to Japanese construction's being of light material, their cities burn quickly. On the 12th a Japanese submarine attack on Okinawa in the evening scored a torpedo hit on a major unit, according to our reports—which failed to state the result. The Japanese report claims that an aircraft carrier was hit and sunk.

On the 13th the Pacific Fleet's planes made large raids over the Tokyo area with special attention to airfields. It was reported that over 250 enemy planes were destroyed on the ground. Off Okinawa an enemy plane crash-dived into a Navy supply ship.

Due to peace negotiations' being under way the FEAF suspended operations, except for those connected with the air and sea blockade, which were continued over the western part of Japan and Korea.

On 14 August the SAF from the Marianas launched an attack against five medium-size cities in central and north Honshu. More than 800 superbombers dropped 6,000 tons of bombs, a tonnage record. About 200 fighters covered the bombers and then attacked airfields near Nagoya.

On the 15th the 3d Fleet, not having received instructions regarding the ending of the war, launched its planes in a morning attack against the Tokyo area. Japanese planes attacked the naval ships but were repulsed after losing 9 planes. This was the last operation preceding the ending of the war. Instruction to cease hostilities was received about noon, and projected air strikes for that afternoon were cancelled.

MINOR OPERATIONS

In the *North Pacific Area* light naval forces shelled Paramushiro on 22 July, while the same island was attacked by the 11th Air Force on 24 and 27 July and on 12 August. Shimushu Island, which is just to the north and has a major air and naval base on the south end, was attacked by the same Air Force on 3 and 8 August.

Fleet Air Wings 4 and 18 attacked Onnekotan on 4, 5, and 11 August, and Torishima on the first and last of these days. The 11th Air Force attacked Matsuwa on 21 July and 12 August.

THE PHILIPPINES (19 July to 18 Aug 45)

Since 28 June, when the campaign in the Philippines was announced as officially closed, there has been no information as to operations other than lists of casualties.

On 19 July there appeared to be at least 10 enemy-held areas still resisting. The two most important were in north Luzon and in east-central Mindanao.

In north Luzon the XIV Corps (with the 6th, 32nd, 37th, and 38th Infantry Divisions) has been operating against enemy forces estimated at about 10,000 men, divided in two detachments. The larger is west of the Cagayan valley and holds the mountain sector north of the line Mankayan—Banaue—Mayayao—Butigui, facing south and east. The smaller detachment is east of the Cagayan River, facing west along the foothills of the Sierra Madre Mountains. Philippine Army units were in north Luzon. A detached enemy force appears to have been in the mountains southwest of Kiangnan. As late as 6 August the enemy were continuously active in a guerrilla warfare movement involving ambushes and minor tactical operations. The largest enemy force noted at any one time and place was one company, which had attacked small American forces near Tuguegarao in the Cagayan valley.

In Mindanao the X Corps (with the 24th and 31st Infantry Divisions) was engaged against an estimated 15,000 enemy belonging to the Japanese Eighteenth Army. Main hostile force appeared to be

The foregoing attacks appear to have been subordinate to reconnaissances. On 18 August American forces were reported as landed on Shimushu, meeting enemy resistance.

In the *Central Pacific* the 4th Marine Air Wing bombed the Palaus on 21 days out of the 31 reported on, and Yap on 12 days.

The heavy bombing on the Palaus has been based on Peleliu, now held by Marine forces. The target is Babelthuap, an adjacent island on which an enemy force is isolated. The latter originally consisted of the 14th Japanese Division, which with attached troops was estimated as forming a garrison of about 25,000 men. Peleliu was first occupied by American troops on 15 September 1944. Babelthuap has been blockaded ever since.

Babelthuap is bombed as often as 5 times a day. Mission of the bombing is to destroy food supplies, and destroy the enemy by starvation. The island is densely covered by vegetation. Every cleared area which appears likely to be cultivated is mercilessly bombed. All fishing vessels seen are sunk. Every sign of habitation is attacked with incendiary bombs. From occasional prisoners taken by the naval patrol it is believed that the enemy is being slowly starved to death.

Peleliu has been made into an excellent air base. It is not a good harbor—the best in this part of the Pacific is Babelthuap.

The attack on Yap is on the same order but of lesser intensity. Attacks have been made 8 times on 4 Japanese-held islands in the Marshall group.

Truk has been attacked twice by superbombers of the Strategic Air Force and once by Fleet Air Wing 18, which also attacked Puluwat once. These seem to have been tactical strikes against small vessels and shore establishments.

Wake has been twice severely shelled by a battleship with accompanying war ships, and two other times by planes alone. Ponape, Woleai, Wotje, and Marcus were attacked by air once each.

In the Marianas, a naval force heavily shelled Chichi on 23 July and 3 August. Under cover of this demonstration an amphibious force of Marines occupied in the Marianas Maug, Asuncion (uninhabited active volcano), Agrihan, Alamagan, and Sariguan. Enemy patrols were found only at Maug and Sariguan, 12 Japanese being killed and 5 captured. The Marines lost one killed and one wounded.

On or about 27 July the heavy cruiser Indianapolis (9,950 tons) was sunk at sea, presumably by an enemy submarine. Casualties amounted to 1,197 officers and men.

around Mount Apo and the jungle country to the north thereof. A small force was operating near the head of the Agusan valley.

All operations appear to have been by small units, with the enemy displaying considerable activity. No details are known. Casualties from 19 July to 5 August, latest date for which report has been received, were

Japanese		American	
Killed	12,846	Killed	73
Prisoners taken	1,434	Missing	2
		Wounded	182
Total	14,280	Total	257
		U.S. losses	= 1
		Jap losses	55

Assuming the figures relating to the enemy are correct, the enemy's forces in the two main areas were reduced during the period from 25,000 to about 11,000.

There is no information at all as to the other enemy-held areas.

It is now known that the enemy evacuated about 5,000 women and children by sea from the Davao area to Japan, prior to the American invasion of Mindanao. Able bodied males were drafted into the military service.

S.W. PACIFIC COMMAND LESS THE PHILIPPINES (19 July to 18 Aug 45)

During the period activities markedly decreased. There have been three active sectors: Borneo, New Guinea, and Bougainville.

BORNEO

Balikpapan

The Australian 7th Division, reinforced by a detachment of Dutch troops and supported by the Australian Air Force, the U.S. 7th Fleet, U.S. Amphibious Units, and U.S. 13th Air Force, had at the beginning of the period taken the port of Balikpapan and held a beachhead about it which included Mt. Batochampar and Sambodjalama. Along the coast the beachhead extended over 28 miles; inland up the Balikpapan Bay, 8 miles. Port oil facilities had been ruined. The Allies had secured minor oil fields, but the main oil fields near Samarinda and beyond remained in Japanese possession.

On 19 July the Australians completed the occupation of the Sambodjalama oil field. The wells were found flaming, but there was no resistance. The land advance to the northeast which had been continuous (and the main mission) since the original landing on 1 July, was discontinued.

On 22 July an amphibious expedition was landed on the west side of Balikpapan Bay near its head, then proceeded toward the sea on the west side. No enemy was found. Next day an advance of 3 miles was made beyond the enemy's former position on Mt. Batochampar. By the 26th another 3 miles had been gained against resistance from enemy combat patrols. No further ground operations occurred subsequently.

Tarakan

There has been no fighting. A Dutch Salvage Battalion has been at work reconditioning oil wells. About half were found to be capable of restoration, but the others required extensive repairs.

The number of wells is about 200 sunk by the Japanese since their occupation, as an easier way to get oil than to recondition burned-out wells, although a few of these were salvaged. Some oil is being produced for Allied use.

Brunei Bay

The Australian 9th Division occupies Brunei Bay and the adjacent area to include Miri to the southwest and Beaufort to the northeast. The latter have been confronted by a Japanese force based on Jesselton. No serious attempt to enlarge the area held by the Allies has been made.

Air Operations

The Australian Air Force has gradually replaced American units. It has been engaged in supporting operations in the Balikpapan sector. Outside of that area constant raids have been made against the Borneo ports of Bandermasin, Pontianak, Kuching, and Sandakan.

To prevent Japanese barge and submarine-barge traffic, and air communication, constant patrols have been maintained around Borneo and air fields in Celebes and eastern Java have been neutralized.

A few Japanese planes have continued to operate.

Total casualties since commencement of operations in Borneo to include 13 August were: Japanese: 1,297 killed and 95 prisoners; Allies: 436 killed, 3 missing, 1,460 wounded, 1,899 total.

NEW GUINEA

The only important operations have centered in the Wewak sector. Wewak had been taken on last 25 May by the Australian 6th Division from units of the Japanese Eighteenth Army. The latter retired to the Prince Alexander Mountains just to the south, and occupied a strong position. In rear of the mountains is the Sepik valley, held by the enemy and where he raised food. In this valley facing east was an Australian right flank guard in the vicinity of Maprik. It had been there

since May, unable to advance. A detachment of the Netherlands Air Force supported the Australians.

The Australian campaign had started near Aitape in November, 1944. Since that date an advance of 110 miles had been made along the coast to Wewak, and a 70-mile advance inland to Maprik. Slow progress was due primarily to lack of transportation. There were neither roads nor bridges, so these had to be constructed as troops moved forward. There was much jungle, and the enemy was hard to locate. Patrols worked up stream beds through the jungle. Occasionally heavy rains caused in gorges a sudden rush of water which drowned the patrols. The rains washed out bridges, which had to be replaced repeatedly. Natives were largely used to move supplies by pack.

After the capture of Wewak, troops were worn. In June there was a noticeable increase of malaria and typhus. The Medical Department got this under control by July after troops had had some rest. At the end of July attacks were started by the 17th Brigade against the enemy line along the Prince Alexander Mountains. These mountains do not exceed 4,000 feet in altitude, but they are rough and jungle covered and so form a substantial obstacle. At the same time the flank guard initiated attacks toward the east in the Maprik area.

The Australian Air Force made about 50 sorties a day in aid of the ground troops. The enemy resisted strongly. It was found that whereas he had previously had no weapons larger than infantry mortars, he now had artillery. It was presumed this had been brought in by air to airfields in the Sepik valley, and that he was similarly supplied with ammunition. Attacks were a succession of limited operations for reducing pill boxes, trenches, or similar objectives. Progress continued to be very slow.

Air operations have centered on raids along the north coast, with special attention to Manokwari, which appears to be the main enemy base.

NEW BRITAIN AND NEW IRELAND

A large enemy force, estimated at between 20,000 and 30,000 men, holds Rabaul and the northeast tip of New Britain, roughly that part north of Latitude 5° South. A new Allied base has been established in Jacquinot Bay on the south coast. The airfield and base are being operated by the New Zealand Air Force, whose zone of operations includes New Britain, New Ireland, and Bougainville.

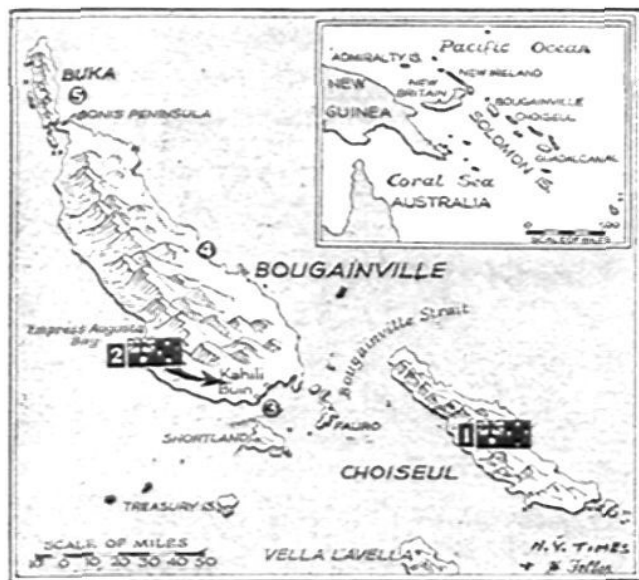
There have been no ground operations on either New Britain or New Ireland. Both Rabaul and Kavieng are bombed, but on a materially decreased scale as compared with past months. The enemy at these two bases is believed to be self-supporting as to food and clothing. By occasional submarine barge and infrequent air service he manages to maintain his forces. American Marine planes are aiding those of New Zealand.

BOUGAINVILLE

The Australian II Corps (Lt.-Gen. S. G. Savage) with the 3d Division in the north and the 11th in the south¹ have been engaged in ousting the enemy from this island. Australian naval forces and New Zealand air forces are supporting the ground troops.

Main enemy base has been Buin, which was originally intended to be the base for an invasion of Australia which was stopped by the American naval victories in the Coral Sea in May, 1942. Ever since the Japanese Seventeenth Army (Lt. Gen. Kanda) has been based on Buin, and appears to be well equipped. Japanese troops are well fed, energetic, and fighting well. Estimated enemy strength is about 17,000 men. Enemy artillery is strong and includes

¹In the preceding number of this JOURNAL, the location of the 3d Division was given as in the north and the 11th as in the south. This was erroneous, and should have been the reverse. C. H. L.



Having cleared the last Japanese from Choiseul (1), late in July the Australians on Bougainville were pushing ahead within 18 miles of Buin (2). All that was left to the enemy was the area around that big base (3), a thin strip along the east coast (4), and the Bonis Perinsula and Buka Island in the north (5).

155-mm howitzers, 100-mm guns, and 75-mm AA guns. The latter are excellent tank destroyers.

At the beginning of the period the Australians, well equipped with artillery and tanks, had arrived in the vicinity of Kahili. This is a garden area and was presumed to be the enemy's main source for food.

The campaign had started in November, 1944, at Empress Augusta Bay, since which time a 60-mile advance had been made and the enemy driven into the Buin area. To strengthen his forces, the enemy during the first half of July withdrew his troops from Choiseul Island to add them to the Buin garrison. The estimated strength of the Choiseul detachment was 1,500 to 2,000 men. That the move was made without Allied interference is an indication that the air and sea blockade was not 100% complete.

The Australians abandoned jungle warfare as unprofitable. Main dependence for offensives was the artillery and tanks. The artillery included 155-mm guns, the first ever used by Australians, and numerous 25-pdr batteries. The air force scouted for advances, advising tanks and infantry of enemy positions and obstacles.

During the entire period only minor progress was reported. As this account closes the Japanese hold Cape Bonis at the north tip of Bougainville, plus adjacent Buka Island; the east coast of Bougainville; and the south tip around Kahili and Buin.

Minor Operations

Air raids have occurred daily throughout the eastern Netherland Indies. They have been on a reduced scale as compared with those of previous months.

End of Hostilities

The order to end hostilities was issued by the Southwest Pacific Command on 15 August. Messages were sent by various commanders in the field to enemy forces demanding surrender. Up to include 18 August, no surrenders had taken place.

CHINA (19 July to 18 Aug 45)

At the beginning of the period Kuomintang China held the area west of the line

Loyang (?)—Laohokow (Jap)—Ichang (J)—Lake Tung Ting—Paoking (J)—Sinning (?)—Inning (J)—Liuchow (J)—Lung River—Pak River—Siang River—Nanning (China)—Li River.

The entire line was stabilized, with minor activity at numerous points.

Other Kuomintang forces composed of guerrillas and irregular troops held two detached areas. The first included the area east of the line

Hokshan (south of Canton)—Si River (Jap on both banks)—Tengyun (Ch)—Limkong (?)—Tinpak (Ch).

Within the above area Japanese held a beachhead around Deep Bay. They also held Hainan and the Luichow peninsula to its north.

The second detached area was north of Hong Kong and east of the line

Sanmen Bay—Hangchow (Jap)—Kweichih (J)—Yangtze River—Lake Poyang—Nanchang (J)—Siao River—Liling (J)—Anjen (J)—Namyung (J)—Hoyun (?)—Hunghai Bay.

Only minor activities were in progress in the two detached areas.

Kuomintang China is controlled by Generalissimo Chiang Kaishek, whose headquarters are at Chungking. He has on paper forces exceeding two million troops. A small part, variously reported as between 6 and 20 divisions, have been American-trained and -equipped. These forces are supplied through lend-lease materiel and by the China Air Force (which is American and not Chinese), consisting of the U.S. 10th and 14th Air Forces (Lt. Gen. George E. Stratemeyer). There are numerous American training and supply centers, but the Chinese troops operate under their own commanders.

A rival Chinese government is maintained by the Communists with headquarters at Yen-an. Its commander-in-chief is General Chu Teh, with General Mao Tze-Tsu in command of troops. It receives no lend-

lease supplies, and is not recognized by the Allies as a legitimate government. It purports to have about two million troops who (according to their own reports) are extraordinarily active, making on an average over 90 attacks a day against the Japanese. Other reports indicate that no attacks have been made for a long time. The Communists hold that part of China west of the line

Loyang (?)—boundary between Shansi and Hopeh—west boundary of Jehol,

where the left of the line connects with Russian troops in Inner Mongolia.

Prior to 1937 the Kuomintang and Communist governments had fought one another for ten years, with neither side winning. This civil war was temporarily discontinued by mutual consent when war with Japan broke out, but no satisfactory liaison has ever been established between the two rivals. Each has a complete and independent administrative government, collects its own taxes, and prescribes its own laws. Each accuses the other of being a dictatorial government not representing the real interests of China.

According to reports of escaped missionaries, as of 1944 less than 3% of the people in Communist territory favor that party. According to newspaper accounts only 0.5% of the people in Kuomintang China belong to that party. It seems, however, that many who are not members favor this party. These people include the intellectual and business men to a great extent. Neither party has any organized opposition within its territory.

A third detached area exists in an uncertain area where the provinces of Shantung, Honan, Anwei, and Kiangsu come together. This is occupied by irregular troops. Both the Kuomintang and Communist Governments claim this territory. Only guerrilla activities on a minor scale have recently occurred here.

On 19 July minor hostilities broke out between the two Chinese

parties. The Communists launched an attack against Kuomintang National Guard troops which had been organized north of the Yellow River across from Sian. At this point the river formed the boundary between recognized Kuomintang and Communist territories. The Communist attack succeeded, although the National Guard troops were reinforced by a brigade of regular infantry sent out from Sian. This operation was not immediately pressed by either side. American diplomatic efforts were hastily made to prevent a spread of the fighting. Although the fighting temporarily stopped, Yen-an reports stated that the Kuomintang moved to the Sian area 9 divisions taken from the front against Japan.

The Communist government took a bitter attitude against the United States, which it charged with being, like the Kuomintang, a capitalist state. It criticized the American ambassador, Maj. Gen. Patrick J. Hurley. It was of course most bitter against the Kuomintang. The latter, having deployed their reinforcements, counterattacked on 22 July in the area northwest of Sian. Troops consisted of the Chinese Sixteenth and Thirty-ninth Armies equipped with American artillery. The artillery preparation lasted three days. On the 24th the Communist Eighth Army, which appears to have been much inferior in strength and had little artillery, withdrew. The Kuomintang being satisfied with the capture of a single town the campaign ended, leaving increased bad feelings between the two major Chinese parties.

In south China a Japanese force of one strong or two weak divisions had early in July evacuated Kanhsien (in Kiangsi) and moved north by marching toward Nanchang. According to Chinese accounts the retreating enemy was attacked day and night continuously and from all directions, for 25 days. The distance covered by the movement was about 225 road miles, and apparently was accomplished by the Japanese without serious loss. Average rate of advance was 9 miles a day, as compared with 5 miles a day for a similar movement made a month earlier along the coast from Foochow toward Shanghai.

On 10 August Japan broadcast her proposition to surrender. The Communist government acted immediately. On the same day the Communist C-in-C issued a summons to Japanese troops in the Communist sector to surrender. At the same time he ordered his own troops to advance and take over all Japanese property, particularly arms.

Next day General Chiang Kai-shek issued an order forbidding the Communists from taking over Japanese property and arms and directing the Japanese to surrender only to Kuomintang officials. Provisionally the Japanese were authorized to retain their weapons and maintain local order.

On 13 August Japanese GHQ at Nanking broadcast that they were not surrendering as yet to anybody, and that any who thought they were, were mistaken and foolish. On this day the Communists broadcast notice that they would not obey General Chiang Kai-shek's order to lay-off from accepting Japanese surrenders. They charged that Chiang's troops had an underground service which was crooked, and was really serving Japan, while the regular troops never did any fighting. General Chu Teh charged that the real reason for the controversy was that the Kuomintang was well armed by American lend-lease, while the Communists were poorly armed. There was now a chance that the Communists might become well armed if they could secure the weapons and munitions of Japan in North China. It was estimated that about 60% of the Japanese were in the North. Chu Teh feared that if Generalissimo Chiang Kai-shek received all Japanese supplies, he would be so well supplied that in a civil war the Communists would have no chance at all.

The Kuomintang looked at the situation from the opposite point of view. They were better armed and more numerous than the Communists. They had not taken advantage of this to attack, but had respected Communist territory. The Communists had to respect Kuomintang territory, as they had too few arms and equipment to take a contrary course. If the Communists should become suddenly well equipped with weapons, might they not start a civil war? In this case the final end of China might well be worse rather than better by Japan's surrender.

The Communists sent messages to the Allies demanding diplomatic recognition, with the right to take part in surrender negotiations. By this time, the Eighth (Route) and Fourth Armies, reinforced by a mixed brigade, had assembled in north Shensi in rear of their left. From this position they moved north, and on 14 August announced that liaison had been established with the Russian right in the general area north of Wanchuan (Kalgan). The mission of the Communist forces was announced as the occupation of south Manchukuo.

On the 14th Chu Teh radioed a message to Chungking, refusing to obey the order to layoff from the Japanese. He stated, "We consider that you have issued a wrong order, very wrong indeed, and we reject it absolutely."

Next day the Kuomintang Government, ignoring the Communists, announced that its troops would occupy Peiping, Tientsin, Nanking, Shanghai, and Hong Kong, for all of which places mayors had been selected. The Yen-an radio broadcast notice that the Kuomintang's actions were leading to a civil war.

On 16 August Generalissimo Chiang Kai-shek wired General Mao Tze-Tsu, commanding the Communist armies: "We have many problems, international and internal, awaiting settlement. May I humbly invite you to come to Chungking immediately, and discuss matters in person? This involves our national welfare, and please do not decline. Yours most anxiously, (Signed) Chiang Kai-shek."

On the 17th the Japanese C-in-C, General Yasuji Okamura, replied to Generalissimo Chiang Kai-shek. He claimed that he had ceased hostilities but that Chinese troops had not. In view of this circumstance he announced his intention of defending Japanese positions. He assumed that the Chinese attacks were unauthorized but he could not ignore them. General Mao declined to come to Chungking, but intimated he *might* send a representative.

Chungking announced on 18 August that arrangements had been made to accept the Japanese surrender at Chihkiang, a Chinese-held town in southwest Hunan. General Ho Yingchin was designated to represent the Kuomintang. The Communists were ignored.

The Chinese Sixth Army, which is American-equipped and -trained, was designated to proceed to Shanghai, while the Chinese First Army, also American-equipped and -trained, was detailed to occupy Kwangtung, including Canton and Hong Kong. The original Chinese plan contemplated having their troops flown into Shanghai and Canton by the American air forces. The latter, under instructions from higher authority, declined to do so. The Chinese are to proceed by marching.

As this account closes the Japanese have not surrendered and hold substantially unchanged the areas indicated at the beginning of this section.

COMMENTS

The sudden surrender of Japan has caused great activity in China. Various parties and nations are each hastening to grab desirable areas, before rivals can reach them.

There is no information as to whether the movement of Communist armies toward south Manchukuo is or is not in accord with an agreement with the Russian armies.

The American China Air Force has engaged in raiding Japanese lines of communication, particularly railroads running north and south. It was reported that they had been given notice as to Russia's intent to declare war on Japan, and that in compliance with the general Allied interest they were acting to prevent Japanese concentrations in Manchukuo. There is no reliable information as to what extent the Japanese were incommoded by the air raids. As noted earlier, and in the article in last month's JOURNAL, troop movements by rail appear to have been abandoned for a considerable time past. Troops have been moving by marching, while supplies went by water over canals and rivers.

On 18 August France signed a treaty at Chungking, ceding back to China (without compensation for public works) the leased area of Kwangchowan. The lease would not have expired until 1998. Kwangchowan, including Fort Bayard, is occupied by Japan and has been frequently bombed.

THE SOUTHEAST ASIA COMMAND (19 July to 18 Aug 45)

The enemy has held that part of Burma which borders the Andaman Sea, and which forms the province of Tenasserim. Main force appears to have been in the vicinity of Moulmein and Martaban, prepared to defend the narrow coastal strip between the Andaman Sea and the mountains. An advanced Japanese force held the east bank of the Sittang River south of Kyaukkyi, with a substantial bridgehead on the west bank along the lower Sittang. A right flank guard covered the road extending east from Toungoo to Mawchi. A detached force covered the road extending east and west through Taunggyi.

The British Twelfth Army, recently made active, covered the lower Sittang and has been engaged in reducing the enemy's bridgehead. The British Fourteenth Army operated along the Mawchi Road and watched the Shan States, held by the enemy. In this area there were no active operations, however. The two British armies had about 17 divisions.

The season of the year was rainy. Rains were heavy, and almost daily. Along the Sittang large areas on both sides of the river were flooded. This limited ground transportation materially, and interfered with the use of armor. Supplies, replacements, and evacuations were provided by air.

Prior to the period under review remnants of two enemy divisions (Japanese Twenty-eighth Army) which had been in Arakan, had succeeded in crossing the Irrawaddy River and had reached the Pegu Mountains. The British were endeavoring to prevent this force, estimated at not over 15,000 men, from reaching the Japanese bridgehead west of the Sittang, or the enemy's main force east of that river. The plan was to maintain close air surveillance and establish a cordon following generally the road and railroad between Toungoo and Pegu. The active part of the front along the Sittang was 110 miles.

On 19 July an air strike was made against Myitkyo, about 10 tons of bombs being dropped, notwithstanding continuous drenching rains. An attack by infantry (vehicles were unable to operate) followed, but was unable to make any progress, the enemy's defense being good.

On 21 July a strong enemy attack developed eastward from the Pegu Mountains near Pyu, obviously with the intent to withdraw to across the Sittang. British infantry, artillery, armor, and air forces attacked from both flanks as fast as the troops could be rushed forward. British reports were that only a fraction of the enemy succeeded in getting across the river. They estimated that the total Japanese did not exceed 5,000 men and that 500 had been killed in the first day's fighting.

The battle fluctuated until the 23d, on which day the center of activity was near Penwagon, which is 20 miles SSE of Pyu. However, there were numerous detached actions all the way between Toungoo and Nyaunglebin, which was near the north edge of the enemy's bridgehead. This was a 75-mile front. Minor daily activity continued around this bridgehead. The battle around Penwagon continued, with the enemy crossing the Sittang at night, subject to artillery fire.

Nights were dark and rainy, observation was poor, and it is not known how many of the enemy succeeded in going over the river. The British were using about 100 fighters by day, while the Japanese had only an occasional reconnaissance plane.

Japanese withdrawals to the north were also noted. On 24 July British troops entered Taunggyi without meeting resistance. By the 25th the battle around Penwagon had diminished but fighting on a reduced scale continued along the west side of the Sittang all the way south to the bridgehead. Some enemy appeared north of Pyu. British guerrillas appeared east of the Sittang to harass enemy forces. On the 28th a British attack against the enemy 8 miles northeast of Pyu met strong opposition and failed to drive him off. With a view to turning the enemy's right, British forces east of Toungoo started westward along the Mawchi Road from their line, which was 28 miles east of Toungoo. Next day the enemy attacked against the east front of Pyu,

but this attempt was repulsed. On the 30th this battle spread to the area southeast of Pyu; a hot fight resulted, with neither side making any particular gains.

On 1 August the British encircled what they described as a "large" enemy detachment on the west side of the Sittang, about 7 miles north of Nyaunglebin. The enemy force refused to surrender; seizing a ravine, it set up a hedgehog position. On the 2nd another enemy force appeared 16 miles north of Nyaunglebin. Efforts to surround this did not succeed, but strong artillery fire was brought upon it. The air force concentrated on attacking the vicinity of Mon, on the east side of the Sittang and presumed to be a critical point for enemy forces around Pyu.

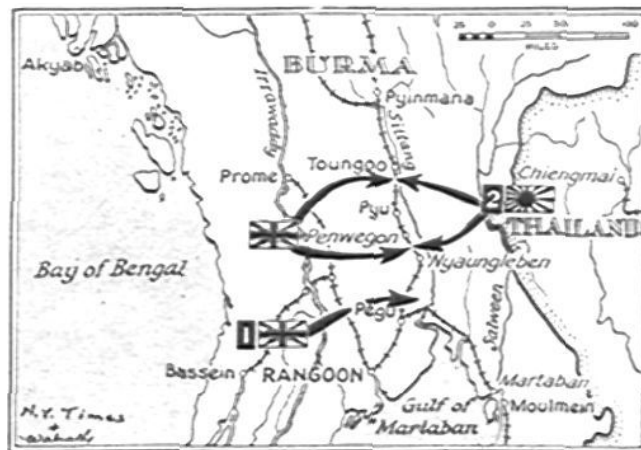
On the 3d a British attack by Nepal (Gurkha) troops astride the railroad extending northeast from Pegu, broke into the enemy's bridgehead at Abya, 22 miles from Pegu. Very strong resistance was met. The enemy assembled his forces just beyond Abya. The attack against the enemy encircled north of Nyaunglebin continued.

The Abya battle was continued on the 4th. It took four successive British attacks to drive the enemy back to a line 2 miles east of the village. A continuation of this offensive on the following day brought a minor advance. At the same time Japanese forces cut in rear of the British and seized a section of the railroad along the line of supply.

On 6 August the British, while going ahead with the attack forward, concentrated on the enemy in their rear areas and succeeded in clearing the railroad and reestablishing a line of supply. The Japanese, apparently as a diversion, attacked at a point south of Abya and 20 miles east from Pegu; they were repulsed.

On 7 August the Abya battle died down. The enemy encircled north of Nyaunglebin appears to have escaped and to have retired across the Sittang and for 12 miles beyond to the Shwegin River, where pursuing British patrols were stopped. The advance along the Mawchi Road was slow. Since 25 July only 3 miles had been gained.

By the 9th the advance along the Mawchi Road had gained another 3 miles. No enemy was found. On the lower Sittang the country was so extensively flooded by continuous rains that operations were limited to patrol activity. These continued northward



By July 24th Allied troops had killed more than 1,300 Japanese attempting to break out of a pocket near Pegu (1) and cross the Sittang River. Indian forces made a successful assault 25 miles northeast of Pegu. The enemy was attacking the British lines along the railway between Toungoo and Nyaunglebin, with the heaviest fighting between the latter point and Penwagon (2).

on the west side of the Sittang to Penwegan and Pyu.

On the 10th the enemy commenced strong artillery fire in the Abya sector. Raids, apparently to secure identifications, followed. A battle started on the 11th, but reports so far available fail to indicate which side started it. It ended on the 12th without material change in the line.

On the 13th the British sent out strong patrols over the entire area between Penwegan and Abya, and to the south thereof. These developed that the enemy was still 2 miles east of Abya, from where his line extended south to include Sathwaygon, which is 9 miles east of Waw. On the Mawchi Road the advance, still meeting no enemy, arrived at a point 36 miles east of Toungoo.

14 August was the last day of full hostilities. On the road from Toungoo a further advance of 2 miles was made. There was no enemy. The slow progress was due to bad roads leading up to a pass through mountains over 8,000 feet high. On the lower Sittang there was considerable activity of small bodies, but no major engagements. News of Japan's surrender was received late on this day, and a cease-fire order was immediately sent out.

In accordance with this order troops on 15 August remained in their lines, but there was considerable firing going on. Planes were sent over the Japanese lines dropping leaflets announcing the surrender of Japan. When this account closes on 18 August lines were stabilized, but some firing (which had, however, declined) was continuing.

An amphibious expedition prepared in Ceylon sailed from that island on 12 August with the mission of seizing Penang. This was to be held as an intermediate base for further operations against Singapore. In preparation for this move the waters north of Penang had been swept by mine layers. The first day of operations was to have been the 15th. On that day three British aircraft carriers with a destroyer escort, preceding the invasion forces, were to have launched air attacks against enemy airfields and fortifications about the projected landing areas. The order to cease firing caused a halt. The amphibious expedition was retained in readiness to proceed to take over such surrender areas as might be later directed.

COMMENTS

Due to the rainy season, neither side conducted any important operations. On the whole the Japanese maintained their bridgehead on the west side of the Sittang, and were able to withdraw a part of their troops in the Pegu Mountains to east of the Sittang. What proportion this was of the total enemy force is yet unknown.

At the close of hostilities the line was Lashio (Br)—Taunggyi (Br)—Pinlaung (Jap)—point 38 road miles east from Toungoo (Br)—Kyaukkyi (J)—Nyaunglebin (?)—Abya (Br)—Waw (Br).

THE MANCHUKUO AND KOREA CAMPAIGN

THE THEATER OF OPERATIONS

The area involved in hostilities includes Manchukuo, Jehol, and Korea.

Manchukuo is shaped like a gigantic letter Y, with its branches filled in. Its base rests on the Yellow Sea and is about 200 miles across from west to east. The east half is mountainous; the west half forms the Liao (Chinese for "iron") valley or plain.

The northeast branch of the Y extends from the base 800 miles to the northeast. Again the eastern half is mountainous, but the west half is a continuation of the Liao plain in the south, and beyond of the Sungari valley, which extends into and merges with the valley of the Amur River.

The northwest branch of the Y extends 700 miles to Manchuli, on the border of Siberia. The south half is within the Liao plain; the outer half is mountainous and partly desert.

A line from the base going nearly due north goes through the center of the Liao plain and thence the Sungari plain. Together they form the great Manchukuo plain, which in general is highly fertile. The plain is bounded on the north by mountains, but Manchukuo extends 150 miles beyond the plain to its northernmost point near Moho, on the Amur.

Jehol is an adjacent province outside the Y, on its lower left. It has been administered as part of Manchukuo only since Japanese occupation in 1932.

The dominant geographical features of Manchukuo are its great rivers and the mountains encircling them. The *Liao River* has its sources about 200 miles north of the base of the Y. Its main stream flows near the center of the west half. It empties into the Liaotung Gulf. At the northwest and northeast corners of this gulf are the ports of Hulutao and Yingkow, both with excellent road and railroad connections into the interior. Hulutao is a new port, with modern improvements. From there a road and railroad follow the coast through a low plain to Tientsin and Peiping in China. This is the main line of communications between Manchukuo and China.

An alternative parallel line about 80 miles inland runs northeast from Peiping through Jehol to enter the Liao plain 70 miles north of Hulutao.

The *Nun* (or *Nonni River*) is the main branch of the Sungari. It rises at the center of the Y in the hills bounding the great Manchukuo plain on the north. It flows nearly due south 400 miles, where it joins the Sungari 80 miles WSW from Harbin. The *Sungari River* has its

sources 200 miles north of the base of the Y in the high and rough mountains along the eastern border. It flows northeast to a point 65 miles east of Hsinking. There is the great Tafengkou dam, in rear of which a lake has been formed nearly 100 miles long and 10 to 20 miles wide. This great dam controls the water level for irrigation and navigation of the lower Sungari. From the dam the river goes northwest to its junction with the Nun. From that junction the Sungari, now navigable, goes 400 miles northeast, past Harbin, to enter the Amur River near Tungkiang. The lower 100 miles of this river has swamps on both banks.

The *Amur River* forms the north border of Manchukuo from Manchuli to the northeast tip of the country. It makes a great bend around the north filled-in section of the Y, flowing in turn north, east, and then south until it joins the Sungari, when it goes northeast.

The *Muling* (or *Ussuri River*) forms the northern part of the boundary of the northeast branch of the Y. It separates Manchukuo from the Maritime Territory of Siberia. On the Manchukuo side the river is flanked by mountains.

The greatest mountain chain starts at the base of the Y and in parallel chains extends northeastwardly. Highest section is east of the Sungari reservoir where in the Chang Pai (Chinese for "long white") Mountains they attain a height of almost 9,000 feet. As the name indicates, this range is snow-covered. With this exception the mountain ranges have altitudes not exceeding 4,500 feet. They are very rough, however, with deep valleys, and constitute a major obstacle. The mountains west of the Muling do not exceed 2,700 feet in altitude. All these mountains are heavily forested.

About 150 miles west of the Nun River, and parallel to it—that is, north and south—is the axis of the *Ta* ("great") *Khingan* Mountains. These mountains and the area west of them have comparatively little rainfall. They are generally barren, being stony and gravel- and sand-covered. They have elevations between 4,500 and 5,600 feet, but the surrounding territory is high land and peaks rarely exceed 1,000 feet above the surrounding country. In summer, which in this area is usually very hot and dry, motor vehicles can traverse these mountains going cross-country. Mountains are 100 to 140 miles wide.

On the east side of the Nun River is the *Hshiao* ("little") *Khingan* Mountains. They separate the Nun and Amur valleys, and nowhere exceed 2,700 feet in height. Across the head of the Nun River plain, extending west to east and connecting the Great

and Little Khingan Mountains, lie the Iikuri Mountains, a low range under 2,000 feet.

At the base of the Y the Liaotung peninsula projects southwest for 140 miles, having the Liaotung (west Liao) Gulf to the west and the Korea Bay to the east. Near the tip of the peninsula are the naval base of Ryojun (or Port Arthur) and the commercial port of Dairen.

The populated part of Manchukuo lies on the great plains and inside the surrounding mountain ranges. Winters are very cold, summers very hot. Snowfall is light, and in the plains will rarely interfere with military operations. Spring and autumn are usually dry. Summer is the season for rains. On an average these do not exceed a yearly amount of 15 inches in the west and 25 in the east. As the rains come during the growing season they ordinarily suffice, and bounteous crops can be raised.

Population of Manchukuo, including Jehol, was reported as about 45,000,000 in 1940, and was then growing at a rate exceeding a million a year. Prior to 1911 there were few Chinese in Manchukuo, as they were excluded by immigration laws quite similar to and for the same reasons as American exclusion laws. After Japanese domination Chinese were admitted and now form around 80% of the total. The majority are employed in agriculture. Soybeans form the main commercial crop; annual production before the war exceeded that of all the rest of the world combined. Wheat is raised in the north, millet in the south. All ordinary temperate climate crops thrive.

The great plains of Manchukuo are not flat, such as those of our central states. They are rolling country like Maryland or Virginia.

The main cities and centers of industrial activity, which is large, are on or near the axis of the Y. Dairen is a main port of 533,000 people, well fitted with harbors and very suitable for a base. It is in the same latitude as Washington, D. C. Mukden (pop. 544,000) is in the latitude of Boston, and is an important industrial center. 50 miles SSW is Anshan (213,000 pop.), a major steel and iron mill center. Hsinking is the capital, and headquarters of the local Emperor; it has 544,000 people. Harbin is the largest city in Manchukuo, having 662,000 people; it is in the latitude of Quebec. All the cities mentioned are on the main line of the South Manchuria RR. This railroad uses American-style equipment for both passengers and freight, and is of standard gauge and double-tracked. 25 miles northeast of Mukden on a branch line is Fushun (pop. 270,000). This has the greatest coal mine in the world, with seams (in open ground) over 400 feet thick.

As the name Liao (iron) indicates, there are large quantities of iron ore in that valley. Based on the coal there are large chemical plants; synthetic oil establishments, using shale in part; manganese; aluminum; copper; gold; and other minerals. For Japan, Manchukuo was a main base for raw materials and a major base for manufactured articles.

Communications through the great valleys are excellent. There are numerous roads, and the best railroad net in the Far East, outside of Japan.

Korea ("Chosen" is the official local name) is inhabited by a people of uncertain origin, but neither Chinese nor Japanese. The country is a mass of mountains, although except in the north sector they do not exceed 5,000 feet in elevation. Their profusion is extraordinary; plains are few and scattered: in all, the plains amount to but 1/5 of the total area, the mountains having the remainder.

Korea is split by a geologic fault, just as is Honshu, the main island of Japan. The Korea fault is a valley which starts near Keijo (or Seoul) and extends slightly east from north clear across the country. Through this valley, bounded on both sides by high mountains, are a railroad and road to Genzan on the east coast.

To the south the dominant mountains are the Taihaku range, which is parallel to the east coast. The east side is steep, and descends abruptly to the sea. Along this coast there are few harbors or landing sites favorable for invasions. On the west side the mountains slope gradually. There are numerous harbors and many islands offshore, whereas there are no islands close to the east shore.

North of the dividing fault the mountains are higher, and merge into the Chang Pai Mountains, reaching altitudes exceeding 8,000 feet.

The climate of south Korea is mild; snow in winter seldom stays on the ground for long. Northern winters are severe. Like in Manchukuo, rain or snow is scanty in winter and heavy during the summer, with rather dry springs and autumns except for occasional hurricanes from the south. Total rainfall varies from 60 inches in the south to 25 in the north. As most of it falls during the crop season, it ordinarily suffices. Summers are hot.

The cultivated area is practically the entire available surface, and is about 11 million acres, equal to 80% of that of Japan. Population of the entire country is 23,000,000, nearly all living on the land.

Rice is the principal crop. Normally this is in part shipped to Japan to fill the deficiency in that country. The Koreans replace it with millet from Manchukuo. Barley is the next most important crop, but all temperate zone grains and fruits are raised to some extent. There are many farm animals, considerably exceeding the number in Japan.

The largest city is Keijo, the capital, with 706,000 people. Twenty miles to the west is its port of Jinsen (pop. 102,000). Most important industrial city, with large steel mills and adjacent to anthracite coal and iron mines, is Heijo (185,000 people). Second largest city is Fusan (213,000 pop.) at the south tip. This is the main port for traffic with Japan. Frequent ferry service normally operates to Shimonoseki, 130 miles away. Fusan's port is excellent and suitable for a major base. Eighty miles to the north is Taikyu (110,000 people) a general industrial town. All the cities mentioned, except Jinsen, are on the main line of the Korea RR, which starting from Fusan passes through Keijo on to Mukden, where it connects with the South Manchuria RR. Like the latter, the Korea RR is built on American standards and is standard gauge.

Lines of communication are good throughout Korea, by both rail and road. At the north east are the modern ports of Rashin and Seishin. These are 250 rail miles from Hsinking in Manchukuo, and are termini of the short lines to the sea. These ports are within 125 miles of the Russian base at Vladivostok.

THE RUSSIAN DECLARATION OF WAR

At Moscow, at 2030 hours local time on 8 August, Foreign Commissar Molotov read a declaration of war to the Japanese ambassador. The reasons alleged for declaring war were

The Allies approached the Soviet Government with a proposal to join in the war against Japanese aggression and thus shorten the period until the finish of the war to decrease the number of casualties and contribute toward the most speedy restoration of peace.

True to its obligation as an ally, the Soviet Government accepted the proposal of the Allies. . . .

The war was to be effective at 2400 hours (midnight) 8/9 august. Shortly after that hour Manchukuo time (which was 1800 hours Moscow time) Russian troops started hostilities. When the declaration of war was read, hostilities had already commenced.

Russia had prepared for the declaration of war on 5 April last, when it denounced its then existing pact of non-aggression with Japan. That pact had been signed on 13 April 1941, at which time Japan was preparing for war with the United States and desired to clear away prospects of attack by Russia during that forthcoming war. At the same time Russia was preparing for war against Germany, and it suited her military situation not to have any trouble with Japan during that war. The pact was probably at the time sincere for both parties. It was to last for five years, subject to a right to denounce at any time upon giving one year's notice.

INITIAL OPERATIONS

The Russian C-in-C was Marshal Alexander M. Vasilevsky. He had three Army Groups:

TransBaikal Army Group—Marshal Rodion Y. Malinovsky—opposite west Manchukuo.

2nd Far East Army Group—General Purkayev—opposite north Manchukuo.

1st Far East Army Group—Marshal Kiril A. Meretskov—opposite east Manchukuo.

No information has been received as to the strengths or compositions of these forces.

The initial front of the TransBaikal Army Group was over 450 miles. In this distance three columns advanced:

Eastward astride the Chinese Eastern RR from Manchuli toward Harbin; this force had right and left flank guards out approximately 50 to 100 miles.

Southeast from Lake Bor toward Taonan.

Southeast from south of Lake Bor toward Tungliao.

The 2nd Far East Army Group had two armies:

From Blahoveshchensk southward toward Harbin.

From Khabarovsk southwest up to the Sungari valley toward Harbin.

The 1st Far East Army Group had an initial front of 180 miles on both sides of Lake Khanka. The right and left wings were each astride a railroad which leads west to Harbin.

Strategically, the Russian plan was a converging movement toward a common center. Maximum success for this plan rested upon either finding the enemy's main army at the center expected (and then in inferior strength to all of the converging columns), or else joining the columns at the center for a joint movement if the enemy was elsewhere. Finding the enemy at the center would have

been similar to von Moltke's 1866 campaign, when he crushed the Austrian Army at Sadowa and ended the war in two days. Joining one's own columns before the enemy's main body was met is a Napoleonic principle, habitual with him, and safest. Greatest danger to a plan of this kind would have been to have found an active enemy, who contained one or more columns while he concentrated and destroyed other columns in turn before their junction was secured.

A detached Russian force was in Karafuto (or Saghalin) and was to attack southward.

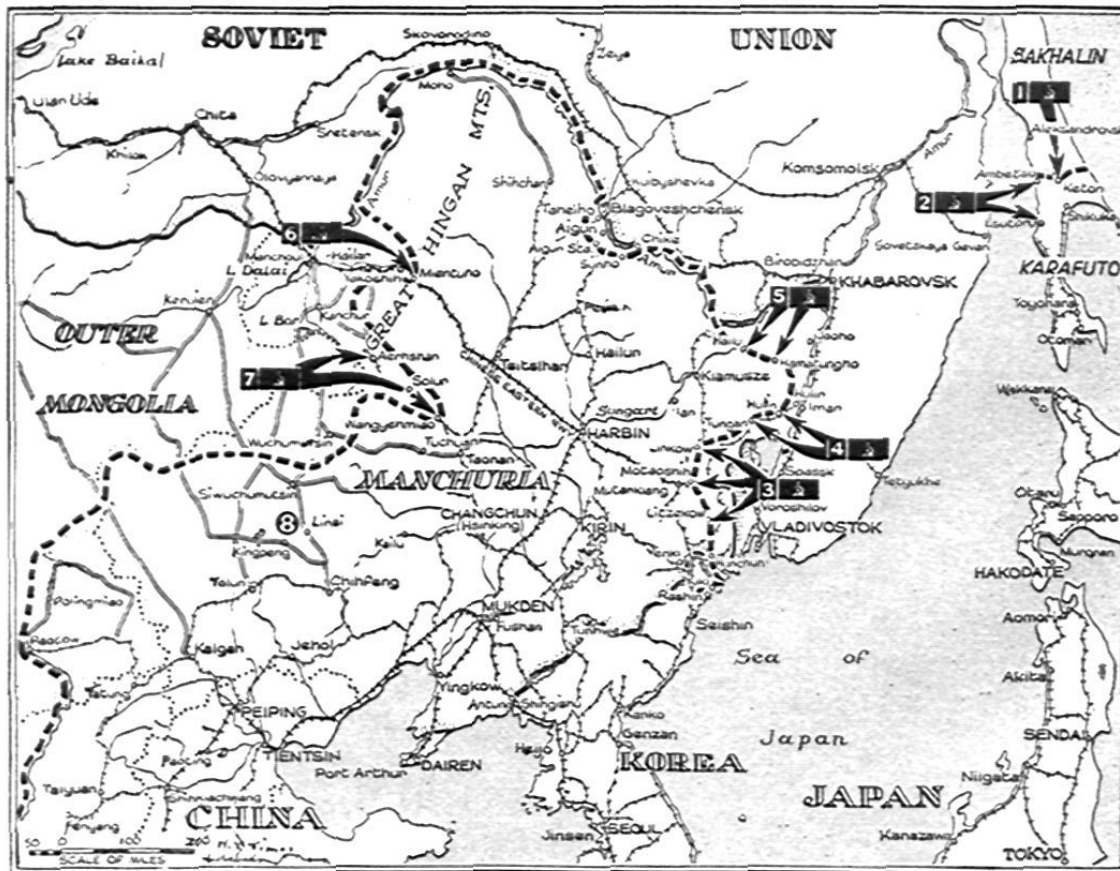
Russian naval forces based on Vladivostok were to attack along the northeast Korea coast. The air force was given as its major mission the destroying of railroad junctions within Manchukuo.

All Russian attacks started off well. The TransBaikal Army Group crossed the frontier and advanced 9 to 15 miles, reaching astride the railroad the line Lake Hulun—Chalainoerh. Further south troops advanced on both sides of Lake Bor, finding no resistance except for observation patrols. Still further south advance elements reached the Great Khingan Mountains.

The 2nd Far East Army Group's left wing forced a crossing of the Amur River with the help of a naval flotilla, and occupied Fuyuan.

The 1st Far East Army Group broke through a fortified line of pillboxes covering the frontier. The navy heavily shelled Seishin, Rashin, and Yuki. The air force concentrated its bombing on Harbin, Changchun, and Yungki (or Kirin).

No major Japanese forces were encountered. Manchukuo



According to Tokyo, on August 13th the Russians landed at Ambetsu and Esutoru (2) in the Japanese half of Sakhalin Island, and reached Keton (1) in their drive across the border. In eastern Manchuria they captured Litzekow, Motaoshih, and Linkow (3). Farther north Soviet forces won Tungwan and Hulin (4). In the Khabarovsk area they seized

Hamatungho and Hailu (5). Along the Chinese Eastern Railway Mientuho fell (6). The deepest penetration was made by units that took Aershshan and overran Solun and Wangyehmiao (7). South of this region the Russians were said by the enemy to have reached the vicinity of Linsi (8).

troops reinforced by Japanese organizations appeared to be covering troops charged with delaying missions.

On 10 August the left of the 1st Far East Army Group continued its attack along the railroad and advanced about 18½ miles to Makiaoho. The 2nd Far East Army Group's left attacked across both the Amur and Muling (or Usuri) Rivers to reach the line Tungkiang—Jaoho without meeting much resistance. The right wing forced a crossing of the Amur south of Blagoveshchensk and established a 9-mile-deep bridgehead around Aigun.

The TransBaikal Army Group continued its advance eastward astride the railroad. Meeting no particular resistance the advance elements arrived at Hulun (or Hailar). The right flank guard was 80 miles to the south. The advance was about 100 miles.

In this area the territory is mostly uninhabited sand and rocky terrain, in general practicable for cross-country motor movements. Supply should have been easy, provided sufficient transportation was available on the ground or in the air.

On 11 August the TransBaikal Army Group's left made only a slight advance along the railroad. Considerable resistance had developed. A better advance was made on the right. Taking advantage of the open terrain, and having numerous motor vehicles, an advance of nearly 50 miles was made southeastwardly. The crest of the Great Khingan Mountains was reached near Aershhan.

The 2nd Far Eastern Army Group's right failed to deepen its bridgehead around Aigun, but it was extended laterally by new river crossings at Chike. The left advanced astride the Sungari to reach Fuchin, whence the line ran in a general southeasterly direction.

The 1st Far Eastern Army Group met hard fighting among mountains and woods, but succeeded in reaching the Muling River.

FINAL OPERATIONS

On the 12th a new Russian movement developed. The front of the TransBaikal Army Group was extended to the south by a number of mobile columns over the few available roads extending eastward between Aershhan and the south part of Chahar Province. This was a 500-mile front. According to Russian sources, part of the mobile columns included Mongolian troops. Chinese Communist reports claim that the extreme right of the new line was composed in part of their Eighth and Fourth Armies. The left of the new movement, meeting minor resistance, reached the line Solunchan (Jap)—Wuchumutsin (Russ) —Siwuchumutsin (J). This advance averaged over 50 miles. An equal advance was made eastward from Hulun (Hailar), where the Japanese fell back. The Russians reached Yakoshih.

The 2nd Far Eastern Army Group's right failed to gain ground near Aigun. The new crossing

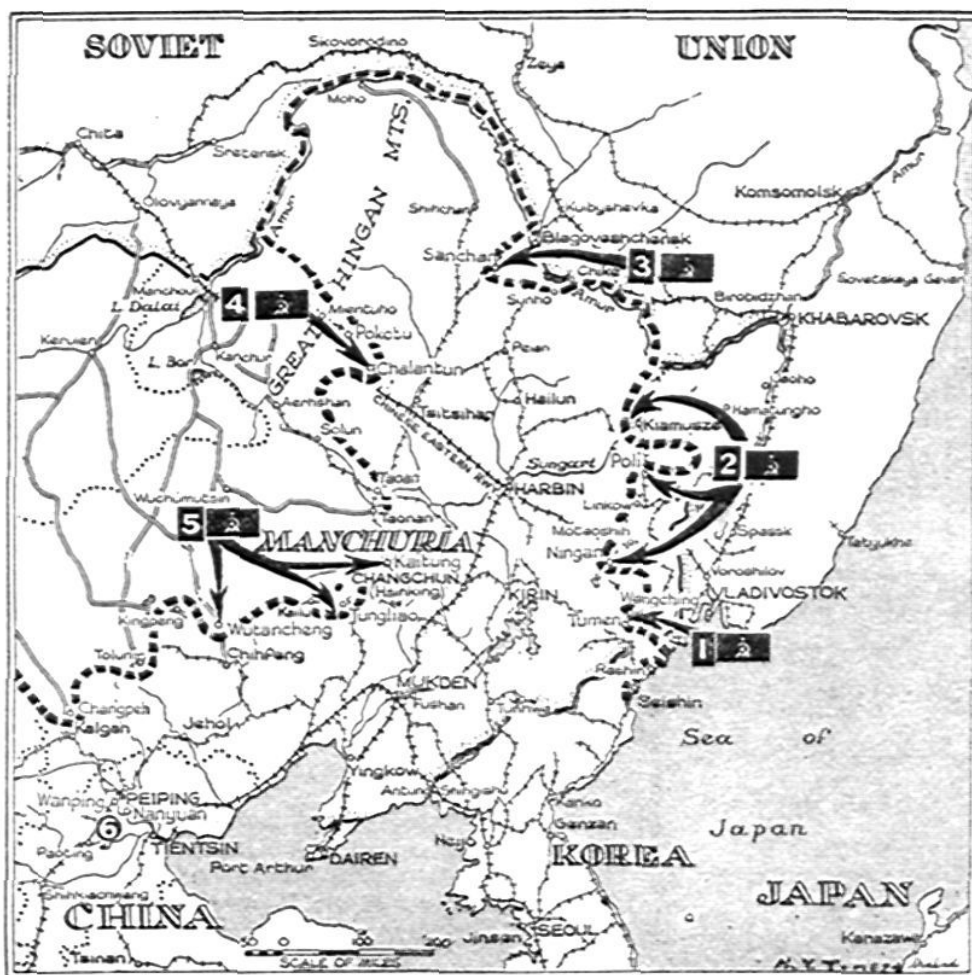
near Chike was advanced to include Sunho. The left of the Army Group, along the Sungari, reached Hwachwan.

The 1st Far Eastern Army Group had heavy fighting in an attempt to force the line of the Muling River. Some bridgeheads were established, the front extending from Mishan as far south as Mulingchan.

Along the northeast Korean coast an amphibious expedition captured Yuki and Rashin. According to Japanese reports weak Russian forces advanced overland from the Vladivostok area, southwest into northeast Korea. There seems to have been little Japanese resistance.

On 13 August the 1st Far Eastern Army Group extended its operations along the Muling River to its mouth at Hulun, making a 180-mile front to Mulingchan. Hulun was taken, but was later lost to a counterattack. It was reported recaptured later. Bridgeheads over the Muling were enlarged, but Japanese opposition was strong and progress was slow. The left of the 2nd Far Eastern Army Group along the Sungari made a slight advance but the right near Aigun made none.

The TransBaikal Army Group made the major gains of the day. Along the Chinese Eastern RR the advance reached Mientuho, an 18-mile advance. The mobile columns to the south made spectacular movements: they reached the line Wangyehmiao (Russ)—Tuchuan (Jap)—Lupeh (J)—Lintung (J)—Linsi (J).



As Japanese troops began to lay down their arms, the Red Army continued to close on Harbin from several directions. It occupied Tumen (1) and Ningan and Poli (2), pushed west of Kiamusze, took Sanchan (3), overran Pokotu and Chalantun (4), and swept up Kaitung, Tungliao, Kailu, and Wutancheng (5). Chinese Communists near Peiping seized Wanping and Nanyuan (6).

On the 14th the TransBaikal Army Group made only slight gains in the north along the railroad. Its mobile columns made great gains, reaching the line

Taoan (Jap)—Taonan (Russ)—Chanyu (R)—Tienshan (R)—Tapanshang (R)—Tuchengtze (J)—Shangtuho (J).

Some of the Russian columns advanced over 90 miles.

The 2nd Far Eastern Army Group was still held up around Aigun, but its left continued to make progress astride the Sungari River and was approaching Kiamusze.

The 1st Far Eastern Army Group having advanced its left across mountains and woods, appeared in the right rear of the Japanese along the Muling River and attacked and captured Mutankiang, thereby turning the whole Japanese position. Along the Muling hard fighting was renewed with only slight Russian gains. However, the capture of Mutankiang ensured a quick Japanese withdrawal.

On 15 August the Japanese (as had been expected) commenced to withdraw from Kiamusze and the Muling River. The latter was crossed at numerous places by Russian troops who also moved in close to Kiamusze and captured Paotsing. The Russians near Aigun continued to be held up.

The TransBaikal Army Group made an advance along the Chinese Eastern RR, and attacked the fortified pass near Pokotu. The mobile columns made only restricted advances but their right was extended by new columns, claimed by Chinese Communists as being in part their troops, and which advancing toward the line Peiping—Chifeng reached Shangtuho—Paochang—Changpeh, all inclusive.

On 16 August the Japanese made strong counterattacks in nearly all areas. Against the 1st Far Eastern Army Group the counterattacks were to gain time for an orderly withdrawal—and succeeded, the Russians making only two minor advances, one of which was into Kiamusze.

The TransBaikal Army Group was held astride the railroad. Hard attacks were made against the mobile columns. Most of them were held, and no advances were made in the center. In hard fighting the Russian left column entered Taoan. New mobile columns, exclusively Chinese, came into line on the extreme right and occupied the line Taolin (CH)—Shangi (?).

On 17 August the 1st Far Eastern Army Group extended its attacks to the south close to the Korea boundary, and reached Wangching. The turning movement which had captured Mutankiang appears to have been contained by the Japanese, who reopened line of communications. They continued to withdraw in good order. At the end of the day the line was Kiamusze (Russ)—Poli (R)—Mutankiang (R)—Ningan (R)—Wangching (R)—Yenki (Jap). The 2nd Far Eastern Army Group announced a slight advance near Aigun.

The TransBaikal Army Group made considerable advance. The Japanese resistance at Pokotu Pass collapsed, and the Russians advanced into Chalantun. The mobile columns, attacking everywhere, reached the line

Taoan (Russ)—Taonan (R)—Kaitung (R)—Tungliao (R)—Kailu (R)—Wutangchen (R)—Shangtuho (?)—Kuyuan (Jap)—Changpeh (R)—Hingho (?)—Taolin (Ch).

Although Japan had abandoned the war on 14 August, the 17th was the first day when Japanese in Manchukuo surrendered. About 20,000 on various fronts laid down their arms.

On 18 August the left of the Far Eastern Army Group repeated their cross-country turning movement by advancing about 20 miles over densely wooded mountains westward from Ningan. Elsewhere no advance was made. The left wing of the 2nd Far Eastern Army Group astride the Sungari reached Tangyuan, against moderate opposition. No advance was recorded by the right wing around Aigun.

Late on this day the Russian C-in-C (Marshal Vasilevsky), whose CP was at Khabarovsk, ordered operations suspended. At the same time a Russian plane was flown to Harbin, with a message to the Japanese C-in-C requesting him to send his chief of staff to Khabarovsk on 19 August to arrange for surrender. During the day about 5,000 Japanese had surrendered at sundry places.

At the close of the period hostilities had not been entirely suspended.

The line in the east was

Tangyuan (Russ)—Ilan (Jap)—Hailin (J)—Lake Chingpo—Wangching (R).

In the north the Russians held a bridgehead which included Aigun—Sunho—Chike.

In the northwest the Russian line was through Chalantun. The mobile columns to the south held the same line as given above for 17 August.

OPERATIONS ON SAKHALIN (KARAFUTO)

On 12 August a Russian force which operated under the 2nd Far Eastern Army Group, attacked south across the border between Sakhalin and Karafuto. At the same time two amphibious expeditions landed on the west Karafuto coast, one just south of Ambetsu and the other north of Esoturo. Main attack across the boundary was astride the road from Grodekovo to Shikuka.

No progress has since been reported for the amphibious expeditions. The land attack advanced about 5 miles south the first day, and on 13 August reached Keton, 17 miles south of the boundary and 46 miles north of Shikuka, presumed Russian objective. On 14 August Japanese counterattacks appear to have forced the Russians back about 4 miles.

At the date of writing there is no report as to subsequent operations.

COMMENTS

The Russian declaration of war on 8 August has been claimed by former Prime Minister Churchill as having been made in compliance with a promise made at the Yalta Conference in February, 1945, to declare war three months after the defeat of Germany. The Russian declaration referred to requests by the Allies, but without specifying dates or other particulars.

So little information as to the operations is available that no real critique can yet be given. The Russian preparations were of such character as to have required considerable preparations. These had been noted by Japan, for at a conference held at Tokyo on 28 June the Japanese Prime Minister announced that he had become aware of Russian intentions to declare war. Japan may not have known the day.

The main Russian effort seems to have been the advance of the mobile columns across country largely desert, but practicable for mechanized troops. By 18 August these troops were only 110 miles from Peiping, 100 miles from Chengteh (capital of Jehol), 130 miles from Mukden, 120 miles from Hsinking (capital of Manchukuo), and 160 miles from Harbin. They were in position, assuming they were in sufficient strength, to encircle the two Japanese armies astride the Chinese Eastern RR, east and west from Harbin. The capture of that point would also have cut off Japanese forces to its north, in the Big Bend area of the Amur River.

The right of these mobile columns was only 200 miles from the Gulf of Chihli. Occupation of the narrow coastal strip along the borders of that sea would have cut off Manchukuo from China and insured occupation solely by Russian troops.

ANOTHER SIGN OF THE TIMES

In 1941 the JOURNAL each month presented a photograph suitable for framing. That project was nearly complete when the Japs staged their sneak attack. As the final picture of the series was of a pastoral, peace-time scene, war-time was not suitable for its distribution.

Now, however, we are once more at peace. The thoughts of many of us return to the leisure, the hobbies, and the pleasures of other days. And this is the fall of the year, the period of crisp days and the baying of hounds. It is with pleasure, then, that we symbolize these days by bringing you the fine photo of the Fort Sill Hunt, nearly four years after its originally scheduled date.

A War of Superlatives

By Hanson W. Baldwin

Republished by courtesy of *The New York Times*

The struggle against Japan was a war of superlatives.

Never in history has a war been fought throughout such a tremendous theater and over such distances; never have ocean barriers been thus conquered. And never before have such vast sea and air forces been employed.

Even more than in the war against Germany it was the industrial strength of the United States that was the solid foundation of victory. So great is the American military potential, as we now know, that it was a war that the United States could have won single-handed—though by no means as quickly as it was won.

The Japanese were overwhelmed by material. Bulldozers scratched airfields out of jungles in hours, where the Japanese, with pickaxes, took weeks. Fleets of the sky and sea so large that no man has even seen them all, dominated the oceans. Tons of ammunition and millions of items of new equipment doomed the enemy to defeat.

NEW WEAPONS ONE FACTOR

The Japanese declared in the closing phases of the struggle that it was a war of Man against the Machine, and they tried to epitomize this in the suicide tactics of their Kamikaze fliers, their most effective weapon. Spirit, they said, was pitted against materiel. But they were wrong. The Japanese war was a struggle of Man, against Man and the Machine, and the issue was foredoomed.

This war utilized an immense variety of new weapons and novel tactics and equipment. It developed along Wellsian lines that completely altered tactics and strategy. The Buck Rogers trend, noticeable throughout the struggle, came to a climax with the atomic bomb, and the war ended, as it had begun, with stunning surprise. Many of the war's new techniques were concerned with sea power, for it was control of the sea—by ships and planes—that defeated Japan.

The various techniques and new weapons and equipment used can only be mentioned briefly.

Development of the Carrier Task Force

First used in fleet maneuvers by the United States Navy many years before the war, this fast, heavy-hitting tactical unit reached its optimum development in the Pacific War. The carrier became the "capital ship" of the modern Navy. Despite her earlier critics, she proved herself completely indispensable to victory in the Pacific.

Extension of Fleet Operating Radius

The old axiom that a fleet is tied to its permanent bases has been invalidated by the experience of the Pacific. The quick establishment of advanced island bases by Seabees and Army

engineers and particularly the floating base system provided by the tremendous expansion of the fleet service force—in the form of mobile, floating drydocks, floating machine shops, water-distilling ships, tankers, barracks ships, store ships, netlayers, etc.—enabled the fleet to cruise any desired distance beyond its most advanced permanent base and to remain at sea without ever dropping anchor for months on end.

Sustained operations, hitherto undreamed of in war, were made possible by the so-called pipeline supply system. Ammunition ships, stores ships, oilers, jeep carriers used to ferry planes, and other supply ships, used in a constant stream or pipeline, met the combat forces at sea and supplied them under way. Motion pictures, mail, spare engines, 16-inch shells, rockets, replacement personnel, oil, gasoline, provisions, even new planes and pilots were transferred to the combat ships in the open sea.

In one unprecedented instance a floating, mobile drydock took aboard a damaged destroyer in the open sea while under way and repaired it en route to port. All who have ever seen a tanker refueling a huge carrier on one side, a great battleship and a small destroyer on the other, with all four ships, lashed together, steaming abreast and only a few yards apart in a seaway at a 10-knot speed, will probably agree that Americans have become, in this war, the most "seagoing" people on earth.

Amphibious Tactics

The development, primarily as a result of Pacific experience, of many different types of specialized amphibious craft and of the technique and tactics of amphibious landings changed the art of war and made victory possible in Europe as well as in the Pacific. The old conception that no sizable landing operation could be successful without a protected harbor or port to supply it was disproved.

More than 150 amphibious landings, an average of more than one a week since Guadalcanal, were made in the Pacific, some unopposed or against little opposition, others against terrific resistance, but all over open beaches or reefs. These amphibious operations forced a close tactical merger between sea, air, and land forces and showed the essential indivisibility of military force.

Land Operations

Offensive operations were conducted despite terrain obstacles—mountains, swamps, jungles, etc.—hitherto considered impassable, and despite the absence of conventional supply lines. The reconquest of Burma was accomplished primarily by land, an operation that had been dubbed impossible in the first years of the war. The development of

jungle tactics and the assault of caves and hill positions required the evolution of new techniques and weapons.

Engineering and Construction Accomplishments

Such achievements as the Alcan Highway, the base development projects of the Pacific, the Stilwell Road, the oil pipelines in Burma and China, and airfield and harbor developments, dwarf all previous concepts and rightly rank with the "Seven Wonders of the World."

Air Power

Flying from land and sea bases, all types of planes made flights of unprecedented distances over open water and dropped tremendous tonnages in bombs and torpedoes. Huge bombers that dwarfed those that helped to defeat Germany played a major role in the final phases of victory. Air transport achievements—particularly in some of the most difficult flying in the world, such as the route "over the Hump"—were an important factor in China's survival. Airborne transport, and particularly the air supply of ground troops in Burma, made the land conquest of Burma possible and opened new chapters in the history of war.

Intelligence Services

Many mistakes were made in our intelligence estimates of enemy land strength, but we more than compensated for them. The Navy's combat intelligence in particular paid big dividends of victory. Some of our success in battle, notably the Battle of Midway—turning point in the Pacific war—was obviously due

to the interception and "breaking" of the enemy's radio messages, which gave us pre-knowledge of the Japanese Fleet's strength and dispositions.

SOME NEW WEAPONS LISTED

New weapons and equipment, many of them designed and developed to meet Pacific needs, made our accomplishments possible. Only a few can be mentioned. Among them were:

The electric-driven, large-size torpedo, detonated magnetically, acoustically or by contact; the jellied gasoline bomb with a detonator in a plane's detachable fuel tank; amphibious vehicles that swim through the water, crawl over reefs, and waddle through swamps; the flame-thrower; radar in all forms for detection, identification and recognition, bombing, navigation, fire control, and other purposes.

Recoilless 57- and 75-mm guns for jungle use light enough for men to carry and fire from the shoulder or tripod mounts; rockets of all sizes and types, surface and air, from 4.5-inch to "spinner" rockets with rotational motion that gives them greater accuracy, and the giant "Tiny Tims" and larger types with major caliber shells as warheads; radar-controlled glider bombs; brain-like fuzes; jet planes; fire bombs; centralized fire control for the B-29 bombers; rocket assisted take-offs; new fuels; waterproofing and anti-fungus material; new malarial measures; D.D.T.; and finally, the atomic bomb.

The Pacific war has been a technological revolution, and material proof of the industrial superiority of American mass production.

ALL 99TH's FA PILOTS GET D.F.C. AWARD

WITH 99TH INFANTRY DIVISION IN GERMANY.—"This is the only division of the armies of the United States in which all of its liaison pilots have been awarded the Distinguished Flying Cross."

These were the words of Maj. Gen. Walter E. Lauer, commanding general of the 99th Infantry Division, as he awarded the DFC Medal to all nine of the liaison pilots of the Division in an impressive ceremony which took place at the 99th CP in Kitzingen, Germany. Before an array of troops representing each of the artillery battalions (the 370th, 371st, 372nd, and 924th) and each of the infantry regiments (the 393d, 394th, and 395th), Gen. Lauer, along with Brig. Gen. Frederick H. Black, commanding general of the Division Artillery, and Brig. Gen. Hugh T. Mayberry, assistant division commander, honored the nine pilots.

Receiving the medal were Lts. Robert W. Kean, Jr., Herbert B. M. Sears, William J. Little, Charles L. Proctor, J. C. Gaston, Orin A. Lehman, John M. Hilson, James W. Ramsey, and Max R. Tadlock.

Decorated with the Silver Star at this same ceremony was Maj. Howard E. Cunningham, in charge of the 99th's air-liaison section, whose supervision of the section made it one of the smoothest-running and efficient in the army.

Flying skill and courage under fire brought the nine pilots their high award. Back in the heat of the big German breakthrough into Belgium last December, the airstrip upon which their planes were grounded was threatened by the enemy. Tanks, machine guns, and artillery were spraying the field. Faced with the choice of either destroying their planes to prevent their capture or flying them from the field, the nine men maneuvered their craft across the strip and flew through the hail of shells and bullets to safety.

"OURTILLERY"

According to the *Marine Corps Chevron*, when shells whistled over the heads of Marines on the Shuri battlefield on Okinawa the question of whose shells they were was answered in Leatherneck terminology.

Shells headed south toward enemy territory from the Marine artillery units behind our lines came from "ourtillery." Those headed north from Nip guns were fired by "theirtilery."

A Real Reel Improvement

By Col. R. G. Barkalow, FA

An attachment to Reel Unit RL-31() to reduce operator fatigue, increase the speed of wire recovery, and prevent over-running and backlash when laying wire, has been field tested and found practical (Fig. 1). It was devised by Cpl. L. Donley, of the 664th FA Bn.

This device can be made from salvage material, and with tools and equipment available in the field. It requires no modification of the reel unit, can be readily attached to or detached from either side of any RL-31 type reel, and does not interfere with normal use of the reel in any position (Figs. 2 and 3). Materials required are two gears from a truck transmission which will provide approximately a two-to-one reduction, and a bearing from a vehicle water pump.

The bearing is welded to a metal plate and the larger gear fitted over it. A yoke is welded to the gear. To the yoke is welded a steel shaft the same size as the reel axle and long enough to permit the crank to be mounted and clear the reel axle.

The smaller gear is secured to a collar which has a sliding fit on the reel axle and is held in place by a cotter pin through the collar and existing hole in the reel axle. A guard to prevent injury to personnel and wire is hinged to the plate mounting the larger gear. The entire assembly, which weighs 13 pounds, is attached to the reel frame by two "U" bolts.

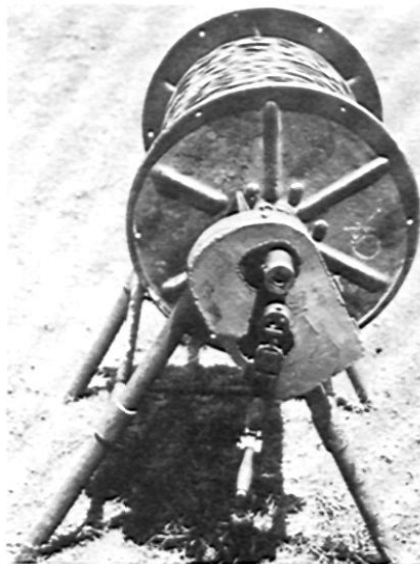
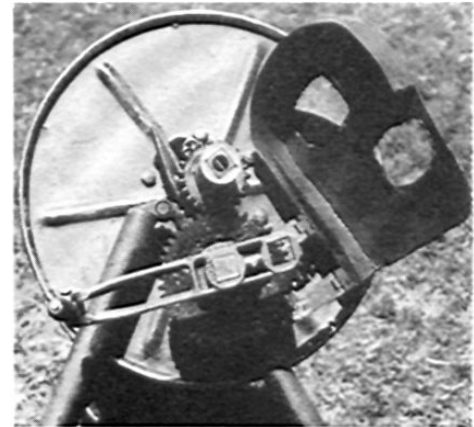
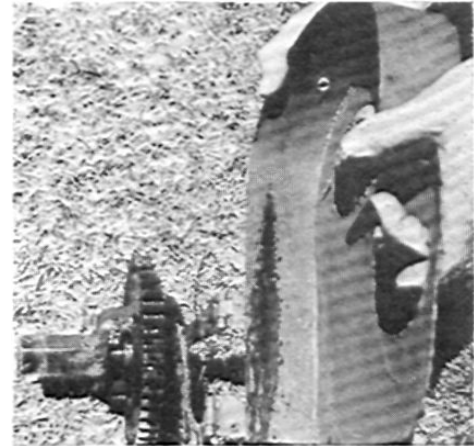


Figure 1



Figure 2

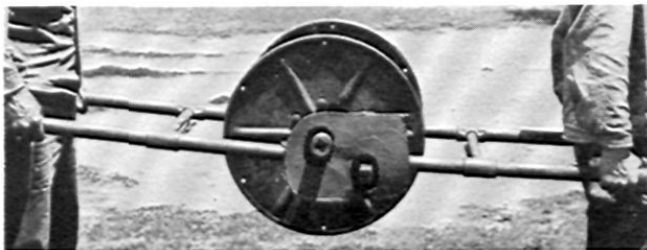


Figure 3

Dan Tyler Moore, Captain FA



Honoring the founder of the Field Artillery School, the late Captain Dan Tyler Moore, this marker recently was placed in front of McNair Hall, headquarters for the school. It was taken from one of the Fort Sill ranges by personnel of the Field Artillery School Range detachment, and then inscribed: "Captain Dan Tyler Moore, FA, 1877-1941, First Commandant, Founded this school June 1911"

A marker recently has been placed in front of McNair Hall in honor of Captain Dan Tyler Moore, the "father" of the Field Artillery School. Captain Moore was chosen to establish and to serve as the first commandant of the "School of Fire for Field Artillery," as it was called until 1918. He entered the army in 1899 as a second lieutenant of infantry, and served in the Spanish-American war as a second lieutenant of Connecticut Infantry.

In 1901 Captain Moore transferred to the Field Artillery, in which he acquired the excellent reputation that suggested his eminent fitness for the position of commandant to which he was appointed. In that capacity he served with distinction.

During the years 1900 to 1908 a group of United States Army field artillery officers recognized that several foreign countries were far in advance in artillery tactics and technique. With this in mind the War Department decided to send an able and energetic officer abroad to study in foreign artillery schools, preparatory to his taking a prominent part in the establishment of a school in this country. The officer selected for this important duty was Captain Dan T. Moore, Sixth Field Artillery. He spent the year 1908-9 visiting the artillery schools in England, Holland and Austria, and was a student at the German artillery school at Juterborg.

In November 1910 Captain Moore was sent to Fort Sill by the War Department to make preliminary arrangements for the establishment of the School of Fire. Fort Sill was selected as the site of the school since the size (51,000 acres) and the varied terrain of the Fort Sill reservation offered admirable opportunity for training both in firing and in tactical handling of Field Artillery. With these ideas Captain Moore was in such hearty accord that he wrote that the Fort Sill reservation would be worth its cost many times over to the government.

Shortly after Captain Moore arrived at Fort Sill, a board of officers consisting of Lieutenant Colonel D. J. Rumbough and Captain Jesse Langdon, both of the First Field Artillery, and Captain Moore, was appointed to formulate detailed plans for the establishment of the school and for its future conduct. In March 1911 the First Field Artillery was ordered from Fort Sill to Hawaii and was replaced by the Fifth Field Artillery. Colonel Rumbough was replaced on the board by Colonel Henry M. Andrews.

Captain Moore was personally responsible for drawing up regulations and laying out the training program of the school. He was able to keep in touch with the War Department through personal letters to his friend and sponsor, Colonel E. St. John Greble, who was on duty in the office of the chief of staff, Major General Leonard Wood. Colonel Greble wrote to Captain Moore almost daily, giving him much valuable advice and encouraging him to redouble his efforts to overcome the many difficulties which continued to present themselves.

In June 1911 the board of officers was dissolved. General Orders No. 73, War Department, June 5, 1911, directed the establishment at Fort Sill of "The School of Fire for Field Artillery." Another order dated July 19 designated Captain Dan T. Moore as commandant. The selection of Captain Moore as commandant of the School by Colonel Greble was the result of his eminent qualifications for the task.

Captain Moore personally trained the two instruction batteries selected from the Fifth Field Artillery.

At first most of the instructional work fell on Captain Moore, the commandant, and Captains G. M. Apple and R. O. Mason, who commanded the two school batteries. Captain Moore was assisted by Lieutenants Ralph McT. Pennell, the secretary, and R. S. Parrott, the supply officer. Captain Augustine McIntyre was detailed as an instructor, after graduating from the first class.

The school progressed so rapidly that at the end of the fall course in 1913 Captain Moore felt that it was in excellent shape and asked to be relieved. The only encouragement he received from Colonel Greble was: "I do not blame you for having enough of the School of Fire. I appreciate, however, what you have done there and so will anyone who will think it over, and the extra work won't hurt your constitution nor your future standing in the army. . . . Keep a-pushing. It is a different field artillery from what it was when the first draft of order for the School of Fire was drawn."

As a Field Artilleryman Captain Moore was outstanding in his technical knowledge, progressive ideas, and driving energy in modernizing his arm. As a result of his work the Field Artillery was up to date and ready for the First World War when it came. He was a former military aide to President Theodore Roosevelt as well as close adviser and friend.

After World War I, Colonel Moore resigned. He held a commission of brigadier-general in the Officers' Reserve Corps.

Colonel Moore was born in Alabama, February 9, 1877, and died April 15, 1941, in Houston, Texas.



F. A. S. EVENTS

Major General Louis Emerson Hibbs, commanding general of the famous 63d "Blood and Fire" Infantry division in the Seventh Army drive through the Saar, over the Rhine, and into Bavaria arrived at Fort Sill on August 30 and assumed his duties as commandant of the Field Artillery School, succeeding Major General Ralph McT. Pennell. The new commandant, 19th since the school was founded by the late Colonel (then Captain) Dan T. Moore, had been on leave following his return from Germany.

General Pennell, whose new assignment has not been announced, has been commandant of the school since October 29, 1944. He had commanded the Field Artillery Replacement Training Center at Fort Sill since April 2, 1943. In taking over command of the school General Pennell succeeded Major General Orlando Ward, who left to assume command of the 20th Armored division after having been commandant since January 1944.

Second Lieutenant Robert G. Hagemann, aide to General Hibbs, reported at the school a few days preceding the arrival of the new commandant.

General Hibbs is no stranger to the Field Artillery School. He was assigned here as a student officer in the advanced course from August 29, 1922 to June 12, 1923, when he was graduated and assigned as an instructor in tactics.

Following his assignment here General Hibbs served in Hawaii and as a student at the Army War College in Washington, D. C. He later was with the 1st Field Artillery Brigade at Fort Hoyle, Md., and the office of the Chief of Staff in Washington.

Still later he went back to the United States Military Academy at West Point, from which he had been graduated June 13, 1916, as graduate manager of athletics, a post which he held until he returned to duty with troops as division artillery commander for the 36th ("Texas") Infantry Division.

After serving with this unit through the Carolina maneuvers and a training period at Camp Edwards, Mass., he was given command of the 63d ("Blood and Fire") Infantry Division and officiated at the activation ceremonies of that organization at Camp Blanding, Fla.

The division later moved to Camp Van Dorn, Miss., where it completed its training for overseas movement. Last November the infantry units went overseas and were temporarily attached to other divisions.

Last February 8th the division was re-assembled in southern France and began to drive with the Seventh Army as part of the Western Front offensive which crashed through the German defenses in the Saar, the Palatinate, and along the Rhine to break into the defenseless heart of Germany.

The division crossed the Danube and was within sight of the highest of the Bavarian peaks when it was relieved on April 29, just nine days before the end of hostilities in Europe.

An interesting note in the activities of the 63d Division is the fact that when it was relieved after 125 days of continuous contact with the enemy, the unit taking its place in the line was the 36th division, General Hibbs's former artillery command.



General Hibbs's combat areas in the current conflict somewhat paralleled those in World War I, when he commanded a battalion of the 5th Field Artillery until he was wounded in action at Cantigny, France, and later when he was chief of staff of corps artillery in the II Corps and was again wounded, this time near LeCateau.

These wounds terminated his combat service in the first World War less than one month before the Armistice was signed; he was invalided out of a hospital in London, England, on December 23, 1918.

* * *

DEPARTMENT OF COMBINED ARMS NOTES

Running concurrently with the Officers' Refresher Course are three new courses designed to bring artillerymen up to date on latest developments. First of these is the Refresher Artillery Intelligence course (RAIC) of three weeks' duration, which is heavily weighted toward air photo reading and interpretation, the employment of air photos as a firing chart, and the restitution of targets from photos. Especially designed for redeployed officers are the other two courses: Field-Staff Officers' Short course (FSOSC) and Battery Officers' Short course (BOSC). Each of these courses is of two weeks' duration and, as the names imply, the former is directed toward functions of battalion and higher echelons and the latter toward the battery. An interesting feature of both of these courses is a problem presenting an amphibious operation on a terrain plot, in which the Regimental Combat Team and Battalion Landing Team planning phases are presented, with emphasis on the role played by the artillery. All three courses are designed primarily to familiarize students with Japanese characteristics and tactics and the terrain in the Pacific area.

The Canadian Army Cadre has reported to the Field Artillery School for instruction in U. S. Army artillery methods. The course is divided generally into two parts. The first one comprises common instruction presented by the Department of Combined Arms. This instruction includes U. S. Army methods of supply and administration and tactical subjects of a general nature. The second part of the course is designed to familiarize students with American materiel and methods of employment, and gunnery technique.

A new training aid has been added for a class on the Japanese use of caves in defensive installations. This training aid is a terrain plot constructed from Battle Field Report of the I-N-O pocket, target designated grid 7777, Okinawa, as well as maps and stereo pairs of this pocket. The terrain plot, constructed to the scale of 1:300, represents an area 400×600 yds. honeycombed with caves tactically sited for all-round defense, including underground installations for first aid stations, quarters for men and horses, supplies, and ammunition. The pocket comprises five ridges—A, B, C, D, E. Available for this study are photographs taken into the caves, showing their external appearances, as well as out of the caves, showing the fields of fire. In the construction of the terrain plot an effort was made at an accurate reproduction of vegetation and color. It is so built that each strong point in the pocket can be disassembled to show the levels of the caves and the internal installations in each level. The terrain plot was designed by

Maj. Henry T. Ford and constructed under the supervision of Lt. Col. Ralph R. Bush.

* * *

DEPARTMENT OF MOTORS

Col. Herman J. Crigger, former director of the Department of Motors, has departed for an overseas assignment.

Lt. Col. Earl L. Barr, assistant director in charge of special motor courses, is on temporary duty attending the Command and General Staff Course No. 25 at Fort Leavenworth, Kan. During his absence Lt. Col. Donald N. Mardt, former instructor in the Ramgarh training center in China, is in charge of all wheeled vehicle and full track special courses.

* * *

PERSONNEL CHANGES, 15 JULY-15 AUGUST

Arrivals

<i>Name</i>	<i>New Duty</i>
Maj. Gen. Louis E. Hibbs	Commandant
Col. Harold A. Doherty	S-1
Col. Frederick A. Granholm	Department of Communication
Lt. Col. Sheridan E. Farin	Department of Combined Arms
Lt. Col. Russell D. Funk	Department of Combined Arms
Lt. Col. William A. Lucas	Department of Combined Arms
Lt. Col. Clifford M. Snow	Department of Combined Arms
Lt. Col. Virgil C. Toller	Department of Gunnery
Maj. William H. Elfring	Department of Gunnery
Maj. John J. Fahey	Department of Gunnery
Maj. Harold E. Fleetwood	Department of Materiel
Maj. George M. Flint	Department of Gunnery
Maj. Arnold S. Gale	Department of Communication
Maj. Henry Herder	Department of Combined Arms
Maj. Maurice R. Hubbard	Department of Gunnery
Maj. George R. Huntsman	S-1 Section
Maj. Edward B. January	Department of Communication
Maj. Billy H. Kerr	Department of Gunnery
Maj. Stephen H. King	Department of Air Training
Maj. Claude H. Matchette	Department of Observation
Maj. Belding H. McCurdy	S-3 Section
Maj. James P. Mulcahy	Department of Gunnery
Maj. John T. Neath	Department of Combined Arms
Maj. Arthur M. Savard	Department of Communication
Maj. John E. G. Shaeffer	Department of Combined Arms
Maj. Almon W. Spaulding	Department of Combined Arms
Capt. Rob L. Adams	Department of Communication
Capt. David B. Andrews	Department of Gunnery
Capt. Warren J. Beale	Department of Gunnery
Capt. Edward L. Blakslee	Department of Observation
Capt. John G. Buckmaster	Department of Combined Arms
Capt. Walter L. Byrd	F. A. S. Detachment
Capt. Richard W. Corwin	Department of Materiel
Capt. Howard A. Fleming	Department of Gunnery
Capt. Albert D. Francis	Department of Combined Arms
Capt. Brislow S. Hopper	Department of Materiel
Capt. John A. Leary	Adjutant General's Office
Capt. Emmett Lewis	Department of Materiel
Capt. Alanson A. Lilly, Jr.	Department of Gunnery
Capt. John M. McCown, Jr.	Department of Gunnery
Capt. George B. Merrill, Jr.	S-4 Section
Capt. Victor T. Murdock	Department of Gunnery
Capt. Arnulf R. Newman	Department of Gunnery
Capt. Joseph A. Schneider	Department of Motors
Capt. Charles B. Shelton	Department of Combined Arms
Capt. Russell L. Thomas	Department of Communication

Maj. Joseph B. Sarver, Jr.	664th FA Bn., Ft. Sill, Okla.	Capt. Seth W. Kuykendall	AGF Repl Depot #2, Ft. Ord, Calif.
Maj. George E. Slade	AGF Repl Depot #2, Ft. Ord, Calif.	Capt. Henry T. Lyon	AGF Repl Depot #2, Ft. Ord, Calif.
Maj. Glenn M. Stinson	Hq. School Troops, FAS	Capt. John J. MacGregor	AGF Repl Depot #2, Ft. Ord, Calif.
Maj. Leroy C. Stump	AGF Repl Depot #2, Ft. Ord, Calif.	Capt. William P. Mader	AGF Repl Depot #2, Ft. Ord, Calif.
Maj. George C. Thomas	AGF Repl Depot #2, Ft. Ord, Calif.	Capt. Milton D. Manning	AGF Repl Depot #2, Ft. Ord, Calif.
Maj. Ray M. Wampler	AGF Repl Depot #2, Ft. Ord, Calif.	Capt. Henry D. Mayfield, Jr.	AGF Repl Depot #2, Ft. Ord, Calif.
Maj. Francis K. Westlake	AGF Repl Depot #2, Ft. Ord, Calif.	Capt. George E. McConnell	AGF Repl Depot #2, Ft. Ord, Calif.
Maj. Wilbur M. Young	AGF Repl Depot #2, Ft. Ord, Calif.	Capt. Keith H. Milton	AGF Repl Depot #2, Ft. Ord, Calif.
Capt. Louis J. Ammel	AGF Repl Depot #2, Ft. Ord, Calif.	Capt. John R. Montgomery	AGF Repl Depot #2, Ft. Ord, Calif.
Capt. Edward B. Baetjer	AGF Repl Depot #2, Ft. Ord, Calif.	Capt. Charles W. Moses	AGF Repl Depot #2, Ft. Ord, Calif.
Capt. Joseph J. Brewer	AGF Repl Depot #2, Ft. Ord, Calif.	Capt. Theodore Nelson, Jr.	AGF Repl Depot #2, Ft. Ord, Calif.
Capt. Andrew Brindzak	AGF Repl Depot #2, Ft. Ord, Calif.	Capt. Walter E. Neubert	AGF Repl Depot #2, Ft. Ord, Calif.
Capt. Harry E. Brown	AGF Repl Depot #2, Ft. Ord, Calif.	Capt. Mark W. Niemann	AGF Repl Depot #2, Ft. Ord, Calif.
Capt. Robert W. Burgner	AGF Repl Depot #2, Ft. Ord, Calif.	Capt. Hugh W. Nixon	AGF Repl Depot #2, Ft. Ord, Calif.
Capt. William H. Butler	AGF Repl Depot #2, Ft. Ord, Calif.	Capt. Sylvis P. Palmer	AGF Repl Depot #2, Ft. Ord, Calif.
Capt. William C. Carr	AGF Repl Depot #2, Ft. Ord, Calif.	Capt. John R. Parker	AGF Repl Depot #2, Ft. Ord, Calif.
Capt. Jacob H. Church	AGF Repl Depot #2, Ft. Ord, Calif.	Capt. William C. Pelton	AGF Repl Depot #2, Ft. Ord, Calif.
Capt. Joseph F. Clark	AGF Repl Depot #2, Ft. Ord, Calif.	Capt. Martin R. Peruzzi	AGF Repl Depot #2, Ft. Ord, Calif.
Capt. Robert G. Clark	AGF Repl Depot #2, Ft. Ord, Calif.	Capt. Thomas F. Piper	AGF Repl Depot #2, Ft. Ord, Calif.
Capt. Eugene C. Clarke, Jr.	AGF Repl Depot #2, Ft. Ord, Calif.	Capt. Clarence D. Purkhiser	AGF Repl Depot #2, Ft. Ord, Calif.
Capt. Gordon I. Conn	AGF Repl Depot #2, Ft. Ord, Calif.	Capt. Alwyn N. Riley	AGF Repl Depot #2, Ft. Ord, Calif.
Capt. William J. Conrad	AGF Repl Depot #2, Ft. Ord, Calif.	Capt. Riley D. Robinson	Hq. School Troops, FAS
Capt. Austin L. Covey	AGF Repl Depot #2, Ft. Ord, Calif.	Capt. Harry Rockberger	AGF Repl Depot #2, Ft. Ord, Calif.
Capt. Paul S. Cragie	AGF Repl Depot #2, Ft. Ord, Calif.	Capt. Mayer Rosenfeld	AGF Repl Depot #2, Ft. Ord, Calif.
Capt. Walter H. Danielson	Hq. School Troops, FAS	Capt. John J. Schonenberg	AGF Repl Depot #2, Ft. Ord, Calif.
Capt. Carl W. Detering	AGF Repl Depot #2, Ft. Ord, Calif.	Capt. Norman Spangenberg	AGF Repl Depot #2, Ft. Ord, Calif.
Capt. Beverly C. Edwards	AGF Repl Depot #2, Ft. Ord, Calif.	Capt. Stoney M. Stubbs	AGF Repl Depot #2, Ft. Ord, Calif.
Capt. Lloyd L. Edwards	AGF Repl Depot #2, Ft. Ord, Calif.	Capt. Carl B. Sturm	AGF Repl Depot #2, Ft. Ord, Calif.
Capt. Neil M. Elder	AGF Repl Depot #2, Ft. Ord, Calif.	Capt. Richard P. Taylor	AGF Repl Depot #2, Ft. Ord, Calif.
Capt. Harlin L. Fenn	AGF Repl Depot #2, Ft. Ord, Calif.	Capt. J. T. Thomas	AGF Repl Depot #2, Ft. Ord, Calif.
Capt. Edward E. Fitzgerald	AGF Repl Depot #2, Ft. Ord, Calif.	Capt. Andre B. Truden	AGF Repl Depot #2, Ft. Ord, Calif.
Capt. Buhl B. Fitzsimmons	AGF Repl Depot #2, Ft. Ord, Calif.	Capt. Gilbert A. Tucker	AGF Repl Depot #2, Ft. Ord, Calif.
Capt. Howard R. Goodyear	AGF Repl Depot #2, Ft. Ord, Calif.	Capt. Harry D. Turner	AGF Repl Depot #2, Ft. Ord, Calif.
Capt. Stanley J. Gordon	AGF Repl Depot #2, Ft. Ord, Calif.	Capt. Robert C. Vincent	AGF Repl Depot #2, Ft. Ord, Calif.
Capt. Andrew G. Gorski	AGF Repl Depot #2, Ft. Ord, Calif.	Capt. Oscar J. Vogl	AGF Repl Depot #2, Ft. Ord, Calif.
Capt. Walter H. Granrud	AGF Repl Depot #2, Ft. Ord, Calif.	Capt. Lawtence H. Volz	AGF Repl Depot #2, Ft. Ord, Calif.
Capt. Gerald Grossman	AGF Repl Depot #2, Ft. Ord, Calif.	Capt. Theodore Weston II	AGF Repl Depot #2, Ft. Ord, Calif.
Capt. Robert S. Harper	AGF Repl Depot #2, Ft. Ord, Calif.	Capt. Walter B. Wright	AGF Repl Depot #2, Ft. Ord, Calif.
Capt. Ben Harvey, Jr.	AGF Repl Depot #2, Ft. Ord, Calif.	Capt. Arthur L. Young	AGF Repl Depot #2, Ft. Ord, Calif.
Capt. Carl S. Herendeen	AGF Repl Depot #2, Ft. Ord, Calif.	1st Lt. James M. Anderson	Hq. 8th SC, Dallas, Tex.
Capt. James W. Higson	AGF Repl Depot #2, Ft. Ord, Calif.	1st Lt. Paul D. Andrews	AGF Repl Depot #2, Ft. Ord, Calif.
Capt. Fredric L. Hill	AGF Repl Depot #2, Ft. Ord, Calif.	1st Lt. Mark J. Appleman	AGF Repl Depot #2, Ft. Ord, Calif.
Capt. George K. Hislop	AGF Repl Depot #2, Ft. Ord, Calif.	1st Lt. Erhest H. Baker	AGF Repl Depot #2, Ft. Ord, Calif.
Capt. Golden Hockaday	AGF Repl Depot #2, Ft. Ord, Calif.	1st Lt. James J. Bambeck	AGF Repl Depot #2, Ft. Ord, Calif.
Capt. James W. Hoffman	AGF Repl Depot #2, Ft. Ord, Calif.	1st Lt. Ventura M. Barata	AGF Repl Depot #2, Ft. Ord, Calif.
Capt. Eugene J. Hughes	AGF Repl Depot #2, Ft. Ord, Calif.	1st Lt. William E. Bergen	AGF Repl Depot #2, Ft. Ord, Calif.
Capt. Harry T. Hunter	AGF Repl Depot #2, Ft. Ord, Calif.	1st Lt. Clelland C. Bland	AGF Repl Depot #2, Ft. Ord, Calif.
Capt. Kendall R. Jones	AGF Repl Depot #2, Ft. Ord, Calif.	1st Lt. Donald C. Broadwell	AGF Repl Depot #2, Ft. Ord, Calif.
Capt. Reino C. Kahelin	AGF Repl Depot #2, Ft. Ord, Calif.	1st Lt. Austin J. Brummitt	AGF Repl Depot #2, Ft. Ord, Calif.
Capt. William C. Kennedy	AGF Repl Depot #2, Ft. Ord, Calif.	1st Lt. Elmer P. Cluver	AGF Repl Depot #2, Ft. Ord, Calif.
Capt. John R. Kivisto	AGF Repl Depot #2, Ft. Ord, Calif.		
Capt. Roy M. Kottman	AGF Repl Depot #2, Ft. Ord, Calif.		

TRENDS in Field Artillery Organization and Equipment

Although this column announces only approved changes, it does not constitute authority to requisition personnel or equipment listed herein.

By Maj. I. F. Belser, Jr., FA

T/O & E 6-56, Headquarters and Headquarters Battery, Motorized, Field Artillery Battalion, 155-mm Gun, 8-inch Gun, 8-inch Howitzer, or 240-mm Howitzer, Truck-Drawn, or Tractor-Drawn, or Self-Propelled has been revised and is now in the hands of The Adjutant General for publication

and distribution. As this is the standard headquarters and headquarters battery used in all heavy Field Artillery battalions, the changes incorporated in the revision will be reflected throughout all heavy artillery. Changes include the addition of a Captain, liaison officer, with a ¼-ton

truck and driver, and a considerable increase in communication personnel and equipment. Six (6) wiremen and telephone operators, six (6) radio operators, and one (1) switchboard operator have been added. Equipment increases include the addition of a ¼-ton truck and ¼-ton trailer for the Radio Set SCR-193 already authorized; the addition of one (1) Radio Set SCR-608, with a ¼-ton truck in which to mount it; the substitution of a 2½-ton SWB truck for one of the ¾-ton trucks previously authorized; and the authorization of two (2) Radio Sets SCR-593 for the receipt of air raid warnings.

Other parts of the battery besides the communication section will also benefit from the revision. The personnel section will now be authorized a ¾-ton weapons carrier. A tractor, crawler type, diesel engine driven, 110-140 DBHP, complete with angledozer, cable operated, has been included, with the necessary equipment for transporting it: a Semi-trailer, low bed, front loading, 20-ton; a Dolly, 4-wheel, tandem, 4 dual tires, M1; and a prime mover. The prime mover for truck-drawn units will be the Truck, 7½-ton, 6×6, and for tractor-drawn or self-propelled units the Tractor, high speed, 18-ton, M4A1. Two (2) tractor drivers (angledozer operators) have been included to drive the prime mover and the angledozer, thus providing a spare driver for whichever of the two pieces of equipment is in use at the moment. One (1) cooks' helper, one (1) automotive mechanic, and one (1) basic have also been added, making the total personnel increase in the battery twenty (20) individuals.

The tables of organization and equipment for the 155-mm gun self-propelled battalion have been revised and are now in the process of publication and distribution. In the revision the T/O & E number changes from 6-125 to 6-455, with corresponding changes in the number of the T/O & E for the gun battery and the service battery, these becoming T/O & E 6-457 and 6-459, respectively. The change in numbering is occasioned by a revision of the system whereby the method of transport of the unit will determine the hundred-series to which its number is assigned. These revised tables inaugurate the 400-series for self-propelled artillery. Besides the changes in T/O & E 6-56 enumerated above, changes in T/O & E 6-457 include the addition of four (4) cannoneers, one (1) wireman and telephone operator, one (1) switchboard operator, one (1) radiotelephone operator, and one (1) cooks' helper, and the substitution of four (4) radiotelephone operators for the three (3) radio operators and one (1) radio repairman previously authorized. The M12 gun motor carriage is replaced by the newly-standardized M40, and the accompanying cargo carrier M30 by a Tractor, high speed, 18-ton, M4A1C pulling a Trailer, ammunition, 8-ton, M23. An addition ¾-ton weapons carrier, ¼-ton truck, and Radio Set SCR-608 have been authorized in the battery detail.

In the service battery, T/O & E 6-459, a first lieutenant train commander with a ¼-ton truck and driver has been added. The maintenance section has been increased by one (1) tank mechanic; and the repairman, utility, has been replaced by an armorer, to provide a somewhat more highly trained individual for the general handiwork required by the battalion. A clerk, general (also radiotelephone operator) replaces the radio

operator, and a Radio set SCR-608 replaces the SCR-619 previously authorized.

The long fight to secure authorization of water trailers has finally been won. Tables for all motorized, airborne, and armored field artillery units will be changed to include one (1) Trailer, 1-ton, 2-wheel, water tank, 250-gallon per battery authorized a kitchen, with the qualifying remark "outside continental US when auth by Theater of Opr Comdr." A Heater, water, immersion, gasoline operated, tank trailer will be provided with each water trailer to prevent the water from freezing in frigid climates and to provide hot water for showers and other purposes.

Two (2) Cameras, aircraft, type K-20, 4×5-inch, all purpose have been approved for each division artillery (all types of divisions), group, brigade, and corps artillery headquarters and headquarters battery, and will be authorized by next changes to those tables. Two (2) photographic technicians, with suitable developing, enlarging, and printing laboratory equipment and transportation, will be included in the corresponding division or corps signal unit and will normally operate directly at the division or corps artillery airstrip.

The Binocular M13 in all Field Artillery tables will be replaced by the M13A1, which has a redesigned eyepiece to render the binocular more water-proof. The Binocular M17 will be replaced in all tables by the M17A1, which incorporates a filter not used in the M17.

All of the 1 August 1944 tables for the airborne division have been rescinded, leaving only the more recent 16 December 1944 tentative tables still in effect.

The success of DDT powder has made unnecessary the Bag, delousing. This item will be deleted from all Field Artillery tables.

The Glasses, sun, spectacle type, w/case have been standardized and will be included in all Field Artillery tables, with a basis of issue for all individuals not authorized Glasses, flying, sun; Goggles, M-1944; or Goggles, variable density, or authorized substitute. Glasses, sun, clip-on-type, w/case, will be issued to individuals with glasses in lieu of the spectacle type. Issue will be qualified by the remark, "When auth by CG Service Command. Outside continental US when auth by Theater of Opr Comdr."

Many of the familiar weapons with which American Field Artillery fought the recent war have been replaced by newer types and have now been reclassified as obsolete. In this category are all types of the M1917-18 155-mm howitzer and carriage; all types of the M1917-18 155-mm gun (GPF) and carriage, with associated equipment; the M12 155-mm gun motor carriage and M30 cargo carrier; and the 240-mm howitzer M1918, modified, with transport wagons and allied accessories. All stock of these items on hand will be disassembled for salvage or usable component parts. The Gun, 4.5-inch, M1, with carriage, gun, 4.5-inch, M1A2, has also been reclassified as obsolete. A sufficient number of 4.5-inch guns and spare tubes to fire up existing stocks of ammunition will be retained for training purposes, and the remainder broken down for salvage.

The Kagoshima or The North Ryukyu Islands

By Col. Conrad H. Lanza

North of Okinawa, in the 330 miles to the south tip of Kyushu, lie the Kagoshima or North Ryukyu Islands. They consist of six important islands, on one of which is a Japanese naval and air base, and about twenty islets.

These islands are the tops of three parallel submerged mountain chains, close together, which separate the east China sea on the west from the Pacific Ocean on the east. The mountains are on an arc the center of which is on the mainland, which is the standard geological form for the western Pacific islands. The inner arc is entirely volcanic, the center one partly volcanic, and the outer one is non-volcanic. The inner arc rises sharply from depths of about 6,000 feet; the other one borders

the deep Ryukyu Trench, with depths exceeding 25,000 feet. None of the volcanoes are at present on the active list.

The total land area of the Kagoshima Islands is 929 square miles; their population at the 1940 census was 264,870. The inhabitants belong to the same race as the Japanese, who have been in possession of the islands for over 300 years. Natives of the islands resemble Japanese and have a language differing but slightly from that spoken in Japan.

Climate is sub-tropical, due to the Japanese current's passing through the islands. Snow and frost are very rare, but the winters are cool. The warm current brings much moisture; rain is frequent. The current cuts through the islands just about their center, near Amami O Island,

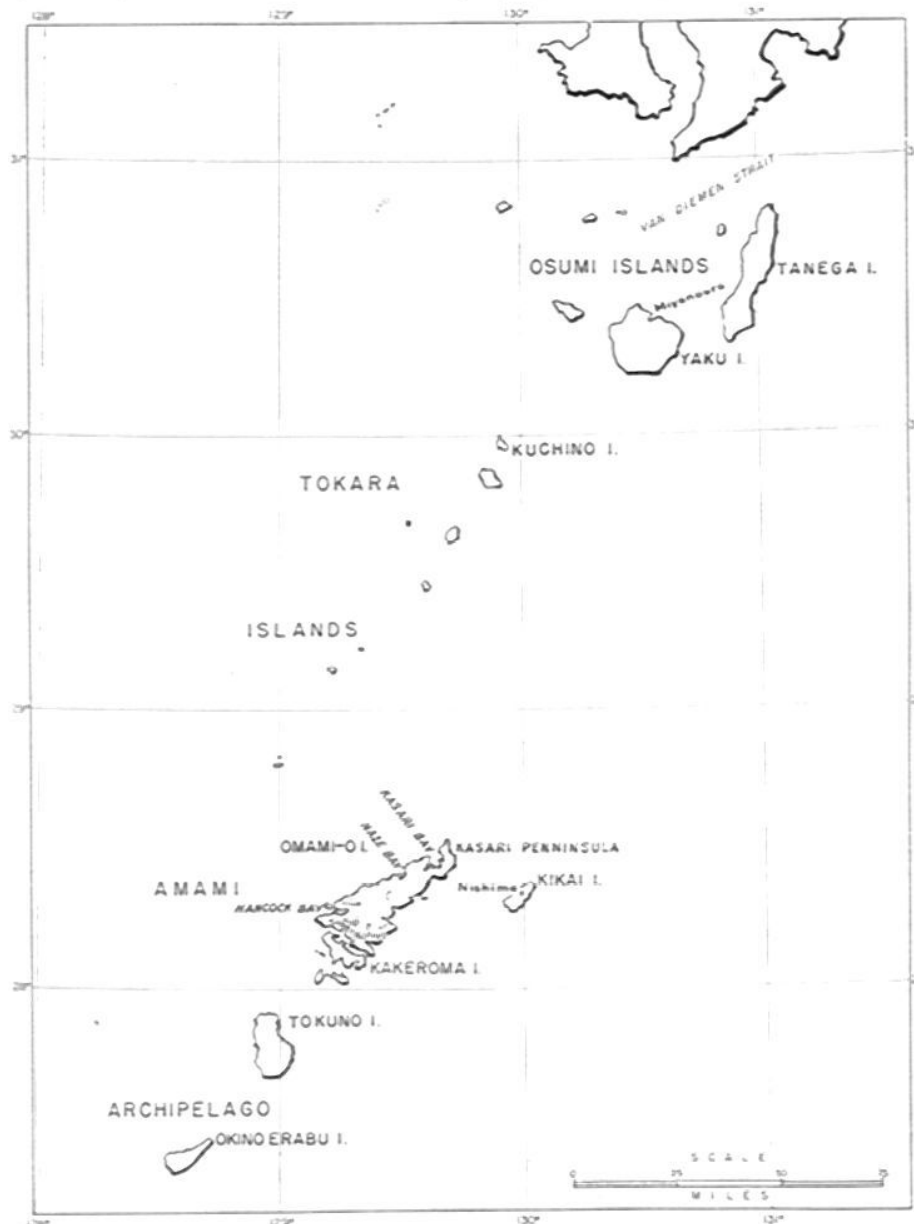
where rain falls about two days out of every three. Typhoons are common, averaging about three a month during the season from July through November. In each year from three to six typhoons pass directly over some of the islands, causing damage in washed-out roads and bridges, and to buildings and crops.

From September to March, inclusive, the climate is dominated by the anti-cyclone area of Siberia. This sends out cold winds which in the Kagoshima Islands come almost from the north. From June to September the winds blow from the south. Between March and June they are mixed. Gales sufficient to interfere with invasion landings may occur in any month.

According to official Japanese figures the temperature varies from a maximum of 96° F. in the summer to a minimum of 38° in winter. Due to the winds, the summer heat is not unduly oppressive.

On all islands there is a deficiency of water due to the absence of any considerable streams. Rainfall is the main source; although usually ample for the native population, sometimes it has not been. For large invasion forces water might have had to be brought in.

Due to overcrowding, lack of running water, absence of sewage systems, etc., the general health of



the inhabitants is below normal. Skin diseases are common. Smallpox is absent but diphtheria, tuberculosis, influenza, and cerebrospinal meningitis are present. Venereal diseases are prevalent. Typhoid, para-typhoid, and dysentery occur.

Mosquitoes are generally found in all islands and carry malaria. Rats are infected with typhus. Eye diseases are found in relatively high proportions.

Poisonous snakes are on most of the islands. They include a species resembling the American copperhead and four kinds of vipers, named locally *huba*, which are dangerous. A local law requires that if any *hubas* are caught the body must be turned in to the nearest police station. The vipers have been such a pest that all police stations are prepared to extract the venom and forward the same to laboratories for use in preparing anti-venom compounds.

Agriculture is the principal occupation in the Kagoshima Islands. Most farms are small, the average size being about two acres. Main crop is the sweet potato, which can be harvested twice a year. Each farm tries to raise its own requirements of sweet potato; there is little surplus for others and none for export.

Sugar is the main commercial crop. In contrast with the practice in Hawaii, sugar fields rarely exceed an acre in extent. It is harvested by hand and transported to small mills operated by a family or by an individual. Out of 6,850 small mills reported on, only 14 had electric power, 128 oil engines, and 160 water power. The balance used animal power. The sugar thus made is brown sugar. It is just as useful in this form as white sugar.

The third crop in importance is rice. Only enough is raised to furnish about a third of the local requirements. The rest of the rice needed has to be imported. In invasion areas provision had to be made for food for inhabitants.

Wheat, millet, and barley, the usual garden vegetables, peaches, plums, bananas, and mandarin oranges, and the sago palm are cultivated. Sago is nutritious, but is eaten only when other food products are unavailable. As a food reserve it is important. Tea is raised in small quantities.

Farm animals are in considerable abundance. Cows are smaller than American ones. Pigs, chickens or ducks, and rabbits are on most farms.

Liquor is plentiful. There are two kinds, made out of rice and out of sweet potatoes.

Fishing is not particularly important. In case other food is wanting fishing could be expanded, as there is an ample supply of fish in neighboring waters.

Tanega is the most northerly and also the most easterly of the Kagoshima Islands. It is about thirty-five miles long from north to south and averages about five in width. In the center is a 923-foot hill, the highest point on the island. Around this hill are a series of five concentric plateaus forming a set of steps down toward the coast. The north section is a detached plateau, with steep south boundary. The south section is flat.

The population numbers some 41,000, fairly well distributed over the entire island. Small towns are numerous

but few are on the coast; they are usually a mile or more inland. Main town, and also the main port suitable for coast vessels, is Nishinoomote on the northwest. A very small port is on the southeast coast.

Tanega is only 20 miles from Kyushu, from which it is separated by Van Diemen Strait. The south part of the island is suitable for air bases and would be under 150 miles from the center of Kyushu. Except in a part of the south sector there are numerous trees and woods, affording good camouflage. All towns are tied to an improved axial road. Secondary roads go in all directions. Roads are Japanese type, which for American vehicles are suitable for one-way traffic only. In the south the axial road is doubled—one on each side of the island.

The coast is suitable for landings only in the south. Elsewhere it is high, but at the south there are sand beaches and dunes. After a landing here it would be necessary to clear the island by a step-by-step advance northward. The series of concentric plateaus form an opportunity for as many cave and tunnel positions in the center, while the north plateau affords another position if attacked from the south.

Yaku is 13 miles west of the south tip of Tanega. It is circular, with a diameter of eighteen miles but with the north side slightly flattened. This island is an old volcano, 6,348 feet high, which occupies most of the center. The west coast has abrupt slopes rising to 3,000 feet. There are no settlements on that side. On the other three sides the central mountain is reached by a series of plateaus, each having a sharp rise and each suitable for cave defense positions. Valleys and deep gorges radiate from the center. These are an obstacle to travel parallel to the coast.

The population exceeds 17,000. Main town is Miyanoura (or Kamiyaku) on the north coast, which is the only one affording anchorage possibilities. All coasts except the north are bordered by numerous rocks and islets.

This island does not have any important military value. It is thickly covered with bamboo and trees which might afford camouflage for minor establishments. No improved roads are reported. There is a trail bordering the shore.

Kuchi no Erabu (or *Kuchinoyerabu*) is a wooded volcano nearly 2,200 feet high, seven miles northwest of Yaku. The axis of the island is at right angles to the usual one, being northwest to southeast. The island is seven miles long and three wide. Two bays almost cut it in two near the center. The volcano is at the southeast end, while the northeast is an elevated plateau. The island is inhabited, and has trails following the shore. As far as known it has no military value. Large rocks lining the shore would be an impediment to invasion.

Kikai is about the same size as *Kuchi no Erabu*, but differs from it in being of considerable military importance. It was an enemy major airdrome whence planes intervened in the Okinawa campaign.

The axis of *Kikai* is normal—northeast to southwest—and is seven miles long. Its width is three miles. The island has a series of plateaus, the highest being in the center, around which are the lower concentric plateaus. Elevation

of the highest is 690 feet. All plateaus slope to the north, and on that side merge into one another. On the other sides there is an escarpment at boundaries, which afford opportunities for cave defense positions. The plateaus provide good runways for airplanes.

The population is around 18,000, distributed in numerous small villages. A road connects Nishime (a small port on the northeast side) with Wan (another small port and main town, on the southwest side). There are sand beaches, bordered by dunes, on both sides of the north point, near the center of the west side, and on the south end. Difficulty in landing arises from a reef which completely surrounds the island and which has a width of one to two miles.

Size of the enemy garrison is unknown. In view of the island's being an air base, it was presumably defended. To capture it an air attack by dropped troops might have afforded good prospects of success.

Amami O is the largest and most important island of the Kagoshimas. It was the enemy's main base in this area following his loss of Okinawa. This island has its north end 15 miles west of Kikai. Axis is normal, and thirty-five miles long. The island is eighteen miles broad at the south. The width decreases rather regularly to the north, at which end it is only seven miles wide.

The enemy's main base was on the east half of the south side, opposite which and about a mile away is *Kakeroma* Island. The strait in between is 10½ miles long and has bays on both sides, well sheltered. *Kakeroma* is 3½ miles wide and has a central ridge uniformly about a thousand feet down the center, which is parallel of the south side of *Amami O*.

Enemy bases north of *Kakeroma* Strait were covered by six ridges, which are parallel to the south shore and afford as many defensive positions against an invasion landing to the north. Ridges are separated by deep valleys which terminate in bays on the east and west coasts. The furthest ridge is twenty-two miles from the south shore. All six ridges are normal to the main axis of the island—that is, they trend from northwest to southeast—and have elevations decreasing from 2,300 feet in the north to 1,700 in the south.

The north end of the island has two parallel ridges whose direction is nearly north and south. Between them, on the west side, is *Kazari* Bay. The head of this bay is an isthmus connecting the north end of *Amami O* (known as *Kazari Peninsula*) with the main section.

The main part of the island has two roads, one on each side, which unite to go on to *Kazari Peninsula*. There are numerous trails. The population exceeds 60,000 outside of the garrison. The island is intensely cultivated.

Center of activity is *Koniya*, near the north center of *Kakeroma* Strait. This was the headquarters of the naval base. The oil depot was at *Kuji*, near the west end of the strait at the head of a deep bay. Air fields are scattered. *Kikai* was a sub-post.

Amami O is generally rugged, and very suitable for cave defenses. With one exception is the east side of the *Kazari Peninsula*, which has sand beaches lined by dunes. After landing here, in order to reach the enemy's base at the south end one would have had first to cross the isthmus around the head of *Kazari* Bay. This varies in width from two miles

down to a half mile of rough hills. It would then have been necessary to get by all six of the ridges across the main part of the island.

Small forces can debark at the heads of three bays on the west side. These are *Kazari* Bay, *Naze* Bay (which is six miles further down the coast), and *Hancock* Bay (at the southwest corner). The latter was strongly defended; the other two probably were. The main part of *Amami O* is topographically similar to the south part of *Okinawa*, where the main battle occurred. But at *Amami O* the depth of the defensive positions over all six ridge lines exceeds twenty-two miles, which is about 50% more than the depth of the enemy's defenses at *Okinawa*. Width of the front is about twice as much as it was at *Okinawa*.

Tokuno is seventeen miles southwest of *Amami O*. Its axis extends north and south for 13½ miles, with an average width of five miles. The island has three old volcanoes—at the north, center, and south and respectively about 1,750, 2,100, and 1,400 feet in height. Based upon these are a series of concentric plateaus—five about the south volcano and three around the other two. Plateaus are nearly level, and are connected by steep escarpments. They afford sites for air fields. The inner plateau is always the largest in extent. Shores are cliff-bound and reef-lined, except for five miles on the southwest which is clear of reefs and which has a coastal plain. On the west side there is a small port at *Hirotoni*.

The island is heavily populated, having 41,000 people, mostly engaged in agriculture.

Oki no Erabu (or *Okinoyerabu*) is 17½ miles southwest of *Tokuno*, with axis in normal direction 12½ miles long. The greatest width is at the southwest end, which is 6½ miles wide. It then tapers off toward the northeast, which end is only 1½ miles wide. The highest hill is at the southwest and is just under 800 feet high. Next largest hill in the center is 610 feet high. Both hills are encircled by concentric plateaus with a separate set for the north end.

The northeast end is low, but all the rest of the coast is bordered by cliffs from 100 to 300 feet high. Except at the northwest cape, which is a 200-foot cliff, all the rest of the coast is bordered by coral reefs.

Population of the island is 23,000. There is a small port at the south.

The island is intensively cultivated. It is suitable for airfields. There is the usual coast road, and a net of trails.

COMMENTS

The important island among the Kagoshimas is *Amami O*, which with its sub-post of *Kikai* formed enemy naval and air bases. It was an enemy stepping stone for planes en route between Japan and Formosa. It was a base from which air attacks were launched against our fleet.

Experience at *Okinawa* indicates that the artillery and air preparations against cave positions were not decisive, notwithstanding impressive tonnages of ammunition expended. When caves are interconnected into a series the defenders withdraw from entrances into the interior and largely avoid casualties. Best form of attack was to burn out cave entrances with flame throwers, using long lines of hose if necessary. To accomplish this, tanks with small infantry detachments operated behind a smoke screen when this was needed.

Howitzer Firing

—*With Kentucky Windage*

By Cpl. Raymond Carlson, FA*

THE SETTING

At 1100 hours on 7 February 1945, the 6th Infantry Division captured the little town of Munoz, in the Province of Nueva Ecija, Luzon, P. I., thereby ending a bitter seven-day attack against one of the toughest Japanese strongholds encountered by American forces on Luzon up to that time. Subsequent events in the Luzon campaign, which on 9 January 1945 began to reclaim the largest of the Philippine Islands, showed Munoz to be one of the most difficult obstacles to overcome.

Munoz was strategically important as a bastion of defense for Japanese lines of supply and communication on Highway 5 leading to San Jose and mountain regions to the north, and a



A view of the battleground after the battle shows Jap tanks smoldering on the highway.

safeguard on the escape route on the San Jose—Rizal Highway between Manila and the Cagayan Valley. With the thoroughness that characterizes him, the enemy transformed a sleepy barrio 1,200 yards in length and 500 in width into a defiant fortress, employing adroit defensive tactics and installations. Tanks with 37-mm and 47-mm turret guns, motor-drawn 47-mm AT and 75-mm and 105-mm guns were dug in and camouflaged to defy both ground and air observation, and were placed to give maximum effective fire and mutual support in defense of the stronghold. Utilizing the cover and the flat terrain, which was all to his advantage, the enemy installed machine guns and automatic weapons in such a way as to lay a blazing front of fire on attacking parties coming upon the town from any direction. With the stubbornness that also characterizes his actions, the enemy held firm for over a week despite the air, artillery, and mortar bombardment hurled upon him, and despite the constant infantry assault waves which attacked him. His losses in manpower and material were appalling.

For the defense of Munoz the enemy had committed the 365th Independent Infantry Battalion, 103d Division; 8th Battery, 2nd Mobile Artillery; Anti-Tank Battalion, 2nd Armored Division; 6th Tank Regiment (less 2nd Company); and one platoon, 2nd Armored Engineers. The seven-day battle of Munoz, with the spectacular artillery-tank battle on the Munoz—San Jose highway, resulted in 1,527 enemy dead of the 1,935 committed, and in the complete destruction of the following: 48 medium tanks (with either 37-mm or 47-mm guns), 4 light tanks, 4 armored cars, 2 tracked prime movers, 41 trucks, 1 American half-track, 15 sedans, 1 station wagon, 4 105-mm howitzers, and 16 47-mm AT guns.

The battle began at 0730 31 January when Company "E," 20th Infantry, after a brief artillery preparation, attacked northeast from a position astride the railroad (see Diagram No. 1) and moved forward 200 yards without opposition. There the advance was halted by blazing fire from automatic weapons. Other units of the 20th Infantry were committed 1 February. The deployment of these units during the next six days is shown in Diagram No. 1.

*Head matters Division Artillery, 6th Infantry Division.

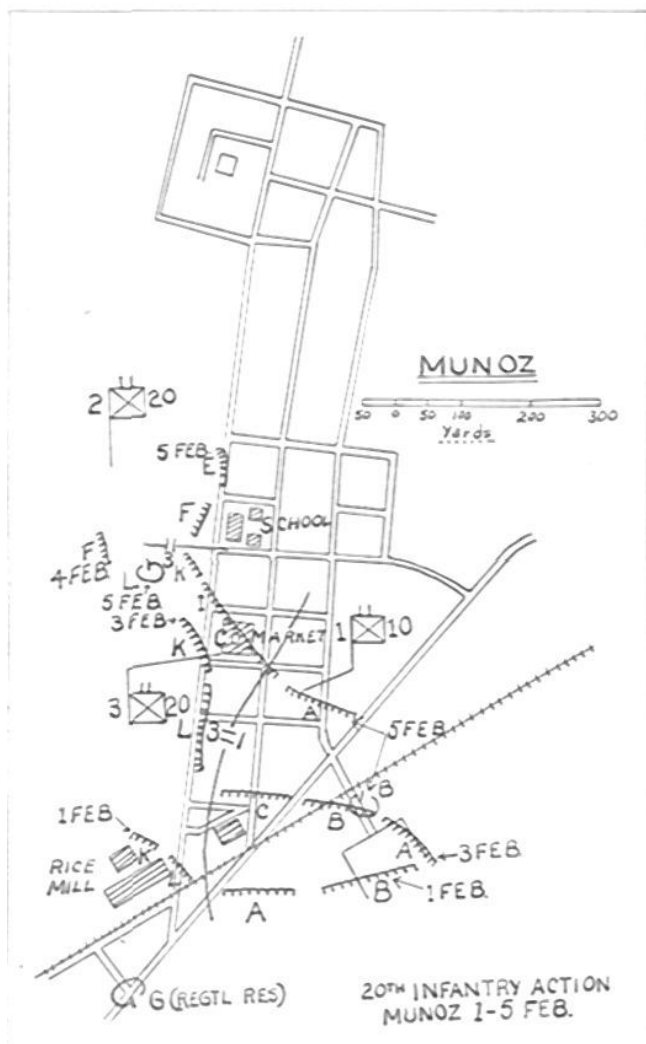


Diagram No. 1

While the 20th Infantry was moving against Munoz, elements of the 1st Infantry and the 63d Infantry were securing Highway 5 between Munoz and San Jose, their mission being the eventual seizure of San Jose.

The 51st Field Artillery Battalion (105-mm howitzer) was in direct support of the 20th Infantry at Munoz. The 53d Field Artillery Battalion (105-mm howitzer) was in direct support of the 63d Infantry. The 80th Field Artillery Battalion (155-mm howitzer) was in general support. The 191st Field Artillery Group was assigned by I Corps the mission of reinforcing the 6th Infantry Division, in operations against Munoz and San Jose.

The terrific pounding administered by the infantry, artillery, and mortar units on the enemy at Munoz gradually wore down his resistance. In an attempt to salvage what he could, he began a retreat at 0330 7 February on Highway 5 in the direction of San Jose.

The Japanese survivors of Munoz, in the next five hours after they began their retreat, were destroyed. Daybreak that morning saw the fleeing tank and armored column blown to shapeless smoking debris, littering Highway 5 for several miles between Munoz and San Jose. The battle that morning between the enemy tank column and two tractor-drawn field artillery battalions is a story in itself, and a fitting climax to the battle of Munoz.



After the tanks were repulsed, the artillerymen proceeded to destroy the attacking column.

DETAILS

When the enemy column withdrew from Munoz the 53d Field Artillery Battalion (105-mm tractor-drawn) and the 80th Field Artillery Battalion (155-mm tractor-drawn) were in position 3.5 miles from Munoz on Highway 5. These two battalions, in direct and general support of the 63d Infantry, had taken these positions in a flanking movement on 3 February to by-pass Munoz and attack San Jose. During this movement the field artillery battalions, following the infantry, had to push their way by bulldozer through most difficult terrain, including rice paddies, irrigation ditches, and swamps. Throughout the movement the battalions were frequently under enemy machine gun, mortar, and artillery fire, and were at all times subject to tank attack. In position, and continuing their missions, they continually fought off *kirikomi tai* (suicide penetration unit) attacks by Japanese infantry.

The 80th occupied a 400-yard front adjoining Highway 5; the battalion area extended approximately 200 yards in depth. Diagram No. 2 shows battery positions and machine guns on the perimeter. Service Battery of the 80th bordered the highway on the Munoz side. Batteries "B" and "C" were also

in position along the highway, with "A" in position behind "C." The howitzers of the 80th were laid in the direction of San Jose. Directly behind the 80th Field Artillery Battalion the 53d Field Artillery Battalion was in position between the barrio of Asta and Highway 5.

Both the 53d and the 80th Field Artillery Battalions maintained alert and aggressive perimeter defenses, adequately armed with .50-cal. machine guns, light machine guns, grenades, bazookas, and automatic weapons. Japanese infiltration patrols had since the beginning of the Luzon

campaign been a constant threat to the security of the field artillery battalions of the 6th Infantry Division. Each battalion commander set up his own perimeter defense, maintaining adequate security of his unit behind his own weapons manned by artillery personnel. Night attacks by small Japanese raiding parties were an old story to these battalions. The

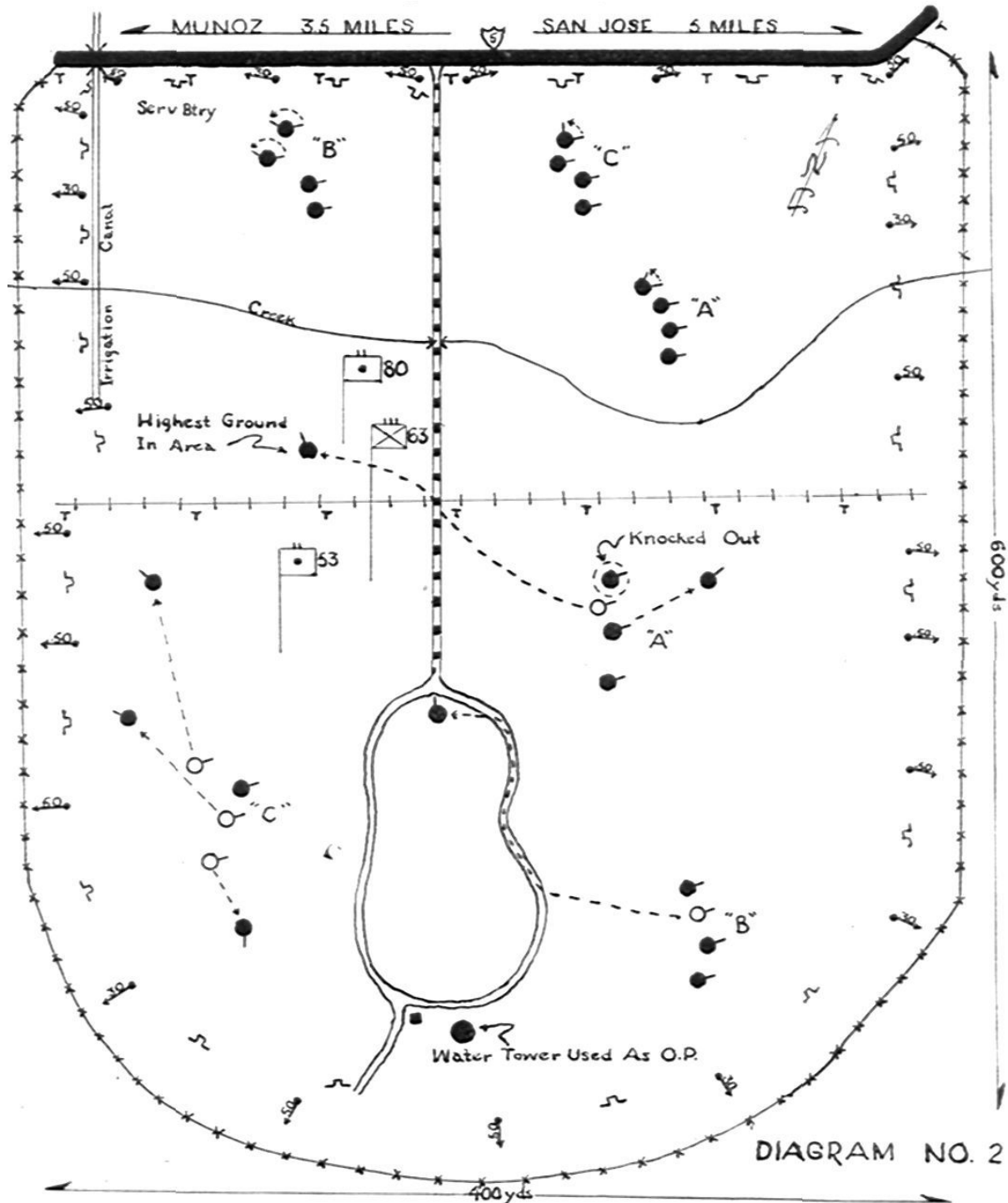
Maffin Bay and Sansapor campaigns in New Guinea, as well as the Luzon campaign, had demonstrated the need of each battalion to maintain its own security and be ready at all times for any eventuality. During the training period at Sansapor prior to the Luzon landings, Brig. Gen. C. E. Hurdis (then Commanding General, 6th Division Artillery and now Maj. Gen. Hurdis, Commanding General, 6th Infantry Division) had inaugurated an intensive program to train all personnel from cooks to computers to be able to man machine guns, bazookas, grenades, and automatic weapons against these organized suicide attacks by the Nips. This program, carried out in meticulous detail by the battalion commanders, paid off in dividends many times during the Luzon campaign and particularly in the tank-artillery battle following the enemy's evacuation of Munoz.

At 070400 the perimeter of Battery "C," 53d Field, reported 20 Japs in the vicinity but out of firing range. This was probably a reconnaissance party which had left Munoz before the exodus of tanks and armored vehicles. A few minutes thereafter a field artillery observer with an infantry unit between Asta and Munoz notified the battalion of the approach of the tank column. The battalion was alerted.

While the 53d was being alerted, the perimeter of the 80th Field Artillery Battalion notified the battalion of the approach of unidentified tanks. This battalion was alerted. A few minutes later the leading tanks of the fleeing tank column passed the first perimeter posts on Highway 5. The first two tanks passed unmolested because identification was not certain. By the time the first two tanks reached

the Asta—Highway 5 intersection they were taken under fire by the perimeter posts operating .50-cal. MGs. The first tank cleared the battalion position, only to be destroyed further down the road by an infantry road block. So intense was the MG fire from the perimeter posts that the second tank burst into flames before

reaching the San Jose side of the perimeter. Destruction of this tank caused a road block, forcing following tanks to scurry for safety off and beside the road. One .50-cal. machine gun position was overrun by a tank and destroyed, but the crew dodged the tank, reoccupied their position, and continued their firing.



* * * Single Strand Barb Wire, 6" Above Ground, 30' To Front Of MG's
 ~ 3 To 4 Man Perimeter Posts ~ Dusk To Daylight ~ Total No. Men, 75
 → MG's Manned 24 Hours ~ Total No. Men, 72

Enemy infantrymen who had been riding on the accompanying personnel carriers and on tanks dismounted and attacked the positions of the artillery battalions. These attacks were conducted vigorously and with determination. The enemy used machine guns, grenades, and small arms in concerted efforts to pierce the perimeter. Fire from these weapons swept the battalion positions, presenting a constant



Another view of the cluttered road.

and hazardous threat to the lives and safety of the personnel and to the security of the howitzers. Neither the enemy's fire power nor his *banzai* attacks prevailed. The artillerymen, protecting their positions, drove the enemy back, nullified his fire power, and assumed the offensive by sending bazooka teams by infiltration to attack the enemy tanks. These bazooka teams scored direct hits on two tanks.

It became apparent to the commanders of the artillery battalions that when daylight heightened visibility, the firing power on the perimeter would not be strong enough to cope with the 47-mm turret guns and the 47-mm and 37-mm antitank guns that could be brought to bear on their positions. Accordingly, they ordered a shifting of their howitzers to be in position at daybreak to bring direct fire on the hostile armored units.

The 53d Field Artillery Battalion (see Diagram No. 2) moved one howitzer from Battery "A" across the battalion area to a position within the area of Headquarters Battery, 80th Field. This howitzer was pointed to fire on tanks along Highway 5 west of the 80th's position. Howitzers of Battery "C," 53d Field, originally laid to fire on San Jose, were turned to fire on the road west toward Munoz. This maneuver was designed to put direct howitzer fire on any tanks which might leave the highway and try encircling movements on the west side of the battalions. A howitzer from Battery "B," 53d Field, was moved to a position near the intersection of the railroad and the Asta—Highway 5 road, adjoining the CP of the 63d Infantry Regiment. This howitzer would protect the road, should the enemy tank column turn down it, and also would be in position to fire on the main highway. No. 2 howitzer of Battery "A," 53d Field, was moved to fire on the road on the eastern boundaries of the 80th Field. The

howitzer of the 53d which was moved into the 80th Field's position was so placed to take advantage of a slightly elevated mound, permitting it to fire over the positions.

While the 53d Field was moving howitzers to more advantageous positions, the 80th Field was doing the same. Two howitzers of Battery "B" were moved to fire on Highway 5 in the direction of Munoz, while one howitzer of Battery "A" was aimed directly at the highway east of the battalion position. Howitzers of Battery "C" did not have to be changed.

An OP was established in a water tower behind the 53d Field. From this vantage point the observer would be in position to observe everything that might happen on the main highway and on the flanks of the battalions.

Such, in brief, were the howitzer locations of the 53d and 80th Field Artillery Battalions just before daylight 7 February. The howitzers were manned and ready for any eventuality. Tense crews stood by waiting for the darkness to

lift and daylight to bring sufficient visibility for the location of the enemy. Movement of the howitzers of the two field artillery battalions was accomplished speedily, efficiently, and without mishap, in spite of the continuous small arms and machine gun fire being directed by the enemy into the battalion positions from outside the perimeter.

At first light of day the tanks opened fire on the battalion positions at point-blank ranges of 50 to 200 yards, with machine guns and turret-mounted 37-mm's and 47-mm's. This fire was intense and sustained. Shells and shell fragments screamed through the battalion positions, wrecking materiel, ripping tents, and causing several deaths and casualties. One howitzer of the 53d Field received a direct hit which resulted in the death of one man and the wounding of the entire gun crew as well as of the battery executive. Four others in the 53d Field were wounded by another shell burst.

Gun crews and personnel responsible for the protection and operation of the howitzers had little or no protection. Yet with courage and coolness, those who manned the howitzers of the two artillery battalions functioned efficiently and smoothly. Point-blank fire was met with point-blank fire. Bazookas, machine guns, and howitzers returned the force of the enemy fire, with the firing range less than 300 yards. At such short range it was necessary for the 80th Field to fire unfuzed projectiles. One of these clipped the turret off an enemy tank at a range of approximately 250 yards; the turret was hurled far off the highway into an adjoining rice paddy.

This was not howitzer firing with the sharp computing methods of a fire direction center. This was not howitzer firing with Cub liaison observation. This was not howitzer firing with forward observers reporting carefully and accurately the effect of each round fired.

This was howitzer firing fast, furious, and point-blank. This was howitzer firing at targets that required rapid and effective engagement because the targets themselves were dangerous armored fighting machines hurling broadsides of fire into the artillery positions. This was howitzer firing at targets that were powerful and well-protected instruments for inflicting death, damage and destruction. This was howitzer firing with Kentucky windage.

The battle lasted approximately an hour, during which there was neither faltering nor hesitation on the part of the men and officers of the two artillery battalions engaged in such close and mortal combat with the enemy. A battery commander of the 80th Field and four enlisted men were killed, while nine enlisted men were wounded. The 53d Field suffered one officer killed in action and seven enlisted men wounded.

When the last enemy gun was silenced it was found that the 53d and 80th Field Artillery Battalions had destroyed six enemy medium tanks, five light tanks, ten personnel carriers, and two towed 105-mm howitzers, with prime movers. 119 enemy dead were counted around the tanks, and an additional 120 who had been killed by rifle or machine gun fire from the

perimeters or by patrols cleaning up survivors around the battalion positions. Not a single tank escaped. This abortive attack and its repulsion by the two artillery battalions and other elements of the division eliminated the Japanese 2nd Armored Division as an effective fighting unit.

The loss to the enemy was incalculable. The loss of this part of the 2nd Japanese Armored Division at Munoz and in the tank-artillery battle the morning of 7 February was perhaps the greatest single loss he has suffered in men and materiel in so short a period in the Philippine Campaign. The loss of this strongly reinforced armored division greatly reduced his aggressiveness and practically ended his ability to protect the vital supply and communication lines between Manila and strong garrisons in northern Luzon.

Before noon, 7 February, while the tanks and vehicles of the vanquished enemy armored column were still smoldering by the wayside, the 53d and 80th Field Artillery Battalions were packed, bag and baggage, for displacement to vicinity of Rizal to continue their mission in direct and general support of advancing and attacking infantry elements of the 6th Infantry Division.

"NOW THEY CAN BE TOLD"

Maj. Edward A. Raymond has identified for us a number of units whose work has been recounted in earlier JOURNALS. These are all in addition to those published at page 431 of our issue for July, 1944.

Under Fire (page 891, December, 1943) dealt with the 58th Armored Field Artillery Battalion (Lt. Col. McBride), the 62nd Armored Field Artillery Battalion (Lt. Col. R. E. Conder), and the 65th Armored Field Artillery Battalion.

Some Battle Lessons (page 104, February, 1944) were learned by the 175th Field Artillery Battalion, commanded by Lt. Col. J. E. Kelly and a part of the 34th Infantry Division.

There were three phases to *As Skirmishers* (page 507, August, 1944). At Borjtoum, Battery A of the 175th Field Artillery Battalion was involved. The 58th Armored Field Artillery Battalion's work at Brolo was described. In the Sele-Calore phase the 158th Field Artillery Battalion (105s

commanded by Lt. Col. R. D. Funk) was engaged, as well as the previously-identified 155s of the 189th.

Under Lt. Col. W. E. Tardy the 601st Tank Destroyer Battalion kept busy *Brassing Off Kraut* (page 694, October, 1944).

T.N.T. Wholesale was delivered by the 83d Chemical Battalion under Lt. Col. W. S. Hutchinson, Jr. (page 781, November, 1944).

The 158th Field Artillery Battalion fought in the *Caves of Anzio* (page 851, December, 1944).

A Combination Mount for Dual .50s (page 110, February, 1945) was developed by the 189th Field Artillery Battalion.

Both the 158th and 189th Field Artillery Battalions participated in *A Fight* (page 156, March, 1945).

Lt. Col. R. T. Nicholls and the 15th Field Artillery Observation Battalion performed admirably *With Carbine and Transit* (page 290, May, 1945).

DUAL-PURPOSE RANGES

In requesting approval of certain areas as firing ranges for his unit, a battalion commander in Germany recently wrote his DivArty commander:

"It is planned to practice Battery Test I on Range 'A' with the battery position west of the river. This involves firing over the village of Fleck but it is deemed that such firing will be conducive to maintaining the present satisfactory discipline of the German civilians. Also, my C.P. is in Fleck, so short rounds will be viewed with great disfavor."

To Get Your JOURNAL, Be Sure We Know Your Latest Address

Artillery Cubs in Mountain Operations

33d Inf Div in Northern Luzon

By Col. Ralph MacDonald, FA*

COMMANDING GENERAL
Headquarters
APO 33, Care Postmaster
San Francisco, Cal.

The Artillery liaison planes did such a fine job for the 33d Infantry Division during the operations which resulted in the capture of Baguio that I asked Colonel Ralph MacDonald, Division Artillery Executive, to write up a brief account of services that the Artillery Air Section performed for the Division.

I personally cannot praise the Artillery pilots too highly. They have flown me a good many hours over Jap-held territory on reconnaissance and I have the greatest confidence in them.

P. W. CLARKSON,
Major General, U. S. Army, Commanding.

Everyone knows of the Field Artillery Liaison Pilots, how they adjust artillery fire, and their value in general to the Field Artillery, but not enough has been told about the many other services they render, now accepted as routine in the 33d

*Executive, 33d Division Artillery.

Division, entirely aside from the strictly field artillery duties which make them indispensable to an infantry division.

The air section is made up of eleven pilots and one rated observer, supplemented by a ground crew of sixteen enlisted men. Its equipment consists of ten L-4 (Piper Cub) liaison planes, two K-20 cameras, and an assortment of necessary spare parts and improvised gadgets.

Training with the present equipment began when ten new planes were delivered in June, 1944, at Finschhafen, New Guinea; it continued until December 1944. During this period there was intensive training with take-offs, landings, flying over the rugged, mountainous jungle terrain of New Guinea with additional time spent on hasty field landings, night flying, and of course the inevitable ferrying. Firing missions were flown and experience gained in photographic capabilities, limitations, and interpretation. Organization of the photo section was elaborated with the addition of more equipment and supplies, and training in photographic processes under exceptional conditions. Approximately 3,000 hours of training were accumulated by the pilots under tropical conditions.

Combat experience began when two pilots and planes of one field artillery battalion were engaged in extensive flying in the Wakde-Sarmi area of Dutch New Guinea in support of patrols. One plane was lost through a forced landing as a result of enemy action, but both pilot and observer were rescued.

On 19 December 1944 the division moved to Morotai, Netherlands East Indies, where it was in combat until the middle of January 1945, when preparations were made to move to Luzon, Philippine Islands. During operations on Northern Luzon, ending 30 June 1945, over 4,500 hours have been flown with the loss of only one plane caught in the treacherous air currents in the mountainous area of Baguio, but without

Loacan air strip, Baguio; elevation: 4,000 feet. Captured by the 123d Infantry, it was immediately placed in operation for artillery Cubs to use.





Kennon Road approach to Baguio. Only artillery fire, adjusted by Cub planes, made the advance possible.

injury to the pilot. The air strip during this phase was located in the mountains at an altitude of 4,000 feet; the accompanying illustrations suggest, at least, what we are pleased to call "rugged terrain."

Although supplies were often critical, all planes were continually in flying condition—a deadlined plane was a rare exception. It may be noted that of the divisions in the Luzon campaign, the total hours flown by this air section have not been exceeded by other division air sections in the Sixth Army. In the ten planes of this division there has never been an engine failure, which speaks eminently for the character of servicing and maintenance. Seven of the ten planes are still operating, although their engines required replacement during the month of June, having exceeded their ordinary life by more than 150 hours. Tribute must be paid to the ground crews for their unceasing effort which made the above record possible.

A photographic section, not

T/O, was organized from personnel borrowed from artillery batteries and equipped by begging, borrowing, and improvising. Two units have been constructed for enlarging prints when desired, and a projector is now in use to throw a picture on a screen where several persons can study it together. Making positives from negatives for this purpose has been quite successful. The section has been responsible for securing, developing, printing, and often enlarging over 8,500 prints taken on 69 photo missions in the Luzon operation. The value of these vertical and oblique pictures was reflected in the increasing requests by infantry regiments, battalions, and companies; and by engineers, division staff, patrols, and reconnaissance parties. That the photo section has justified itself is indicated by the recommendation of the Sixth Army Artillery Officer that other divisions organize a similar unit in their own sections.

Due to the mountainous terrain over which the division was operating, air strikes (with possible bombing and strafing accidents to our own troops) were a source of



An air strike by P-38s on Mountain Trail north of Baguio is led in by an artillery Cub.



Kennon Road approach to Baguio, where high-angle fire was the rule and Cub observation hazardous but essential.

growing concern until the expedient was tried of having a liaison pilot lead in the attacking planes. The liaison pilot knew the ground well, marked the target with smoke grenades, and his passenger (an air officer) directed the attack formation. This procedure insured control of the bombing flight and safety for the ground troops, thus greatly increasing the effectiveness of the air strikes. Since there has been no accident in over 40 air strikes guided in by our pilots, confidence has been assured. An air school, under the direction of the Air Corps liaison officer, is being established to present these methods and experiences to other divisions.

Our liaison planes have successfully carried out emergency air drops to small, isolated forces, and in spite of the limited capacity of a Cub many necessary supplies from hand grenades to rations have been provided.

Even with the use of thousands of Igorot carriers (mostly women, by the way) it was often impossible to supply ground

troops who had advanced through the mountains many miles beyond road heads. C-47s were the answer, but it was extremely difficult for them to find the ground troops and the treacherous mountain air currents and tricky approaches to dropping grounds made it a hazardous task. The Cubs again solved the problem by leading in the C47s to the dropping grounds and indicating the safest approach and get-away.

In the dense jungle on Morotai it was impossible for a patrol to locate itself on the ground or map. The Cubs solved this problem by flying over the general area, contacting the patrol by radio, and when the patrol reported that the Cub was directly overhead the pilot would give the patrol leader his location. This system was also used in the mountains of Northern Luzon.

Cubs have also been used for emergency evacuation of casualties from air strips well up in the mountains, built by Igorot women and children for the use of guerrilla forces.

The following statements from enemy sources are of interest:

"Pray, do they let the enemy planes fly this sky at their will? Even the artillery observation plane flies like a butterfly as if mocking us. Yet, I must remain here and fulfil my duty as a soldier of the Imperial Army. . . ."

"U. S. artillery liaison planes were a great nuisance because they constantly observed our troop movements."

"We were under constant artillery and aerial bombardment. Air strikes caused the majority of the casualties. Artillery is effective only when a liaison plane is present to direct fire."

"My unit feared U. S. observation planes because they often found our position."

"While my unit was engaged in road building a U. S. artillery liaison plane flew over and enemy artillery fire was received soon afterward. Several ammunition dumps were hit."

NOTICE OF ANNUAL MEETING, U. S. FIELD ARTILLERY ASSOCIATION

In compliance with Article VII, Section 1, of the Constitution, notice is hereby given that the Executive Council has fixed 5:30 P. M. Monday, December 17, 1945, as the time of the annual meeting of the Association to be held at the Army and Navy Club, 1627 Eye St., N. W., Washington, D. C.

The business to be disposed of will be the election of six members of the Executive Council (three Regular Army, two National Guard, and one Organized Reserve), and the transaction of such other business as may properly come before the meeting. Nominations may be made by proxy, or from the floor of the meeting.

NAVAL GUNFIRE SUPPORT IN THE PACIFIC

By Lt. Col. R. D. Heinl, Jr., USMC*



"Furthermore, your naval artillery was terrific. . . ."—The speaker is Field Marshal Karl Gerd von Runstedt, explaining to the press why the Normandy landings succeeded.

"Damage from naval gunfire was most severe. . . ."—A Japanese prisoner ruefully recalls the preliminary bombardment of Iwo Jima.

"POW states that among the weapons used, naval gunfire was by far the most effective. . . ."—A captured enemy battalion commander attempts to assess the causes of his unit's downfall.

The most eloquent evidence of a weapon's effectiveness can be obtained only from the receiving end—and when such heartfelt testimonials as the foregoing begin to come in, you can be certain of the quality of your product.

* * * *

Naval gunfire support of amphibious operations, one of the major tactical surprises of the war, was employed with considerable success in European landings, although the handicap of novelty and the rapid movement of forces inland beyond the range of naval support in most instances soon reduced it to a secondary role. But now that extensive redeployment is afoot into the Pacific—where landmasses are smaller, initial resistance far more bitter and unyielding, and the whole nature of operations web-footed—it might be well for European newcomers to take a second look at naval gunfire doctrines and techniques as they have developed in the Pacific war.

*Naval Gunfire Officer, V Amphibious Corps.

From the outset many factors have encouraged the rise of naval gunfire support to its present importance in the Pacific. Ready availability of ships, with their formidable fire-power; the necessity of reducing small island-targets defended by minutely-organized, fortress-like installations vulnerable from sea-approaches; the confidence (familiarity-bred) of Marines and Pacific infantry in naval capabilities; the existence of key Fleet Marine Force and Naval staff sections devoted solely to planning, research, and development of amphibious gunnery—these and many other reasons have made Pacific naval gunfire support a complex and highly effective technique.

Probably the most noticeable—and notable—of the points of difference from Europe lies in the organization and training of the personnel who control, coordinate, and execute gunfire support. Now it is more than an affair of a few random shore fire-control parties, differing from division to division in composition and equipment and often ill-indoctrinated in the fine points of their arm. Shore fire-control parties in the Pacific theater—at least in the Fleet Marine Force, and usually with the Army divisions—are centrally trained, using ships of all types with ample ammunition allowances. They are of standard (and now adequate) composition, the battle of the T/Os having finally been won. And they go into operations with familiar teammates, in support of the battalions they have fought beside in many previous engagements.

Above the battalion shore fire-control parties, in each regimental headquarters is a naval gunfire liaison team commanded by an officer who has graduated in combat from the battalion level, a battle-wise young naval officer who

can advise his supported regiment on the full use of fires and coordinate carefully the operations of the three shore fire-control parties supporting the battalions of his regiment. Each division headquarters includes a Naval Gunfire Officer (assistant G-3), a field officer, one of a trinity with the Artillery and Air Officers. Between operations he supervises training of

afloat, amphibious gunnery is able to reach and maintain its standards.

One of the most striking aspects of an amphibious operation in the Fleet Marine Force is the coordination of fires between artillery, air, and naval gunfire. This is due to the concept, developed through long experience, of the so-called "Supporting Arms" as an entity on each level. From the battalions on up, representatives of each arm work, eat, sleep, and think together. For example, on the division level, taking the case of one of the divisions on Iwo Jima, right adjacent to the G-3 section was the Supporting Arms center (initially a separate hole, later a dug-in blackout tent), where converged all communications required for control and coordination of the three arms. These included a trunk from the division switchboard; a direct line to the division artillery fire direction center; another direct line to the Corps Supporting Arms switchboard (a higher-echelon refinement); and lines to division naval gunfire and air-support radio centrals (dug-in vehicular radio installations for each). During critical hours of the operational day representatives of the three arms were with the general, usually staring the coordinates off the G-3 situation map. In between, and when planning was needed, the Supporting Arms center housed all hands until they



Marine artillery FDC in an Iwo Jima cave.

all naval gunfire personnel attached to the division while simultaneously preparing plans for gunfire support in future campaigns. During battle he coordinates and plans the naval fires to support his division, assigning target priorities, ammunition allowances, and deep or general support fire-missions. Further up the line, on corps and Fleet Marine Force (field army) levels, there are naval gunfire sections, subdivisions of the special staff, organized and trained to plan and execute naval gunfire support for large forces, recommending and securing the ships and spotting aircraft which subordinate formations require, dealing directly with naval opposite numbers around the clock during operations, and serenely dominating a complex web of liaison communications by wire and radio.

Gunfire communications in the typical Pacific operation far exceed in scope the simple arrangements which obtained in the majority of European landings. Overall command and control nets link fire-support ships and the controlling, coordinating agencies so that great flexibility and instant change are continually possible. Within divisions, SCR-300 frequencies assigned exclusively for naval gunfire use enable the division gunfire officer to reach every naval liaison officer and spotter (forward observer), and to have the same tight coordination between his teams that a rifle battalion commander achieves among his companies. Thus by harnessing communications and by continual drill, not only among personnel ashore but on every single opportunity in joint exercises with the forces

could emerge with a close-knit, all-around, all-arms plan of fires to support the announced scheme of maneuver.

To the man with the rifle, who in Europe has seen naval fire held five hundred or a thousand yards away from him (and probably glad of it), the biggest surprise will be how close it is brought in the Pacific. Long experience, rigid training of fire-support ships, and veteran personnel enable delivery of fires as a routine matter to within two hundred yards of supported infantry, and in many situations to half of that—which is pretty close shooting for a five-inch gun on a floating platform. In Pacific naval gunfire, close support means *close* support.

Illumination is something again. In view of the nocturnal habits of the enemy, use of all-night illumination by fire-support ships has become a deeply ingrained habit. Our troops rest easier when those big five-inch star-shells keep the Nips frozen. Of course, like anything else illumination can be overworked, but six stars per hour night in and night out render a regimental front much more liveable. And continuous illumination on a few seconds' call has probably done more to break up night-time banzai charges than any other single factor. Ask the Nips.

Coastal mopping-up by destroyers or LCS(L) has in the Pacific become a matter of fine points, due to the enemy's proclivity of going to ground in every cave and crevice he can find. Each operation reaches the stage in which naval gunfire personnel of the divisions go afloat onto some "cave-shooting"

ship (where, incidentally, steak and hot showers usually await) to prowl along the flanks of the advance, plugging five-inch or 40-mm shells into ominous depths which otherwise would have to be cleaned out the hard way by flame-thrower, pole-charge, and BAR.

"Hit 'em where they ain't!" has been the luxury of forces fortunate enough to be able to bypass resistance. In the Pacific, where such vital objectives as Tarawa, Saipan, Peleliu, and Iwo Jima had to be taken because of lack of permissible alternatives, it has not always been possible to go "where they ain't." As a result, the technique of preliminary naval bombardment—really a sort of siege by warships—has advanced greatly during the course of operations against Japan. What began as a random unloading of large quantities of fire onto an objective (simple area-coverage) has become a methodical technique for destruction of pin-pointed targets carefully selected, sorted, and assigned priorities of attack. Itemized bookkeeping, damage assessment by air observation, up-to-the-minute photo coverage, and careful tabulation of results enable amphibious group commanders to report with certainty when preliminary bombardment has accomplished its job and whether or not an objective is "ripe" for landing, together with an estimate of what remains to make trouble.

The spark which vitalizes amphibious gunnery in the Pacific is

generated by inter-service combination of effort and training between the Fleet Marine Force, commands afloat, and the Amphibious Forces, Pacific Fleet. The FMF stabilizes training and doctrine for the shore end of the business; commands afloat ensure that every fire-support ship receives complete and intensive training against real shore targets before she is qualified for fire-support duties; and the Amphibious Forces, jointly with the FMF or Army components, conduct the actual operations. Thus, before any officer or enlisted man, Navy or Marine, reports to an assault signal company for duty in connection with naval gunfire, he has undergone extensive training with real ships, he has learned naval gunnery in the Fleet Gunnery and Torpedo School, and he has been prepared for his job by operational training from the Fleet Marine Force. By the same token every fire-support ship has been required to fire a record qualification-course, just like the Marine or soldier with his M-1 or Springfield.

The crucial role which gunfire support has played in Pacific operations would be hard to over-assess. Together with close-support carrier aviation it has put uncounted thousands, probably hundreds of thousands, of tons of ammunition onto enemy defenses, with every round placed to make the individual rifleman's job easier. For you who are newly entering the Pacific it will be a weapon worth watching.

TAKE GERMAN TOWN BY ERROR

WITH THE 69TH INFANTRY DIVISION ARTILLERY.—By entering the wrong town, Lt. John W. Isaminger, Cpl. Edward J. Ornett, Jr., and Pfc. Metro Sakara captured 26 prisoners, acquired a large number of German weapons, and blocked the plans of the German army to defend one of the outposts of Leipzig.

Acting as an advance party for the 880th Field Artillery Battalion, 69th Infantry Division, the three were routed through an unoccupied town. Not until they saw an armed German military messenger on a bicycle did they realize what the situation might be. The messenger was taken captive, and the party started to leave the village as unobtrusively as they had entered. On leaving they found themselves to the rear of a fully manned German machine gun protecting the town's flank.

The messenger was sent forward to tell the squad that they were surrounded by American troops. Unquestionably delighted to be out of the war, the Germans crowded around the jeep and turned over all their weapons. The vehicle not being capable of transporting the large number, Lt. Isaminger instructed the Nazis to march under a white flag to the nearest American lines.

After finishing their original mission the three Yanks returned to see if the prisoners had followed instructions. Not only had they carried out orders but several more Germans had joined them. The messenger, however, had returned to the village and was persuading fourteen more Nazis to come from hiding in a railway car and surrender.

WITH THE THIRD ARMORED DIVISION, SEVENTH ARMY, GERMANY.—Now that the shooting is over and the figures have been totted, artillerymen of the Third Armored believe that they fired more 105-mm ammunition between the D-day landings in Normandy and VE-day than did any other division in the ETO. They are not counting the estimated 100,000 rounds fired by attached light battalions, either.

Lt. Col. Edward S. Berry, the present division artillery officer, has produced the following figures to back up the claim; total 105-mm ammunition expended was 490,021 rounds by all three battalions, with the 391st Armored Field Artillery Battalion (under the command of Lt. Col. George G. Garton) leading the rest with an impressive total of 170,100 rounds. Another record was that of the attached 991st Field Artillery Battalion (SP 155-mm) which, by virtue of its mobile guns, was able to keep up with the armor and fired 48,937 rounds.

The man chiefly responsible for the active use of the artillery was Col. Frederic J. Brown, who commanded the division artillery during its entire combat period. He felt that no expenditure of ammunition was excessive when the lives of doughboys and tankers could be saved.

Artillery in Defense Along the Moselle

By Maj. Harold S. Davis, FA

Having worked with practically every division in the Third Army as Corps Artillery, and as direct support (DS) artillery for one of them (although organically a Corps battalion), we were not greatly surprised when we were given another strange assignment. We were to become the DS battalion for a Cavalry Group consisting of two squadrons of cavalry and one battalion of engineers. Our fire direction center was also to serve as Task Force FDC. Mission: to hold the Moselle River line from two thousand meters south of Remich to two thousand meters north of Grevenmacher—a sector over 20,000 yards wide.

Our artillery consisted of our battalion of 105-mm truckdrawn howitzers, and two batteries of 75-mm self propelled assault guns, which were organic to the cavalry group. Our battalion was spread in such a manner as to cover most of the river front with at least one battery and the central portion (in the vicinity of Wincheringen, where the enemy showed the most strength) with all three. The assault guns (six per battery) were placed close to the river, the 2nd Cavalry in the north and the 42nd in the south, so as to make maximum use of their main attribute—6400 *m* traverse. (It may well be pointed out that the cavalry assault gun troops [as well as the infantry cannon companies] are the step-children of the army. Neither their own arm nor the artillery often takes proper steps to see that they are well provided for in the way of equipment or latest artillery procedure.)

We provided both of these troops with grid sheets, plotting equipment of all types, and—above all—instruction. They were taught latest FDC methods and indirect fire technique,

and proved themselves both capable and alert in putting these methods to use. Soon they were operating their own FDCs and were tied in to ours by trunk and direct wire lines as well as radio. They also provided observers and did their share in the manning of OPs.

Although thinly spread along this wide front, we maintained an appearance of great strength by beginning an active H&I (harassing and interdiction) firing schedule, concentrating mainly on towns. All roads and supply routes run through towns, so by interdicting the main roads in these towns one pretty well interrupts the shuttling of both supplies and troops from one point to another. In addition, if any rounds miss the roads they are bound to hit somewhere in the town, thus harassing the occupants and possibly causing damage to their wire and CP installations as well as vehicles. To prevent the enemy from avoiding any one spot we assigned five points in each town and fired them all on well staggered schedules.

We soon received more artillery and our duties and responsibilities began to increase by leaps and bounds. First to arrive was a 75-mm truck-drawn tank destroyer battalion. One company, consisting of three platoons of four guns each, was placed in indirect firing positions in a central location so as to cover the entire river front as well as an area to our east reaching to the very outskirts of Saarburg. One platoon from each of the other companies were also employed in an indirect fire capacity, one taking position in the northern portion of our sector and the other in the south. The remaining platoons were placed in direct fire positions along the river front. Each of the two separate

AUTHOR'S NOTE

Many stories have been written of the mopping-up operations in the Saar-Moselle triangle, but I believe this is the first concerning the entire operation leading up to the German defeat there. It was quite peculiar, for what was considered to be a quiet sector gradually developed into an important one, and also because of the unusual type of weapons used in an indirect fire role. Most of the artillery pieces were 76-mm TD guns (towed) and 75-mm assault guns—none of which are normally employed in defensive situations. The troops holding the line were cavalry and service engineers—a new role for them too. The task force commander, Col. Reed, did an exceptional job in molding the entire group into a smooth-working organization. Our battalion commander (Lt. Col. Shepherd) maintained command liaison with him throughout the entire operation, keeping close tabs on the situation at all times.

The following units were involved:

- a. 2nd Cavalry Group, consisting of the 2nd and 42nd Squadrons.
- b. 808th Tank Destroyer Battalion (the unit having all 3 companies reinforcing our fire).
- c. 825th Tank Destroyer Battalion (the unit placing one platoon at a time under our control for training purposes).
- d. 4th Armored Division which, maintaining radio silence and utmost secrecy as to location, placed two battalions of SP 105-mm howitzers at our disposal: the 66th FA Bn reinforced our fires and the 94th FA Bn reinforced the 775th FA Bn (the 4.5-in unit which in turn was reinforcing us).
- e. 1284th Service Engineers, on the line with the 2nd Cav Gp, acting as infantry throughout a good portion of the operation.

This operation of course did not run from 13 Aug 44 to 8 May 45, but in that period we hung up the following record:

	<i>Destroyed</i>	<i>Damaged or Neutralized</i>
Tanks	5	7
Mortars	12	66
Nebelwerfers and rocket guns	14	25
88s and other guns and howitzers	36	98
Machine guns	21	43
Vehicles	28	72
Ammunition dumps	13	—

Some of the items listed under damaged or neutralized may have actually been destroyed, but none were so classed unless verified.

In addition to the above we fired 2,743 other missions on such things as infantry, command posts, preparations for the attack, towns, registrations, etc. This gave our 255th FA BN a total of 3,183 missions and 57,807 rounds fired.

rate platoons provided two computers (with no previous training) to work in our FDC. Until the computers were properly trained these two platoons were handled as though they were two extra batteries of our own battalion. The platoons also received instruction in indirect fire procedure and the officers were brushed up on fire direction technique. At the end of a few days each had organized and was operating its own FDC. The TD company in the center position had had previous training and so proved capable of providing accurate and rapid fire right from the beginning.

We now had a total of 44 artillery pieces and six FDCs. The entire front was divided into two sectors by the task force commander—a northern and southern, with a cavalry squadron commander in charge of each. We were capable of massing in either sector a total of four TD platoons, two batteries of 105s, and one battery of assault guns.

It was now decided to push all Germans from our side of the Moselle. The river front was ours with the exception of Machtum and the two hills to the southwest. We first concentrated on the hills, which provided commanding observation over an extensive area. The cavalry (acting in their new capacity as infantry) advanced close behind our artillery preparation and assaulted the enemy positions immediately after the lifting of our fire. The enemy was driven from both hills with ease. A counterattack that night retook one hill, which was retaken by our troops the following morning.

Then the town of Machtum was carefully studied and a plan decided upon. We were to provide a five-minute preparation on the west side of town and harassing fires on the eastern half as well as on the opposite shore (on suspected machine gun and mortar positions), all to begin at H-hour. The cavalry, having advanced to the outskirts of the town under cover of darkness, was to wait five minutes from the time of the first volley and then enter from the west at H+5. At this time we were to begin a five-minute preparation on the eastern half of the town, which would also be entered from the west at H+10. From H+10 to H+13 a volume of fire was to be placed on the opposite bank of the river to give the impression that the preparation had not yet ended, thus allowing the cavalry a few extra minutes to get into the streets, which we were certain would be empty (at least of living Germans). At the eastern extremity of town an engineer patrol was to be placed to prevent any escape in that direction. A battalion of 4.5s in the vicinity of Flaxweiler was loaned to us by an artillery group in order to provide extra fire power. Because of their dispersion the TDs were assigned the harassing missions. All other artillery was to be employed in the preparation. H-hour, on call from our forward observer with the cavalry, was to be announced at such time as they had reached the town ready to enter. Check rounds were fired into the town during daylight hours prior to the attack under the guise of normal H&I fires.

The plan worked better than we had even hoped. The town was taken at the loss of no

men, and all the enemy were either killed or captured with the exception of a few who managed to swim the river.

None of our supporting units had liaison planes, therefore it was necessary for the pilots and observers with our two planes to conduct all registrations with the exception of the few at short range which our ground OPs could handle. Because of different azimuth directions for each battery in our battalion, and the distance between batteries, we had daily to conduct a separate registration for each battery. The same was true for our five TD platoons, which also had to be registered with both normal and reduced charges. Then too our assault guns had to be registered with Charges 3 and 5 and in different sectors. Hardly a day passed without at least a dozen air adjustments on check points. In addition, we instituted a policy of checking all H&I missions before dusk. So between doing this, registering, patrolling the river front, and looking for enemy artillery, equipment, and personnel, our air section had a very busy time.

Due to the lack of communications in the cavalry and engineers, our wire sections were kept especially busy. Over 100 miles of wire were laid and maintained, radio serving as an alternate means of communications. Both 500- and 600-series radios were used by employing those channels common to each. Lateral lines were laid between organizations. No loss of communications ever occurred during the entire operation.

At this time our sector was increased by an additional 8,000 meters to the north and more artillery was added to reinforce our battalion. A self-propelled 105-mm battalion (18 howitzers) from the 4th Armored Division was placed in position to strengthen our northern sector, and another TD battalion placed one platoon at a time (each



A section of the 259th FA Bn prepares to load its 4.5" gun near Heppenback, Belgium.



for a 5 day period) at our disposal for training purposes. The 42nd Cavalry was leap-frogged to the north of the 2nd Cavalry; an engineer force replaced them in the south. Our sector now ran from Remich in the south to Oberbillig in the north.

During the entire period we were operating in close harmony with the 94th Division, which held a line from the Moselle River to the Saar River along a line about 1,000 meters below Nennig and Sinz. On several occasions during this period we fired preparations to aid them in stabilizing and strengthening their positions. Our position on the flank of the force facing them enabled us to reach targets beyond their range.

In coordination with an attack by several divisions to our north we fired an artillery feint designed to contain the enemy in the Saar-Moselle triangle. It apparently worked, because the 11th Panzer Division moved into the area the next day and took up positions facing the 94th. They also sent reinforcements into the sector facing us in order to guard their right flank. The increased activity gave us some shooting to do and we succeeded in knocking out several vehicles and three tanks (two from direct fire TD positions).

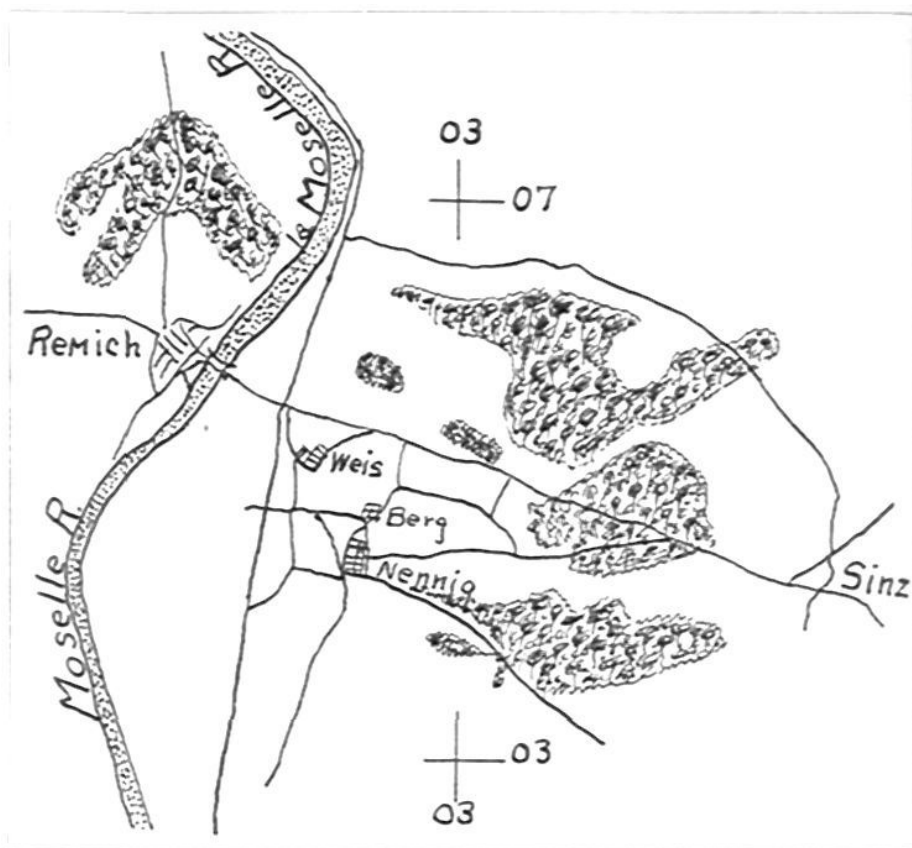
On one occasion the 10th Armored division, which had now come up beside the 94th, sent a liaison officer to us to arrange for the use of one of our assault gun batteries and a platoon of TDs to act as DS for their tanks in an attack on Nennig and Berg, and to employ our OPs (of which we now had 14) and two of our planes (we now had four) for observation over the area. We established a FDC in the southern sector by bringing the two unit FDCs together and used our own battalion to reinforce their fire. The attack was successful: the 94th followed up to occupy the towns and hold them, for they provided an excellent base for future operations.

About two days later one of our OPs near Remich observed an intense amount of fire in the vicinity of Weiss. They began watching this sector and saw a German attack develop before their eyes. It was like watching a play

from the wings—the Germans never realized our observers were there. The heinies began laying a curtain of time fire mixed with impact over the town of Weiss and its outer defenses, then laid down a smoke screen before the town on the ground to the east. Then they began to pour infantry out of the woods to the east of the town. Mortars and machine guns opened up and

approximately 400 troops advanced on the town. The force they opposed couldn't see them, but we could. In a moment's time we had 34 guns massed on the area and firing with devastating effect. The German preparation lifted but the troops did not move. They were rapidly being decimated. After covering the area thoroughly, as well as the MG and mortar positions, we turned our guns to the woods from which the infantry had come and to which many of them had retreated and covered it thoroughly. Result: an attack completely broken up, an estimated 100 casualties, several mortars and machine guns neutralized or destroyed.

The 4.5 battalion to our north was assigned to our task force with a reinforcing mission and another SP 105 battalion joined us with similar orders. To achieve better control we made the 4.5 battalion the DS unit for the northern sector and assigned to them both the SP unit which had just joined us and the 42nd Cavalry assault gun



battery (which had been moved up north). We retained our mission as task force FDC for the entire sector and in addition acted as DS for the 2nd Cavalry. Now we had twelve 75-mm assault guns, fifty 105-mm howitzers, twelve 4.5-in guns, and sixteen TDs (we had lost our southernmost platoon, which had gone back to a rear area for re-equipping)—a total of 92 guns, 14 OPs, 8 air OPs, and 8 FDCs.

PW reports testified to the value of our H&I fires. On one occasion they said we had hit a mess line and kitchen truck causing casualties. On another we hit a CP, killing a radio operator, a clerk, and one other soldier and forcing the CP to move to another town. They reported that we played havoc with their wire communications. As for the towns, well, they will find it much easier to pick another spot, rebuild, and start all over again!

During this entire period our troops made numerous river crossings and seized and held various towns for short

periods. This gave them excellent training for future operations as well as giving them both prisoners and information.

The grand finale came when two tank battalions entered the area, were surveyed in by us, and prepared for indirect fire. A separate FDC was set up for their control. The entire sector exploded when we, they, and the guns of the 94th Infantry and 10th Armored opened up simultaneously and paved the way for the attack toward the north of the 10th Armored and 94th Infantry Divisions and the river crossing by the 2nd Cavalry Group and the 4th Armored Division. The entire Moselle-Saar triangle was closed out and the way to Trier was open.

When we returned to operating under normal circumstances as Corps light artillery reinforcing the fire of a division light battalion, we found our work comparatively simple to handle.

CANNON COMPANY AT MONS LELLIGEN

By Lt. S. J. Tobin, FA

The defensive action of the 12th Inf Cn Co at Mons Lelligen was typical of the resistance by all units of the 4th Inf Div against the left shoulder of the Ardennes breakthrough and thwarted the drive on the city of Luxembourg. The enemy unit it engaged was the 2nd Bn 316th Inf, 212 Volks Grenadier Div. According to a PW statement, this battalion was so badly mauled during the first week of the breakthrough by units of the 4th Inf Div that the CO, Maj. Mittermaier, was lost and the remnants (of approximately company strength) were formed up under the command of Lt. Pfeiffer, the former weapons company commander, into a Kampf Gruppe.

Just prior to the Ardennes breakthrough on December 16, 1944, the 4th Inf Div had come down from the Huertgen Forest into the quiet sector north and east of Luxembourg City to rest, rehabilitate, and perform necessary maintenance on weapons and vehicles. The 12th Inf Cn Co had sent to Luxembourg for maintenance several of its vehicles, including two half-track prime movers and a 2½-ton truck. In addition, one gun had a damaged recoil system and was inoperative.

At 0930 on the morning of December 16th the cannon company was in position south of the town of Berdorf when the Germans attacked. At the time, they were operating as an extra battery under direction of the 42nd Field Artillery Battalion. In the ensuing fight, cannon company observers conducted fire from the 42nd on the advancing enemy and held out until they received orders from Lt. Col. Edgar, CO 42nd FA Bn, to withdraw. One of their remaining vehicles was damaged and out of action due to enemy artillery fire. The withdrawal to Consdorf was made by using two jeeps, a kitchen truck, and all other available transport. Four of the guns were shuttled out first; the remaining two were taken out a short time later.

By 1430 they had pulled back to Consdorf and reorganized, and at 1445 they moved out on orders from Col. Chance, CO

12th Inf, to a position near Zittig where they stayed until the next morning.

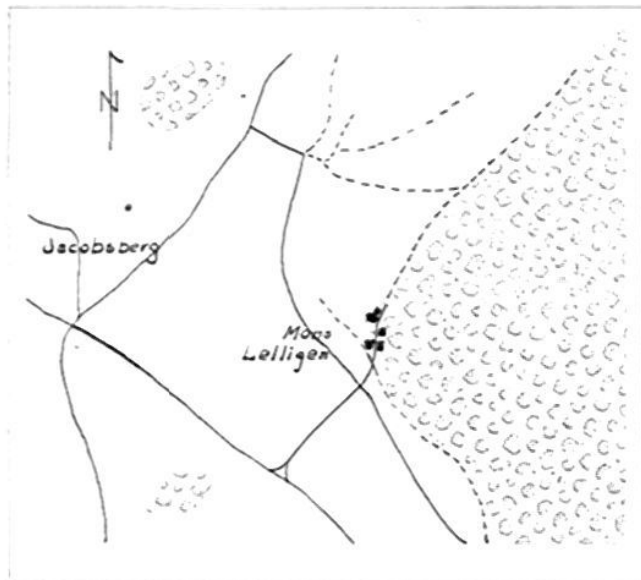
During the next day (17 Dec) the company moved to Biber and then to Berbourg. At Berbourg they obtained supplies, signal equipment, clothes, and water from a medium field artillery battery.

At 0800 on the morning of 18 Dec the CO, Lt. John Cooke, received orders from Lt. Col. Edgar to move into a position near the farm at Mons Lelligen east of Jacobsberg. Lt. Cooke sent out the reconnaissance party to select the gun position. At 1030 it returned to guide the company into position, reporting that it had selected a position for the guns and a nearby house for a CP.

Lt. Jacob Pearlstein, the Exec Officer, moved the company out of Berbourg at 1100 with the CP Group in the lead. They were still operating with makeshift transport. Meanwhile the CO (Lt. Cooke) remained in Berbourg to obtain ammunition and supplies. The column proceeded by way of Bech and Jacobsberg to Mons Lelligen. The CP Group arrived at 1145 and went into the house to set up their FDC. The sector of fire assigned to them by the 42nd FA Bn was generally the area between the towns of Osweiler and Dickweiler.

The wire crew asked Lt. Pearlstein for permission to check the house and barn about 50 yards up the road running along the edge of the woods. Their intention was to find a possible location for their switchboard. Obtaining permission, they started for the building.

The guns were being guided into position along the road running northwest from the CP by Lt. William A. Roemer, CO 3d Platoon, and Lt. Howard Krause. Sgt. George W. Henk placed the gun with the damaged recoil system in the tin-roofed barn across the road from the CP. The ground was very soft and muddy, and most of the guns were on the



road still coupled up. The last gun had come up and stopped on the road just above the CP. About noon Lt. Roemer and Sgt. Henk went into the woods to scout and make a reconnaissance to prepare local security of the CP and gun positions. Hardly had they entered the woods before they saw several Germans who fired on them.

Immediately machine gun, mortar, and small arms fire broke out all along the woods in front of their position. A machine gun was firing from the building where four men of the wire crew had gone, and another from the small building north of the shed where the damaged gun had been placed.

Everyone took cover wherever he could find it. Some dropped behind the guns, others ran into the CP, and several jumped into the ditch along the road. Immediately all men began returning the enemy fire with their small arms. T/Sgt. Joseph C. Kolinski ran out of the CP to where his gun was standing in the road. He jumped into the truck, prepared ammunition, loaded, and fired singlehanded, point blank into the woods. At the time the gun was without sights and was still coupled to the prime mover.

The Germans took cover in the woods in foxholes which had been left by a TD unit which had been in the area some time previous. Sgt. Kolinski, who was trying to bring fire on the foxholes, called to Lt. Pearlstein, who was looking out of the window of the CP, to throw him a firing table. None being available, he asked, "How many mils' change is a hundred yards?" Lt. Pearlstein yelled back, "The hell with it! Keep shooting!" Other men ran to their guns and began firing point blank at the enemy in the woods at ranges of 50 to 100 yards. For the moment, the guns were still coupled to their prime movers. Fragments from the bursts of the guns were falling on their own men, the ranges were so close.

The immediate concern was to get contact with the outside, but the radio was still in a jeep parked outside the CP. T/Sgt. James H. Snow ran from the CP, grabbed the 610 radio, and returned with a burst of MG fire at his heels. He had forgotten the headset and had to make another dash to the jeep to get it. Lt. Pearlstein took the radio to the attic and stuck the aerial through the skylight in the roof; this drew immediate fire from the Jerries. He called the 42nd FA Bn and told them that he was in position northeast of Jacobsberg and being attacked by enemy infantry in strength. He requested artillery support, but as no map of the area was available he could not give their exact location; the artillery declined to fire on the woods as they did not have observation of the area. He then asked that tanks be sent up and said for them to contact Lt. Cooke, who could give them their coordinates.

By 1215 Lt. Roemer and Lt. Horace Kneas had organized a defense, and the men were returning the enemy fire with the howitzers and all available small arms. The direct fire had taken the heart out of the Germans' attack and they withdrew momentarily around 1230. All the guns were in action by this time, except the one with the damaged recoil system, which had been left in the shed across from the CP.

The MG squad which was in the small building north of the CP withdrew from their position. Sgt. Howell, chief of section of the damaged gun, was standing behind a wrecked German vehicle on the north side of the shed which contained his howitzer. From this position, with his carbine he killed the machine gunner and 7 riflemen at a range of about 25 yards as they ran from the building.

Meanwhile four men of the wire crew had been captured and held in the building north of the CP. German soldiers had been seen around it but they had not fired on the building owing to the presence of their own men. About 1300 Lt. Roemer and a number of men charged the building, meeting no resistance. Inside they found some of the web equipment of the men, one piece of which was blood-stained.



An infantry 105 in Wenau Forest

One man later said that they had seen the Germans cross the road and go into the woods with their four men, one of whom was wounded and being carried. The men had called to them not to shoot.

During this time the howitzer crews had been holding off the enemy from their position by firing into the woods. At about 1330 the ammunition began to run out. The reserve supply was in a truck which was standing in the center of the intersection about 20 yards southeast of the CP. A volunteer, Pvt. Lectra R. Sullivan, ran to the truck, which was already smoking from tracer bullets that had been fired into it. Under heavy fire he drove the truck back up to the gun position where the much-needed ammunition was unloaded and the fire put out.

About 1330 the positions began to receive long-range machine gun fire from the hill to the northeast of their positions and, as their ammunition was getting low, it was decided to abandon the position. At approximately 1400 Lt. Pearlstein decided to go for help. A group of people were seen on the high ground near Jacobsberg and there was some apprehension concerning whether the town was in enemy or friendly hands. He decided to use that route, regardless. Taking three men and two wounded, he set off to get help from Herborn. The group consisted of a driver (Pfc. Ernest P. Andrews), Pvt. Joe T. Reynolds, Sgt. William A. Ruckman, and the two wounded men (Pfc. Frank A. D'Armore and Pfc. Elmer E. Larkins). They went south along the road from the CP and turned west toward Jacobsberg, running over some telephone lines at the intersection. The wires fouled the wheels, stopping the jeep. All hands jumped out and cut the wires, freeing the car in short order.

When they reached the crossroads at Jacobsberg they met Lt. Cooke and a group of others, who were the people they had seen on the hill from their CP. Lt. Pearlstein explained the situation to Lt. Cooke and then took the wounded on to the aid station at Herborn. There he gave the situation to the 3d Bn 12th Inf, then reported to the 42nd FA Bn and asked for fire into the woods at Mons Lelligen. Lt. Col. Edgar declined to fire unobserved fire, but he gave Lt. Pearlstein a radio and said that he would fire with observation. The lieutenant picked up some small arms ammo from I Co 3d Bn, then headed back to the gun position.

In the meantime Lts. Roemer and Kneas had put a plan of withdrawal into action. Two of the guns were sent to the high ground east of the crossroads at Jacobsberg to cover the withdrawal of the rest of the unit. The two pieces were pulled out under heavy fire, then the transport came back to help get



the rest of the unit out. Several of the guns and vehicles had become stuck in the soggy ground and had to be winched out. While this was under way the enemy began to attack. Sgt. Howell volunteered to contact the two guns which had been sent out under the command of Lt. Kneas to cover their withdrawal, and obtain immediate fire on the enemy. Under heavy fire he ran across the open ground between the gun position and the crossroads near Jacobsberg, a distance of some 500 yards. There he contacted Lt. Kneas and helped get the two howitzers into action, taking over one section himself. Under the covering fire from the two guns they began to withdraw the others at approximately 1430. To further cover the withdrawal Lt. Roemer sent Sgt. Kolinski with his gun section to set up in position at the road junction some 400 yards south of the CP. Under covering fire of the three guns the remaining vehicles were pulled out. It was approximately 1530 when Sgt. Kolinski was given the signal to withdraw.

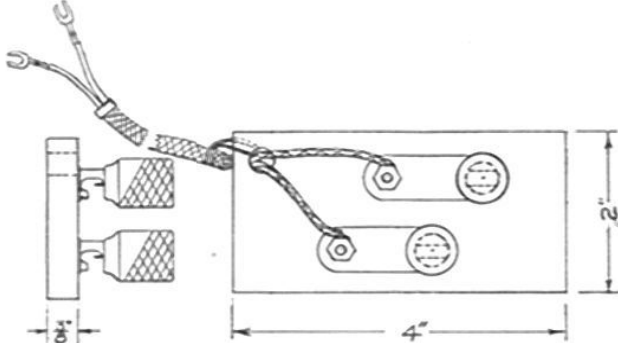
As the last vehicle cleared the Jacobsberg crossroads the group met two medium tanks and 15 men from K Co under command of Lt. William R. Orton, who were coming to their aid. The MG position on the hill above the CP location which had been harassing their position was pointed out; the tanks fired several rounds at it, driving the Germans off the hill. At the crossroads Lt. Pearlstein met the column on his way back from the aid station. The unit pulled back to Berbourg, where they went into position, arriving at 1700 at the same place they had left that morning.

Not in the BOOK

A TEST CLIP

During recent operations in the Philippine Islands a switchboard operator in my battery, Tec 5 George Merantza, as an expedient improvised a test clip which proved very satisfactory in tapping in on lines.

Cut a 2" section of an old terminal strip (TM-184) and remove the binding posts (TM-175) on one side of the contacts. In place of the



TM-175 insert a small bolt to which wires from the test phone are attached (see sketch). Wires to be tested are inserted in the remaining two binding posts. Using this item as a test clip always insures an excellent contact with the wire.

CAPT. DAVID TURNBULL, FA

17/R SCALE

To make the determination of 17/R easier, it has been found expedient to plot 17/R "boxes" in the space between the "range" and elevation scales on the 12" GFT.

India ink dots indicate the limits of the boxes. Figures are written in India ink also. They do not interfere with any scales, and make the computation automatic.

LT. THOMAS B. MAIER, FA

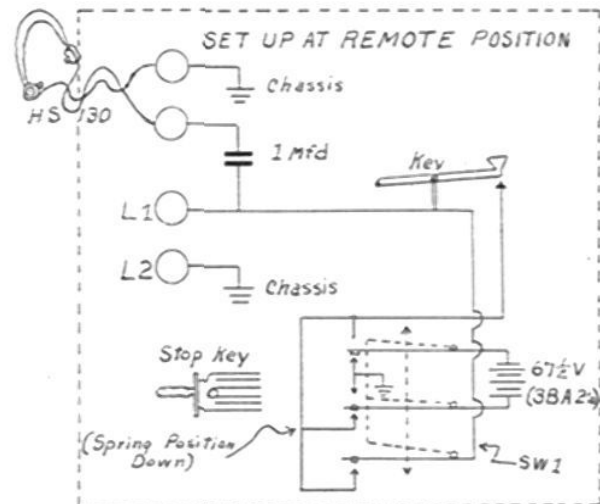
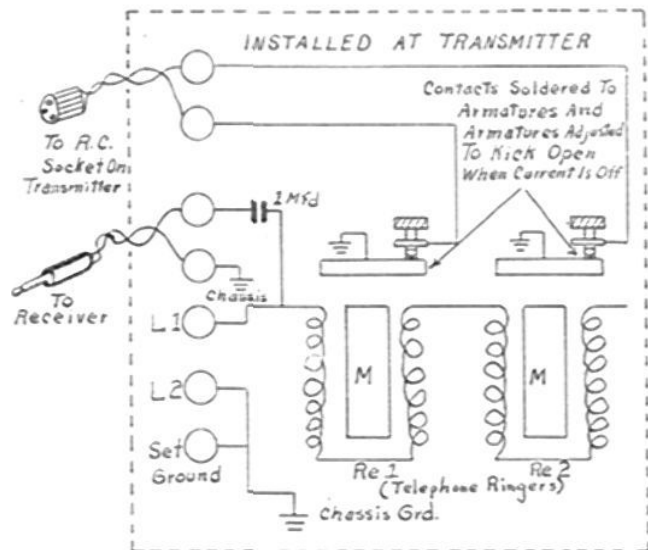
REMOTE CONTROL FOR SCR-193

In stabilized situations (where the radio must be set up at a distance from the message center), and sometimes for the comfort and safety of operators, it is desirable to operate the SCR-193 by remote control. The method used in the 209th FA Group works over distances up to two miles, and can be simplex over the regular 28 line. After all stations have been netted, all further operation can be carried on from the remote control position.

To start the dynamotor, the operator momentarily depresses his sending key. When transmission is completed a momentary depression of the stop key turns it off. Both receiver and transmitter can be heard in the headset at all times.

Parts required are a key, headset, jack to fit headset plug, leaf switch similar to ring-talk key in BD-72 switchboard, two 1-mfd condensers, two old telephone ringers (for polarized relays), a plug PL-55, and an improvised plug to fit the remote control socket on the transmitter. The part that is installed at the transmitter can be built into a very small metal box and left permanently installed on the side of the transmitter; it does not affect the operation of the set in any way, when the remote control is not being used. The remote unit can be built into a box a little larger than that of the telegraph set TG-5-B.

EDITOR'S NOTE: This feature is devoted to ideas sent in by our readers describing methods or devices which, though not specified by official literature, have proved useful in service.



One caution: as the starting relay contacts are somewhat overloaded, they tend to burn and stick. If you have available a relay with larger contact points than the telephone ringers have, even greater reliability should result.

One other point: the new Remote Control Unit RC-289 performs the functions for which this improvisation was devised. You may not have that available, however. And even if you do, the system here described will work in case of emergency.

M/SGT. WESLEY P. GARRETT, FA

ERRATA NOTE

Several errors appeared in *Compass Training Speeded* by Lt. Manfred W. Ehrich, FA, which was published on page 438 of this JOURNAL for July, 1945. (1) In his examples, Lt. Manfred was working with a base which ran in a due east-west direction. (2) The first example should have read, "March 83 yds on azimuth 2000 μ , 50 yds on azimuth 900 μ , 85 yds on azimuth 1600 μ ."—ED.

Diary of War Events

(As reported by the American press—Edited by B. H. W.)

AUGUST, 1945

- 1st 800 B-29s drop 6,000 tons of bombs on 4 cities and oil plants on Honshu. Okinawa-based planes bomb Kyushu; others from Iwo hit the Nagoya and Kobe areas of Honshu.
Carrier planes bomb Wake Island.
Berlin conference of the Big Three ends.
- 2nd 250 Far East Air Force planes bomb Nagasaki, on Kyushu.
- 3rd U. S. 20th Air Force plugs all major Jap harbors with air-sown mines.
Chinese troops capture Sinning.
- 4th War Department extends Gen. MacArthur's command to include the Ryukyus.
Gen. MacArthur's forces seize Jap hospital ship after it had been found to be carrying guns, shells, and fighting personnel.
Sweden signs trade agreement with Argentina.
- 5th Chinese troops capture Tajungkiang.
- 6th Hiroshima, a main Jap city, hit by an atomic bomb. Details remain closely guarded but President Truman announces that the bomb is a "harnessing of the basic power of the universe." U. S. and British research scientists worked on it together. 2 billion dollars spent on its development.
- 7th Atomic bomb obliterated 60% of Hiroshima, destroyed 5 major industrial plants.
Carrier planes of the Pacific Fleet rake the China Sea near Shanghai.
Chinese troops capture Yeungkong, south China port west of Hong Kong.
- 8th Russia declares war on Japan.
U. S. 3d Fleet planes strike northern Honshu. B-29s hit 4 Jap cities. Chinese troops capture Wuhu Island, east of Foochow.
President Truman signs the United Nations Charter.
- 9th Red Army advances 14 miles into Manchuria.
U. S. 3d Fleet and British carrier planes pound Honshu. B-29s bomb Amagasaki and the Tokyo area.
- 10th Japan offers to surrender under an interpretation of the Potsdam ultimatum that would leave the Emperor's sovereignty unimpaired.
Russian troops advance 105 miles in Trans-Baikal sector.
- 11th Allied powers agree to the Japanese proposal to surrender on the basis of the Potsdam ultimatum, but on the condition that the Japanese Emperor come under the authority of the Allied Commander in Chief to act as his agent.
- 12th 400 allied planes raid Kurume, supply and distribution center on Kyushu.
Russians send amphibious forces into Korea.
- 13th U. S. 3d Fleet planes bomb Tokyo area, destroy 138 Jap planes.
600 land-based planes raid Kyushu.
- 14th President Truman announces Japan's acceptance to the Potsdam ultimatum at 7 P.M. Simultaneously with the presidential announcement, Adm. Nimitz flashes "Cease Firing" orders to all units under his command.
Navy Dept. reports the sinking of U. S. heavy cruiser *Indianapolis*, lists all men on board as casualties.
Soviet Union signs "a treaty of friendship and alliance" with China.
- 15th Carrier planes shot down 35 Jap planes during attack on the Tokyo area just prior to the surrender. Isolated groups of Japs continue to make war.
- 16th Gen. MacArthur grants Japan request of 2 to 12 days' delay in signing final surrender papers.
Russian general orders Jap army in Manchuria to surrender by Monday, 20 Aug 45.
President Truman reports that Japan will not be divided into separate zones of control. Gen. MacArthur to be occupational commander.
- 17th Jap planes attack U. S. bombers on a photographic mission over Tokyo area. Jap troops begin to surrender in the Manchurian front.
Gen. de Gaulle commutes Marshal Petain's death sentence to life imprisonment.
- 18th Jap planes again attack U. S. reconnaissance planes over Tokyo; kill 1 U. S. crewman, wound 2.
- 19th 16-man Japanese armistice mission arrives in Manila for conference.
Medical team of parachutists find Lt. Gen. Wainwright alive and well at a prisoner-of-war camp at Sian, 100 miles northeast of Mukden, Manchuria.
- 20th The Red Army occupies all key cities in Manchuria as all organized Jap resistance ceases.
- 21st A daring American team of parachutists drops into Peiping, rescues 4 of the 8 airmen who were lost in the 1942 Tokyo raid headed by Gen. Doolittle.
- 22nd Big Three prepare joint political action to avert civil war in China.
Gen. de Gaulle arrives in Washington for conference with President Truman.
- 23d Allied air attacks wrecked 44 Jap cities, killed 260,000 persons, injured 412,000, and left 9,200,000 homeless.
- 24th Russian forces continue their advance toward Peiping; take 3 more Korean towns.
- 25th U. S. warships enter Sagami Bay, outside the entrance to Tokyo Bay, on the occupation schedule.
Soviet troops land on Korea's east coast.
- 27th Occupation of Japan begins when 48 transport planes and Flying Fortresses land 150 technicians at Atsugi airfield, 18 miles southwest of Tokyo.
- 28th Gen. MacArthur leaves Manila for Tokyo.
News received that 300 survivors of the cruiser *Houston*, which disappeared on March 1, 1942, in the Java Sea, are in Jap prison camp.
- 29th Foreign troops occupy Japan for 1st time in 1,000 years.
President Truman releases the Pearl Harbor findings of the Army and Navy inquiry boards.
- 30th Gen. MacArthur sets up his occupation headquarters in the New Grand Hotel of ruined Kokohama.
Otto Dietrick, former head of the Reich press, surrenders to the British.
- 31st Gen. Wainwright arrives at Gen. MacArthur's headquarters in Yokohama to witness the Japanese surrender.

SEPTEMBER

- 2nd Foreign Minister Shigemitsu signs the unconditional surrender document for Japan. Gen. MacArthur signs on behalf of the Allies.
President Truman proclaims today as V-J Day.



For Heroism and Service



404th FA GROUP, HQ & HQ BTRY

Croix de Guerre Avec Palm
Col. JOHN C. WYETH, O-3675

Silver Star
Maj. JAMES L. RUSSELL, O-330080

Oak Leaf Clusters to Air Medal
Maj. NEIL NORRIS, O-1166799
Capt. FRANK W. RAWLS, O-1183745
1st Lt. EUGENE E. TALLEY, O-1182276

Air Medal
Capt. HUGH E. HORN, JR., O-404459
Maj. NEIL NORRIS, O-1166799
Capt. FRANK W. RAWLS, O-1183745
Maj. JAMES L. RUSSELL, O-330080
1st Lt. EUGENE E. TALLEY, O-1182276

1st Lt. WILLIAM R. WOOLRIDGE, O-1174477

Oak Leaf Clusters to Bronze Star
Lt. Col. LEO W. CATHER, O-18510

Bronze Star
Maj. WILLIAM L. ALLEN, O-304334
1st Sgt. GEORGE J. BARDWIL
T/4 STANLEY F. BERGSTEIN
Capt. LEWIS BOLNICK, O-422794, DC
2nd Lt. THOMAS J. BOYLE, O-2012063
2nd Lt. ANDREW CHEVREAU, O-2009626
S/Sgt. CLARK W. CLARY
T/5 HAROLD J. GERKEN
T/5 WALTER S. GREEN

T/5 EUGENE P. KELSEY
M/Sgt. OREN F. KEY
Capt. EDWARD E. KUSCH, O-543162, C. Ch.
S/Sgt. CHANT D. LEE
Capt. JAMES B. McCLELLAN, O-1844404
Pfc. JOHN A. OWENS
M/Sgt. HENRY C. PRESNELL
1st Lt. GEORGE H. ROADMAN, O-1178611
M/Sgt. WENDELL A. SCOTT
T/4 HARROLD W. SIMS
Col. JOHN C. WYETH, O-3675

80TH DIVISION ARTILLERY

HEADQUARTERS DIVISION ARTILLERY

Legion of Honor (French)
Brig. Gen. JAY W. MacKELVIE

Croix de Guerre with Palm (French)
Brig. Gen. JAY W. MacKELVIE

Order of Medal of War 2nd Class (Russian)

Brig. Gen. JAY W. MacKELVIE

Legion of Merit
Col. JOSEPH W. SHAW

Silver Star
1st Lt. RICHARD S. JAMESON
Sgt. CHARLES E. KEENEY
T/S JAMES L. NAGEL

Distinguished Flying Cross
1st Lt. GEORGE R. FREDLUND

Soldier's Medal
T/4 BILLY M. CONDRY

Bronze Star
Maj. JOHN M. ALLEN
Capt. LLOYD C. COLE
1st Lt. GEORGE R. FREDLUND
Maj. JAY W. FREDRICKSON
WOJG ROBERT Z. FREEMAN
Pvt. OSCAR GREEN
1st Lt. DAVID J. HINDLEMAN
Cpl. JOSEPH HOMA
Brig. Gen. JAY W. MacKELVIE
Capt. HENRY M. MARY
M/Sgt. ANDREW F. OWENS
Col. JOSPEH W. SHAW
T/5 GEORGE W. SHEAR

Air Medal
T/3 FREDERICK BUDGE
T/Sgt. EUGENE CARCARAMO

313TH FIELD ARTILLERY BATTALION

Legion of Merit
Lt. Col. FREDERICK W. ELLERY

Silver Star—Posthumously
Pfc. WALTER G. HOOK

Silver Star
Cpl. DOYLE R. GUSTIN
Capt. ROBERT P. STEPTOE
Capt. RAYMOND N. TALCOTT

Bronze Star—Posthumously
Sgt. LEVI V. BROSS
Pvt. WILFRED J. DUBOIS
Pfc. MELVIN N. HOLBEN
T/5 WILLIAM J. RENNICH
Pfc. STANLEY C. STANKIEWICZ

Bronze Star
T/5 DOMINICK A. ABBRUZZESE
S/Sgt. PAUL ADLER
S/Sgt. SAMUEL H. AGNEW
T/Sgt. ROBERT L. BABCOCK
Sgt. OTIS H. BARRON
M/Sgt. G. DORSEY BEAN
Capt. BURTON E. BECK
T/4 HERBERT W. BENTZIN
Capt. ROBERT M. BINGHAM
Pfc. KARL W. BLOCKER
Maj. JOHN W. BOWDEN
Pvt. EDWARD J. BRADLEY
Sgt. DONALD W. BRAND
T/4 THERON C. BRIDWELL
S/Sgt. ROBERT A. BRINKER
Pvt. LEROY B. BRYAN
T/4 DEAN E. BURRIS
WOJG MURRAY R. CALLAWAY
Cpl. EDWARD B. CAREY
T/Sgt. CARL A. CARLSON
Capt. WILLIAM A. CRAWFORD
1st Sgt. EDWARD CUNNINGHAM
Cpl. GUY R. DUNCAN
Lt. Col. FREDERICK W. ELLERY
T/4 SAMUEL GAY, JR.
1st Lt. STANLEY A. GOLDBERG
S/Sgt. JOSEPH J. GROF
Sgt. LEONARD V. GURMIN
Capt. ROBERT S. HALL
T/5 EDWARD H. HARGRAVES
Cpl. EDWARD F. HERBER
1st Sgt. VICTOR J. HILL

S/Sgt. ELMER HOGAN
T/4 ERNEST P. HOLBROOK
T/5 CLARENCE F. HOUSER
1st Sgt. ARBY L. JOHNSON
T/5 CHARLES H. KINGSOLVER
T/4 LEONARD L. KRYLL
T/Sgt. GORDON McDONALD
Cpl. JOSEPH H. McDONALD
1st Lt. WILLIAM J. MacMILLEN
S/Sgt. WILLIAM R. MADEN
Sgt. ROY E. MAGNUSON
Pvt. THIRL L. MAXWELL
S/Sgt. ANTHONY B. MERCURI
S/Sgt. ADAM R. MICHALAK
1st Sgt. RAYMOND P. MOORE
Cpl. RONALD E. MORRIS
T/5 HALMEN O. NORDERHAUG
S/Sgt. RAYMOND W. PAGE
Sgt. JAMES W. PHILLIPS
S/Sgt. EDWARD A. POLETTI
Cpl. EDWARD A. PUGH
Capt. FRANK H. RICH
1st Lt. JAMES B. RICHARDSON
Cpl. CLAYTON M. RICKARD
T/Sgt. ROBERT A. SANDROCK
Capt. ARCHANGELO SERVILLO
Lt. Col. JAMES McM. SHEPHERD
S/Sgt. ARTHUR F. SLATES
1st Lt. GEORGE R. SMEBY
S/Sgt. PAUL W. SMITH
Capt. RAYMOND N. TALCOTT
T/4 HAROLD N. THORSON
Sgt. HARDIN T. VERTREES
Pfc. ROBERT H. WHITE
Sgt. ARTHUR G. WILKINSON
Pfc. WILLIAM C. WILLIAMS, JR.
S/Sgt. JOHN WISCHUNOWSKI

Air Medal
1st Lt. LOUIS J. HAVERLANDT
T/5 ROBERT T. HENERDEEN
2nd Lt. MARION S. KING

1st Lt. A. A. McFATRIDGE, JR.
T/3 FRANK W. POOLE, JR.
T/5 T. A. RZEPIEJEWSKI

314TH FIELD ARTILLERY BATTALION

Croix de Guerre (French)

Lt. Col. DANIEL J. MINAHAN

Silver Star—Posthumously

2d Lt. RAY E. DICKSON

Silver Star

1st Lt. PAUL H. BASSETT
1st Lt. DONALD R. HALL
Lt. Col. DANIEL J. MINAHAN

Distinguished Flying Cross

1st Lt. HUBERT H. KENYON

Bronze Star—Posthumously

Sgt. JOHN T. KROAH
Sgt. EMIL E. TUMOLO

Bronze Star

Cpl. WILLIAM T. ADAMS
Pfc. WILLIAM J. ANDERTON
S/Sgt. CLAUDE W. BALL
1st Lt. EDWARD BAR
T/5 EDWARD R. BARATTA
Capt. JOHN K. BEARD, JR.
Pfc. HAROLD E. BLACK
Pfc. R. J. CHRISTMAS, JR.
Capt. NELSON W. CURTISS
S/Sgt. BRUCE E. DUNSHA
T/5 GILBERT FARNELL
Pvt. ORVILLE D. HARVEY
Capt. MICHAEL F. HENEGHAN
Capt. KENNETH W. HODGDON
S/Sgt. EDWARD P. JACKSON, JR.
Pvt. JOSEPH R. JASAK, JR.
2d Lt. ROBERT KEPPELMAN
T/5 JOHN J. KIRK
1st Sgt. FRANK C. KNOTT
Pfc. WILLIAM M. KUYKENDALL
S/Sgt. WALTER C. McCARTY
1st Sgt. RUDOLF M. MADSEN
S/Sgt. JOHN F. MALAGISE
2d Lt. WILLIAM T. MARTIN
Capt. FREDERICK J. MAXTED
Pfc. LAWRENCE P. MEDLER
Pfc. WALTER MICKIEWICZ
Cpl. RICHARD J. MURREN
S/Sgt. ALTICE F. NICHOLSON
Pfc. CHARLES W. PECORONI
Maj. JAMES F. ROARK
T/3 MARCUS W. ROBINSON
1st Lt. JOHN RUYAN
Pvt. EDWARD G. SCARBERRY
Maj. RICHARD J. SCHALLIOL
S/Sgt. JOHN W. SCHUNK
M/Sgt. EDWARD L. SHOLLY
Pvt. JOHN W. SMITH
Pvt. LOUIS STALLINGS
Pfc. SYLVESTER P. STRZEPEK
T/4 PORTER T. TALKINGTON
Pvt. JOSEPH TATULLI
Capt. ROBERT E. THURSTON
T/5 PAUL F. TUCKER
Capt. RICHARD A. WILNER
T/4 STANLEY E. WILSON
Sgt. WILLIAM T. WOODS
Pfc. JAMES D. WRIGHT

Air Medal

1st Lt. ARTHUR J. LINDBERG
S/Sgt. GERALD H. REBENDORF

1st Lt. JOHN W. SIMONSON
315TH FIELD ARTILLERY BATTALION

Croix de Guerre (French)

Lt. Col. JOHN M. BURDGE, JR.

Silver Star

S/Sgt. TARRANCE L. BEAVER
Capt. JOHN B. DeBRUN
1st Lt. HENRY REISING
T/5 KEITH R. VEGLAHN

BRONZE STAR

Capt. JAMES A. BEDFORD
Sgt. CARL L. BEUCHAT
T/4 JAMES R. BEVINS
Lt. Col. JOHN M. BURDGE, JR.
2d Lt. RUSSELL G. BURGHARDT
T/5 DOMINICK CAVELLO
Capt. JOHN B. DeBRUN
S/Sgt. GLENN A. DICKERSON
1st Lt. OLIVER B. HALL
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Pvt. ERNEST P. HOLBROOK
1st Lt. RAY M. HOUSE
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Pfc. GEORGE W. McCOY
Pfc. RICHARD MAXWELL
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Capt. EDWYN OWEN
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2d Lt. PAUL A. STATON
Sgt. ARNOLD F. STAUFFER
Pvt. SELMER L. STORBERG
1st Lt. DONALD P. TODD
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Pfc. OTTO WASHINGTON
2d Lt. WILBUR W. WEST
T/Sgt. ROBERT W. WOERNER
S/Sgt. ROBERT A. WOLFE
Sgt. HARRY P. WROBLEWSKI

Air Medal

2d Lt. CHARLES S. RITCHEY

905TH FIELD ARTILLERY BATTALION

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Silver Star—Posthumously

2d Lt. JOHN R. PORTEOUS

Silver Star

1st Lt. ANDREW E. HOLMS

Bronze Star

Cpl. THOMAS AGUILLARD
1st Lt. ROBERT R. ANDERSON
Pfc. MIKE J. BANASIAK
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S/Sgt. ROY E. BEESE
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T/4 WALTER KRAFTY
Cpl. EARL I. LAFNEAR
S/Sgt. EDWARD S. LANN
T/5 THOMAS W. LEONARD
Maj. OSWALD H. LINCK
T/Sgt. T. M. McCARTHY
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Sgt. LORANCE L. MOFFATT
Pfc. GEORGE NEWMAN
1st Sgt. WILLIAM S. PAZIK
Pfc. CHARLES W. PECORONI
T/5 HOMER I. PENINGER
1st Sgt. HUEY L. PEVEY
Cpl. ALPHONSE PYRE
T/4 ATLEE J. REEB
Cpl. MARION A. ROTH
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Capt. MILTON C. WAKEFIELD
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Cpl. W. C. WOMACK
Cpl. WILLIAM J. ZWICK

Air Medal

1st Lt. ROBERT R. ANDERSON
Lt. Col. JOHN W. BROWNING
S/Sgt. CHARLES E. CHROSNIAK
1st Lt. LEWIS H. COX

BOOK REVIEWS

THE COMING AGE OF ROCKET POWER. By G. Edward Pendray. 227 pp.; appendix; index; illustrated. Harper & Bros. \$3.50.

Mr. Pendray, an Assistant to the President of the Westinghouse Electric & Manufacturing Co., has long been a rocket enthusiast. He helped organize the American Rocket Society, edited its publication, served as its president, and is now its secretary. Thus he is not one of the many free-lancers scratching at this subject and grinding out something that will sell on the current market. Rather, he is thoroughly steeped in his subject.

Knowing his subject so well, he graphically describes the types of rockets, their development, trials and tribulations, commercial uses to which rockets have already been put, military functions, etc. Rocket experimenters were long classified as something out of Jules Verne, but the tremendous progress made in this field during the war has eliminated much of this skepticism. Rocket enthusiasts still make many predictions that seem outlandish to the layman, but development has proceeded to the point that the post-war world will see many of them come true. Certainly rockets and jet-propulsion principles will be so widely applied that at least a general knowledge of them will be a "must." And this appears to be the best book to date, to furnish that indoctrination.

STRONGER THAN DEATH. By Richard Tregaskis. 144 pp. Random House. \$2.00.

Fear in war is natural and real. Richard Tregaskis deals with it in a convincing, realistic manner, and his book has a satisfying note of thoughtful sincerity.

The central figure in the story, a young captain, after his first experimental recklessness, sobers down to a sort of cowering anxiety. When he thinks of his wife, Suzy, and their baby daughter, his life seems too precious to fling away in one moment of battlefield glory. He finds himself thinking too much, and becoming engrossed in an overpowering concern for his life. The reader gets a clear picture of the enlisted men's reaction to their captain's shaken state, yet somehow, through the author's deft handling of psychological stresses, feels too closely identified with his reasoning to lose respect and sympathy for him.

Despite his fear he has a strong sense of moral responsibility, and he is completely in character when he takes a determined account of the quality of his leadership. He comes through with the conviction that, at whatever cost, he must satisfy his conscience, ". . . that the only

immortality, the lasting things about his life, were honor, decency, courage, the intangibles of the spirit." It is this conviction, stronger than fear, that leads him on to performance measuring up to the highest ideals of soldiery.

When Suzy receives the dreaded telegram from the War Department, "We regret . . .," the reader shares with her the feeling that, "I can't believe it. I can't believe he could have died." Just as his concept of duty transcended fear, his performance of that duty transcended death. F.E.J.

PER ARDUA: The Rise of British Air Power 1911-1939. By Hilary St. George Saunders. 326 pp.; appendixes; index; illustrated. Oxford University Press. \$3.75.

Mr. Saunders is perhaps best known in this country for his *Combined Operations*, the story of development of amphibious warfare. Again he has prepared an authentic history, and one filled with interesting sidelights and anecdotes.

From the very first days of British military flying—the days of the Royal Flying Corps and the Royal Naval Air Service—he traces the brilliant work of flyers down to the outbreak of this war. Early reconnaissance in France, the first aerial adjustment of artillery fire, desert warfare both in Palestine and the Libyan desert, growth of machines in both numbers and capabilities, the great among the pioneers and innovators—it is of such things he speaks, and well. Another volume is projected, to bring the account down to the present. It too will cover stirring and critical times, and will be the more understandable because of this earlier publication of the background material.

CHINESE-JAPANESE CHARACTERS. By Mr. and Mrs. O. Vaccari. 1224 cards. P. D. and Ione Perkins. \$7.50.

The Perkins are to be commended for their publication of so many fine works on the languages and other aspects of the Orient. Here they ring the bell again, to the benefit of those needing or just desiring a knowledge of the so-peculiar written characters of the Japanese and Chinese languages.

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PROCEED WITHOUT DELAY. By Sgt. Thomas R. St. George. 181 pp.; sketches. Thomas Y. Crowell Co. \$2.00.

Remember % *Postmaster*? Well, *Proceed Without Delay* is from the same pen. So are the sketches, only this time there are even more of them. The same screwball sergeant continues his travels (authentic) in the Pacific, this time from Sydney to Port Moresby, Salamaua, and then on to Leyte with the attacking troops. Everywhere things happened to him. Maybe no more than has happened to many another, but St. George has the knack of both seeing the funny and odd sides of things and of passing them along in a refreshing way. It's a swell yarn.

SHEPHERD'S EMPIRE. By Charles Wayland Towne and Edward Norris Wentworth. 333 pp.; bibliography; index; illustrated. University of Oklahoma Press. \$3.50.

From East Texas through seven southwestern states to islands off California, from the days of the conquistadores to the present—that is the sweep of this epic of the sheep. When we hear of "the West" we usually think of rodeos and sheepmen. But we hardly recall the importance of the flocks.

Perhaps this is partly because sheep raising was almost solely a business of the Spaniards. The cattle industry was more Anglican in its beginnings, so more was written about it. In fact, though, there is most as much romance in the sheep industry. It's well told in this book, which is as close to a complete history of the subject as has yet been published.

THE CITY IS THE PEOPLE. By Henry S. Churchill. 186 pp.; illustrated. Reynal & Hitchcock. \$3.00.

So many groups and agencies connected with "planning" have galloped in different directions simultaneously that the very term has fallen into some disrepute, at least as applied to some fields. Yet, if handled sensibly and with due balance between the ideal and the possible, nothing is more helpful than city planning for protection of both property values and standards of living.

In a thoroughly stimulating book, Mr. Churchill reviews the history of cities ancient, middle-aged, and modern. He looks at our American precedents and what has happened to our city plans. City planning is far from a new concept. Few plans, however, have been soundly conceived, and few that approached that ideal have been well followed. Efforts are being made in the right direction. There is some fumbling, much inaction, but the principles are sound. This excellent discussion of what will soon be a most important problem to us all, is timely indeed.

ONE WHO SURVIVED. By Alexander Barmine. 328 pp.; index; illustrated. G. P. Putnam's Sons. \$3.75.

Barmine was born in Russia. In his teens when Revolution came he volunteered for the Red Army as a private, fought through the Civil War, was commissioned in the field, received higher military education, rose to brigadier general. As a man of great ability he became a leader in many phases of the Soviet government's activity, as business man, industrialist, journalist, diplomat. Shortly before this he was Charge d'Affaires in Athens. In short, he had unique opportunities to learn thoroughly the principles and practices of the Soviet State.

Through the years he saw many things which were hard to reconcile with Marxist doctrine. His faith in the government remained, however, until the days of 1937's Great Purge, when so many Old Bolsheviks went to their deaths. Then he became convinced that counter-revolution was complete, that Russia was as totalitarian as the countries so-called.

This autobiography is direct, straightforward, unsensational in tone and without endeavor to be lurid. Its impact is thus the greater. Its narrative of simple events is actually a thrilling tale of adventure. Facts are told without bitterness and without partisanship or thundering denunciations. Out of this emerges an important part of the record, as intimate a picture of Russia as we are likely to have for a long, long time.

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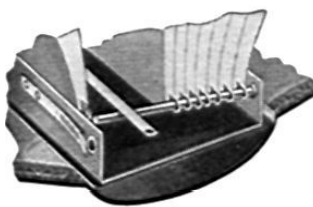
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THE GERMAN RECORD: A Political Portrait. By William Ebenstein. 308 pp.; notes; index. Farrar & Rinehart. \$3.00.

Dr. Ebenstein, though only 35, has long worked to expose fascism, in his *Fascism at Work, Fascist Italy*, and (even better known) *The Nazi State*. Now he takes an analytical look at the long-time history of Germany and her people, to see what the past may suggest as to the pattern of the future.

Obviously the Germans of Germany are of a quite different stripe than the "Germans" of this country—the latter's forebears left the old country to get away from individuals such as our troops have encountered. We can not judge present-day Germans by any standards we can find at home. Although perhaps not all Germans are Nazis, all are so tarred by the brush of at least acquiescence that the guilt of one group is the guilt of all. All Germany must share the blame for events of the past several years.

Such is Ebenstein's conclusion. He ends his analysis with some concrete suggestions for the future treatment of Germany. The whole subject deserves much thought by all Americans; this *Political Portrait* is a helpful handbook.

THE HAYS OFFICE. By Raymond Moley. 254 pp.; index; illustrated. The Bobbs-Merrill Co. \$3.75.

Of all big businesses, that of "the movies" mushroomed the fastest. Some of its growth was unsound, to say the least. Threatened by great public disapproval, its individualistic leaders desperately placed its destinies in the hands of a "czar," Will Hays.

Czar he was in name, but not in ambition. In the past 23 years he has gradually led the industry to higher levels of quality, public acceptance, business principles. Although best known as operator of filmdom's self-censorship, his office has many other activities. Growth and development of all this is well recounted in this description of an industry's efforts to improve its output by self-government and by public cooperation.

NAKED CITY. By Weegee. 243 pp. Essential Books. \$4.00.

Weegee is a photographer, and he loves New York. This combination has turned him into a foremost news photographer whom Earl Wilson has called "an O. Henry with a camera." His specialties are crime and violence. They form a fair part of the over-200 photos which are the backbone of this book. But other facets of the big city and its life are covered too. Together, these all make this a striking, intimate portrait of the world's first city, as well as a grand collection of splendid photography.

ISLAND 49. By Merle Miller. 186 pp. Thomas Y. Crowell Co. \$2.50.

Although written by a combat soldier, a combat correspondent for *Yank*, this is not an account of a specific invasion. Rather, it is a composite of scenes, events, personalities. This treatment as a novel gives in many ways a more complete picture of the personal and tactical difficulties that arise in amphibious operations. The candid treatment by Sgt. Miller should bring much understanding to every reader.

JAPANESE MILITARISM: Its Cause and Cure. By John M. Maki. 258 pp.; index. Alfred A. Knopf. \$3.00.

In one most important respect this volume differs from the current flood of books on Japan and the Japanese. John M. Maki was born in our state of Washington of Japanese parents. He was reared in an American household as a member of the family. After college graduation he turned to Japanese studies, and later spent more than two years studying in Japan. He thus has a deeper knowledge of his subject than do most authors. He is completely enlightened concerning the Japanese nation, and ardent in his desire to see a complete and genuine victory in the Pacific.

He clearly indicates what it is we are fighting. Although there is of course the militant nation, actually it is Japanese ideas that are our enemy—the ideas of the Jap political, economic, and military oligarchies. Those are the subject of this discussion, which is the most penetrating this reviewer has yet encountered.

THE WISDOM OF ISRAEL. Edited by Louis Browne. 743 pp.; index of authors. Random House. \$3.95.

This book's selections reflect not only the philosophical, ethical, and moral history of a creative and long-surviving people, but also a good bit of the deep humor which has helped sustain them through the centuries. They are drawn from wide sources, among them the Old Testament, the Apocrypha, the Twelve Testaments, Hillel's wisdom, the Confessions of Josephus, the New Testament, the Talmudic writers, Maimonides, Spinoza, Heine, Aleichem, and many others.

Altogether this is a fit companion to Lin Yutang's *The Wisdom of China and India*. It presents some of the most enduring ideas which the mind of man has captured. The precepts of its writers transcend the limits of the one race or the one religion; most are common to all great religions, some of which have themselves stemmed from Israel. They continue to be firm guides for men and women living in an age of confusion and disaster, and to those whose lives present them individually with similar situations.

HALF A HUNDRED TALES BY GREAT AMERICAN WRITERS. Edited by Charles Grayson. 527 pp. The Blakiston Co. \$3.00.

Such authors as Louis Bromfield, William Faulkner, Dashiell Hammett, Ernest Hemingway, John P. Marquand, and Donald Ogden Stewart are represented here. All of them are well known, but these selections are not. Some of these tales well illustrate the fact that not even the finest writers can always do first-class work. Others are quite well done. All are interesting specimens, especially to those already familiar with some of these writers' products. The variety makes this a pleasant book for dipping into in leisure times.

THE PATTERN OF SOVIET POWER. By Edgar Snow. 212 pp.; index; illustrated. Random House. \$2.75.

Edgar Snow's long residence in Russia has given him a point of view quite sympathetic to that country, its aims, and its aspirations. He may not be quite "all out" in favor of everything there, but he certainly undertakes to answer critics of phases of Soviet life and activity.

Because of his informed background, Snow's writings are important to an understanding of our great ally. Those familiar with his *Red Star Over China* and *People on Our Side* well understand this. In his newest book he interprets the facts and the aspirations of Russia in her relations with both Europe and the rest of the world, particularly China and the Orient. He examines the Russian program in Poland, Germany, the Balkans, and the Far East. In view of the present trend of world events this is an exceedingly timely book, and an important one.

PISTOL AND REVOLVER SHOOTING. By Walter F. Roper. 251 pp.; index; illustrated. The Macmillan Co. \$2.49.

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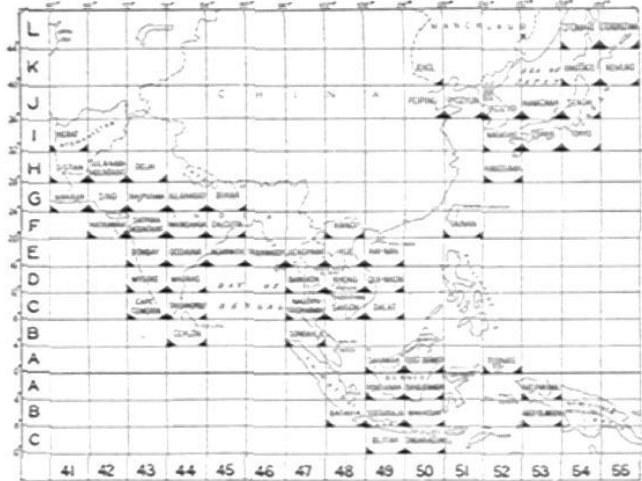
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HOW TO SOLVE IT. By G. Polya. 204 pp.; illustrated. Princeton University Press. \$2.50.

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PSYCHOLOGY FOR THE ARMED SERVICES. Prepared by a Committee of the National Research Council. 517 pp.; index; illustrated. Infantry Journal. \$3.00.

Two years ago a little volume *Psychology for the Fighting Man* appeared under the imprint of this same publisher. It was the first book in its field, specifically trying to apply psychology for the benefit of the soldier.

Unlike that earlier volume, which contained a minimum of technical explanation, this new and larger work is designed (1) as a textbook on the college level and (2) as a book in which basic psychological principles and their naval and military applications are more fully developed. And unlike many dual-purpose volumes, this one should well fulfill its aims. For those desiring further references, bibliographical references appear at the end of each chapter.

BONES OF CONTENTION. By the Rt. Hon. Lord Vansittart. 158 pp., index. Alfred A. Knopf. \$2.75.

Published in Britain last spring, the former Foreign Ministry Under Secretary's latest book is fortunately now available in this country. It is a restatement and an elaboration of his thesis that the German *people* are responsible for successive wars in successive generations through the centuries, that they must be held under close and stringent control (a "hard peace"). Vansittart also suggests that the great powers will likely again forget the danger of Germany but that the small nations, those that suffered most under German heels, will be more apt to remember and thus should participate in occupation and control.

"Vansittartism" has not been thoroughly understood. Many believe it involves merely a grinding down of Germany. That is not the case. Lord Vansittart's main contention is that for many, many years the German *people* have, through their positive acts or their acquiescence, been responsible for the acts of the German State. From that fact stem his proposals for the future cure.

In this latest volume he presents strong support from historians through the centuries, dating back to the 1st-Century Romans. True enough, and admittedly, there is no biological connection between those early-day Huns and present-day Germans. In fact, however, the literary coincidence that ancient writers described the Germans as we know them today, states truths that can not be ignored. Those early descriptions help show the pattern of thought and action that have so long existed in the same region, regardless of blood lines. Strong measures must be applied over a considerable period to result in a change that will allow the world of the future to be a peaceful one.

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