

TANK BATTLES OF THE PACIFIC WAR 1941-1945

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ARMOR AT WAR SERIES

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Front Cover

The 716th Tank Battalion soon encountered elements of the Japanese 2nd Armored Division. Here, "Classy Peg" of Co. C, passes out a Type 97 kai Shinhoto Chi-ha medium tank knocked out during fighting near Linmangsen while the battalion was supporting the 43rd Infantry Division. The Japanese tank has taken a direct hit on the right sponson just below the hull roof. "Classy Peg" has the battalion's wolf's head insignia painted on the hull side instead of the turret.



Back Cover

A Type 95 Ha-go light tank of the 2nd Company, 9th Tank Regiment, knocked out in encounters with bazooka teams from the 77th Division near Yigo on 7 August 1944; notice that the driver's hatch has been blown off. The 9th Regiment was split between Guam and Saipan; most of its tanks were knocked out during battles near the beachhead in encounters with M4A2 tanks.



"Comet", a M4A2(W) of Co. C, 4th Marine Tank Battalion on Iwo Jima. This unit used a slightly different approach to reinforce the roof and hull hatches, welding on metal bars instead of the penny nails used by the 5th Tank Battalion. Notice that the tank gun is named "Widow Maker". It was not uncommon for crews to name the tank and the tank gun differently. The side planking on these tanks is spaced out about four inches from the hull side, and a layer of concrete added to also provide protection against the dreaded Japanese 47mm anti-tank gun.

The photos in this book come from official US sources unless otherwise noted. Most are from the US Marine Corps and US Army Signal Corps located at several different archives, but also including some photos from the US Navy.

INTRODUCTION

"The enemy's power lies in their tanks. It has become obvious that our overall battle against the American forces is a battle against their M3 and M4 tanks." This statement was written by Gen. Ushijima, the commander of the Japanese 32nd Army on Okinawa when preparing his troops for the final battle in the spring of 1945. His statement may come as a surprise to many military historians who seldom associate the Pacific battles with tank warfare. Yet tanks played a vital role in nearly all the major campaigns of the Pacific war from 1941 to 1945, and indeed played a decisive tactical role in many battles. The general lack of appreciation of the importance of tanks in the Pacific campaign is due to the misconception that tank warfare in World War 2 was primarily tank versus tank warfare. This was not the case in Europe, and even less so in the Pacific. Most tank actions in the Pacific involved the fire support of infantry in overcoming fortified enemy positions. This was true both from the Japanese perspective and the Allied perspective. Although there were few epic tank versus tank battles in the Pacific, nonetheless the United States committed a third of its separate Army tank battalions to this theatre, as well as all the Marine tank battalions.

1941: The War Begins

Japan opened the main phase of the Pacific War on 7 December 1941 with the attack on Pearl Harbor. The Japanese Kwantung Army had already been involved in fighting on the Asian mainland, mainly against China, and also against the Soviet Union at Lake Khasan in 1938 and at Khalkin Gol in Manchuria in 1939. Against the poorly equipped Chinese forces, Japanese tanks were dominant. The Type 89 Chi-ro medium tank may seem laughably obsolete compared to a T-34 or a Panther, but in China in the 1930s, against poorly equipped infantry, it was a very potent tank. The conflict with the Soviets in 1939 came as a shock for the Imperial Japanese Army (IJA). The Soviets were much better equipped with armor and had a better appreciation of mechanized tactics. The best units of the Kwantung Army were defeated, and the IJA concluded that the poor performance of their tank units was one of the problems. At the time, the IJA had three principal types of tanks in service, the outdated Typ 89 Chi-ro medium tank, the new Type 95 Ha-go light tank and the new Type 97 Chi-ha medium tank. The Khalkin Gol

battle convinced the IJA that there was the need for a better armed tank. This resulted in the Type 97-kai Shinhoto Chi-ha, armed with the new Type 1 47mm gun. However, the IJA gave little priority to tank production, and the new Type 97-kai was not available in any significant numbers until 1943 by which time it was already obsolete.

By the beginning of the war in the Pacific in December 1941, the Japanese armored force had grown. The Kwantung Army's Mixed Mechanized Brigade was replaced by the 1st and 2nd Tank Groups (each with three tank regiments) stationed in Manchuria. In addition, the IJA was forming more than a dozen other tank regiments, intended to act as shock forces during offensive operations. The Army's ten main infantry divisions each had a tank company, usually with nine Type 95 Ha-go light tanks, as well as a patrol company in many infantry regiments with Type 94 tankettes, replacing traditional horse cavalry. The Japanese army did not have extensive experience in jungle warfare prior to 1941, having fought mostly in the more temperate climate of northern China. But the IJA believed that tanks could be successfully employed in the jungle terrain of the southwest Pacific that was their next objective.

Japan's opponents were ill-prepared for the amphibious assault that took place in December 1941. Britain could ill-afford to strip its European forces of precious armored vehicles. So there was only a handful of Lancaster and Marmon Herrington armored cars stationed with the Singapore and Malaya garrisons. Two tank regiments were belatedly allotted to the Pacific and were already enroute when the Japanese struck. The Netherlands East Indies Army (KNIL) had planned to reinforce their forces (in what is present day Indonesia) with 675 tanks: 75 Vickers Carden Loyd Model 1936 light tanks and 600 Marmon Herrington light tanks. However only 49 of these had arrived before the Japanese attack. The KNIL also had some armored car units including one with 12 Alvis Straussler AC3Ds, one with locally-built Overvalwagen and US M3A1 scout cars, and one with Krupp Panzerkraftwagen. British tanks only arrived after the Japanese attack when B Sqn., the King's Own Hussars was sent to Asia with 16 Vickers Mk VI light tanks.

With war clouds brewing the US Army dispatched the Provisional Tank Group to Luzon in the Philippines in November 1941 consisting of 108 brand-

new M3 light tanks of the 192nd and 194th Tank Battalions and 50 M3 75mm Gun Motor Carriages, better known as SPMs: Self-Propelled Mounts.

Defeat in Malaya: 1941-42

The British position in the Pacific hinged on the key naval base of Singapore, a fortified city that was widely regarded as impregnable. The British felt that the rough terrain around the city made it impossible to tanks, and difficult if not impossible to traverse by any large military formations. The Japanese thought otherwise. The IJA staged amphibious landings at the northern neck of the Malay Peninsula on 8 December 1941. Gen. Yamashita's 25th Army deployed 211 tanks in the 1st, 6th and 14th Tank Regiments. The 1st Tank Regiment, (with 40 Type 97 Chi-ha medium tanks and 12 Type 95 Ha-go light Tanks) penetrated Lt. Gen. Percival's Jitra line on 11 December 1941. The most important tank battle followed on 7 January 1942, when the Japanese 6th Tank Regiment overcame the Slim River line north of Singapore. The unthinkable occurred had occurred and Singapore fell on 15 February, thanks in part to the effective use of tanks.

Defeat in the Philippines: 1941-42

Among the Japanese forces landing in the Philippines were the 4th and 7th Tank Regiments. The US Provisional Tank Group counter-attacked the Lingayen Gulf landings on Luzon shortly after the initial Japanese landings. The first tank-vs.-tank engagement took place on 22 December 1941 when 4th Tank Regt. Type 95 Ha-go light tanks ambushed a patrol of M3 light tanks from the 192nd Tank Battalion near Damortis. These two opposing tank units continued to skirmish as the US forces retreated. The Japanese 4th Tank Regiment was the spearhead of the Japanese attack, while the US tankers often formed the rearguard of US forces. The US Army Provisional Tank Group needlessly lost many tanks in ill-conceived withdrawals, due in no small measure to the inexperience of higher commands with tanks. Some surviving M3 light tanks were among the last of the US rearguard to withdraw into the Bataan Peninsula. The last tank-vs.-tank action took place on 7 April 1942 when two Japanese tanks were destroyed by the M3 light tanks on Bataan.

The Japanese 7th Tank Regiment captured several M3 light tanks and managed to make a few operational

by cannabaling other wrecks. These were used to make up for their own losses. Following the fall of Bataan a special unit was formed to support the landing on Corregidor. The Japanese 7th Tank Regiment had criticised the 57mm gun on the Type 97 Chi-ha, and a few of the improved Type 97-kai Shinhato Chi-has were sent as replacements. Two Shinhato Chi-has took part in the Corregidor landing along with one M3 light tank commanded by the detachment leader, Maj. Matsuoka. The sudden appearance of the Japanese tanks near the main Corregidor tunnels and the absence of any US Army anti-tank weapons was one of the key reasons for the final collapse of the US defense.

Japan Advances to the South: 1942

The IJA 4th Tank Regt. which fought at Khalkin Gol and later in the Philippines, was refurbished and shipped to Java in March 1942, after most of the Dutch East Indies had already fallen. There were few if any contacts with Dutch tanks, and there are few records that the Dutch tanks saw much service against Japanese infantry.

Following their victory in Malaya, the Japanese Army struck into Burma, hoping to fight all the way into India. This effort was backed by the 1st, 2nd and 14th Tank Regiments. There were two Allied tank units in Burma, the recently arrived British 7th Armoured Brigade, tasked with stopping the Japanese advance on India, and the Chinese 200th Mechanised Division, attempting to keep open the supply route between India and Burma into southern China. The British tank contingent consisted of two veteran tank units hastily withdrawn from the North African Desert campaign, the 2nd Royal Tank Regiment and 7th Hussars. The 7th Hussars was equipped with M3 Stuart light tanks, still painted in desert colors. They had been intended to reinforce the Singapore garrison, but were diverted to Rangoon when news of the fall of Singapore arrived. The regiment fought a series of costly rearguard actions, including several tangles with the Japanese 14th Tank Regiment. By the time the survivors of the unit reached British lines, only one Stuart remained in action.

The Chinese 200th Mechanised Division consisted of one tank and one motorised infantry regiment, equipped mainly with Soviet equipment purchased in 1938-39. The Chinese were very reluctant to deploy their only armored unit to foreign battlefields, but were convinced when Gen. Stilwell

warned Chiang Kai-shek of the dire consequences if Japan cut the Chinese supply route from Burma. Gen. Stilwell was very impressed by the Chinese tank unit's tough fight in the Hukwang Valley in March 1942, but it suffered heavy equipment losses in the process of slowing the Japanese advance.

Japan's early victories in the Pacific war rested on the skillful and imaginative use of tanks against ill-prepared enemies. The US and Britain were quickly shocked out of their contempt for the Japanese, and their misplaced confidence in imagined natural barriers to Japanese tanks. New attention was paid to the need for tanks in Pacific theatre operations. Ironically, the stunning victories lulled the Japanese army into complacency. Through most of 1942 and 1943, the Japanese made little effort to improve the technical quality of their tank force, and the introduction of the Type 97-kai Shinhato Chi-ha was delayed, receiving low priority by Japan's heavy industries. By the time that both sides began clashing on land again, the Allies were equipped with new tanks that had been spurred along by the arms race in the European theatre.

Even though Japanese tank design stagnated, the organization of the Japanese tank force continued to mature. The success of German blitzkrieg tactics in Europe led to Japan reorganizing the Tank Groups in Manchuria July 1942 as a new Mechanised Army headquartered at Sopingchieh. This included the 1st and 2nd Tank Divisions. Later in 1942, the 3rd Tank Div. was formed in China, and the 4th Tank Div. at the Chiba Tank School in Japan. Most of the large scale Japanese tank operations took place in China during the war, notably the use of the 3rd Tank Division during the autumn 1944 offensive to seize the B-29 bases in China. Only one of the new formations, the 2nd Tank Division, fought in the Pacific War, in the Philippines in 1944-45.

Tanks in the Southwest Pacific Campaigns: 1942-43

With Japan on its doorstep in New Guinea, Australia began expanding its tank forces. Australia and New Zealand had already formed units for the Western Desert, but the Japanese threat put a halt to this. Australia and New Zealand began to develop their own tanks, such as the Sentinel and the Bob Sempie Tank, but through the war both countries would depend on tank supplies from Britain and the United States. At peak strength in 1942, Australia had four tank brigades, equipped with Matilda, M3 Light and

M3 Medium tanks, but due to manpower problems, only a single brigade remained by 1944. New Zealand also formed a number of armored units, but only one squadron actually saw combat in the Pacific.

The US Marines began receiving light tanks in 1941, planning to attach one battalion to each division. This was not achieved until 1944. In 1943 a USMC tank battalion nominally included 67 M3 light tanks, though M4A2 medium tank companies were added as they became available. The M4A2 version was selected since its diesel fuel was compatible with the fuel used by naval landing craft. The US Army usually attached one tank battalion to each infantry division in combat. The first use of Allied armor since the 1942 defeats was on New Guinea and in the Solomons. In August 1942, Co.A, 1st Marine Tank Battalion landed on Guadalcanal with its M2A4 and M3 light tanks, followed in November by Co.B, 2nd Marine Tank Battalion. They were used to support Marine attacks against Japanese defenses. Guadalcanal was densely jungled which hampered tank support. Most actions involved a few tanks supporting Marines by routing out Japanese bunkers, and breaking up Japanese infantry counter-attacks with machine gun and canister fire. The Japanese infantry was very poorly equipped with anti-tank weapons, and resorted to heroic but suicidal close-range attacks on the tanks using improvised means such as satchel charges. The M3 light tanks tried to operate in pairs, with one tank spraying the other with machine gun fire to ward off the Japanese infantry, intent on prying open hatches with bayonets. The brutal close-quarter fighting was so savage that Gen. Vandergriff recalled the bloodsplashed tanks 'looking like meat-grinders'.

Late in October the Japanese Sumiyoshi Force was landed on Guadalcanal for a counter-offensive against the Marines. The 1st Inf. Tank Co. spearheaded the attack across the Matanika river with 12 Type 97 Chi-ha medium tanks manned by veteran crews of the 4th Co., 2nd Tank Regiment. Most of the tanks were destroyed by Marine 37mm anti-tank guns mid-stream, putting an end to Japanese armor operations on Guadalcanal.

The Japanese seized New Britain and New Ireland in August 1942, and the IJA garrisoned Rabaul with the 8th Tank Regiment. In September the IJA conducted amphibious landings at Milne Bay, supported by Type 95 Ha-go light tanks. The threat to Australia led to

the first commitment of Australian tanks. M3 Stuarts of 2/6th Armoured Regiment first saw action around Cape Endiaderre in support of Australian infantry. During the bloody Buna campaign, which lasted into 1943, the tanks provided essential support for the Australian infantry, in spite of the enormous difficulties of tank operations in the fetid New Guinea jungle. The Australian 1st Tank Battalion joined the fray in October 1943 on the Huon Peninsula. Its Matildas were nearly invulnerable to the standard Japanese 37mm anti-tank guns. In the fighting around Pabu, one Matilda took no fewer than 50 hits from 37mm guns without a single penetration. Its durability made it an extremely popular vehicle with the Aussie tankers. The Matilda, though obsolete in Europe, became the staple of Australian tank units.

In July 1943 the US Army and Marines began operations on New Georgia, capturing Munda airfield with the support of three M3A1 light tank platoons from the USMC 9th, 10th and 11th Defense Battalions. The fighting spread to Bougainville in November 1943, one of the longest campaigns in the southwest Pacific fighting. The 3rd Marine Tank Battalion's M3A1 light tanks helped capture the airfield during the initial landings at Cape Torokina, but were halted by dense jungle and heavy rains. In 1944, the US Army's 754th Tank Battalion had another go at it, and proved more successful. In July 1945 the Australian 2/4th Armoured Regiment sent Matildas to North Bougainville to rout out Japanese forces on Buka.

The use of tanks in the Solomons was made extremely difficult by the terrain. Nearly all of the areas were heavily forested with jungle growth, and often the open areas and trails were too wet and sodden to support the weight of tanks. The horrors of the terrain were nowhere more evident than on Cape Gloucester. The Marine 1st Tank Battalion landed in December 1943, but enemy strongpoints were so inaccessible that M4A2 medium tanks were loaded on to LCM landing craft and used as miniature battleships to blast Japanese bunkers close to shore. In the spring of 1944, Gen. Douglas MacArthur had become frustrated by the slow pace of the advance. He ordered a bold insertion of troops far down the coast at the Japanese supply bases of Hollandia and Aitape, bypassing many strong garrisons. The US Army's 632nd Tank Destroyer and 44th Tank Battalions took part in the final phases of the operation. The 603rd Sep. Tank Company landed with its

M4A1 medium tanks on outlying Bak Island and the six Type 95 Ha-go stationed there to support the Japanese garrison were quickly overcome. In August 1944 Australian troops pushed eastwards towards Wewak with welcome support from the Matildas of 2/4th Armoured Regiment. The only use of New Zealand tanks took place in February 1944 when the Special Army Tank Squadron, equipped with Valentine IIs, supported the landings on Green Island.

The original plans for the Philippines campaign envisioned using Australian troops alongside US Army units. Instead, they took over later operations against Japanese garrisons on New Guinea, and were responsible for the attacks on Borneo to capture important oilfields and port facilities. In April 1945, Matildas of the 2/9th Armoured Regiment landed in support of the 26th Inf. Brigade on Tarakan. Landings at Brunel Bay followed; and 2/9th Armd. Regiment detachments took part in the seizure of Brookton and Labuan Island. The largest single action by Australian tanks took place in July 1945. The 1st Tank Regiment supported the landings at the Balikpapan oilfields. The normal Matilda gun-tanks were reinforced by "funnies" such as Frog flamethrower tanks, Matilda bulldozers and a Covenanter bridgelayers.

The Central Pacific: 1944

The jungle terrain of the Southwest Pacific conforms to most popular stereotypes of warfare in the Pacific. But in fact, the battles on the Central Pacific islands took place in very different terrain which made it possible to use tanks on a larger scale and in a more effective manner. Most of these operations were infantry support missions using small numbers of tanks to provide fire and protection to advancing foot soldiers. The Central Pacific fighting also introduced many innovations in tank operations, especially bunker busting tactics using flamethrower tanks. On the Japanese side, the lack of adequate anti-tank guns until the arrival of Type 1 47mm anti-tank guns in the summer of 1944 put the Japanese infantry at a severe disadvantage. The Japanese infantry responded with heroic but very costly tactics to overcome tanks. Most of these involved close-assault on the tanks using improvised anti-tank weapons such as lunge-mines, magnetic mines, and satchel charges. By 1944, these tactics became quite innovative, often preceded by smoke grenades to mask the approach of the tank-killer teams. But innovative or not,

the attacks were horribly costly, pitting bravery against the tank's raw firepower. In the end, it was the firepower that usually won. The key to defending against such tactics was close cooperation between the tanks and US infantry.

The first and bloodiest of these battles, Tarawa, took place on the wretched coral atolls in the Gilbert Islands on 20 November 1943. The main Japanese defences were on Betio, held by the elite 6th Yokosuka Special Naval Landing Force and 7th Sasebo SNLF with seven entrenched Type 95 light tanks. The SNLF were the Japanese equivalent of the US Marines. Tarawa saw the first use of amtracs in a contested landing. The tanks assigned to support the 2nd Marine Division landings were M4A2 medium tanks of Co.C, 1 Marine Amphibious Corps (IMAC) Tank Battalion, and M3A1 light tanks of Cos. B and C, 2nd Marine Tank Battalion. The first Marine tanks to land at Beach Red 1 were six M4A2 medium tanks dropped 1,200 yards offshore. As they approached the beach, the tank drivers saw a thick carpet of wounded and dead Marines in front of them. To avoid running them over, the tanks tried to move to the flanks of the landing area, only to fall victim to Japanese artillery, or to drown in high shell holes created by the pre-invasion bombardment. Two tanks made it to shore. "Chicago" was knocked out, and "China Gals" turret ring was jammed by a hit from a Japanese Type 95. With its gun inoperable, China Gal rammed the smaller Japanese tank, putting it out of action. Eight M4A2 medium tanks from 2nd and 3rd platoons, were dropped off Beach Red-3, losing one of their number in a shell hole. Of the three survivors, one was knocked out by a Japanese infantryman with a magnetic mine, and another became bogged in a shell hole. The four M4A2 medium tanks of 3rd Platoon, all were knocked out, one by a US Navy dive-bomber and three from a Japanese gun emplacement. "Colorado" returned to the battle after the flames were put out by driving into the sea. By the end of D+1, a bogged tank had been recovered so that the Marines were supported by the charred Colorado, the damaged China Gal, and Cecilia. No M3A1 light tanks got ashore on D-Day, as four LCMs carrying tanks of 2nd Platoon, Co.C, 2nd Marine Tank Battalion were sunk off the beach. The first M3A1 light tanks arrived on D+1 but one was lost to a magnetic mine. The other two platoons landed all 12 of their M3A1s successfully on D + 2. The 37mm gun of the M3A1 was ineffective

against Japanese ferro-concrete bunkers forcing Marine tankers to drive right up to the target and fired high explosive rounds directly through the gunslits. The tiny atoll of Tarawa was taken in three days of fighting at a horrible cost. The M3A1 light tank, standard equipment of the USMC tank battalions, was shown to be inadequate, but the M4A2 medium tank had proved far more valuable. Re-equipment soon began in USMC tank battalions. Tarawa also showed the need for flamethrower tanks to burn out bunkers since no tank gun could possibly penetrate the thick bunkers that the Japanese engineers created.

The Army attack on neighbouring Makin Island was swift and cheap compared with Tarawa. The Army landed the 193rd Tank Battalion, the only unit to use obsolete M3 medium tanks in combat in the Pacific. There were two Japanese Type 95 Ha-go light tanks on Makin, but no tank-vs.-tank encounters.

The Marshall Islands: February 1944

The next objective for US amphibious forces was Kwajalein, the largest atoll in the world, more than 60 miles long, with a lagoon 20 miles wide. Although there was some fear that Kwajalein would turn into another bloody battle like Tarawa, the Japanese garrison was more scattered and not as well equipped. On 1 February 1944, the 4th Marine Div, landed on the adjoining Roi-Namur Islands, and Army units attacked islands in the atoll. A total of 10 M4A2 medium tanks and 3 M5A1 light tanks of Co.C and A, 4th Marine Tank Battalion landed in support of the 23rd Marines at Roi, taking their objective in two hours. The 24th Marines landing at Namur were supported by ten M5A1 light tanks of Co.B which were soon attacked by swarming Japanese infantry. The tenacity of the Japanese defense of Namur led to a call for reinforcements. The tanks on Roi pooled their fuel, and four M4A2 medium tanks, Jenny Lee, Jezebel, Joker and Juarez, crossed a sand spit to reinforce the light tanks. That night the medium tanks repulsed a furious Japanese counter-attack. The only Japanese armor on the island were few tankettes and one Type 2 Ka-mi amphibious tank.

While the Marines attacked Roi-Namur, the Army's 7th Division attacked Kwajalein itself, supported by the 767th Tank Battalion. Of the 30 islets in the atoll, US troops had to fight for ten of them. American casualties were much lighter than first feared due to the effective use of tanks and armtracs.

The next objective was Eniwetok, an atoll similar to Kwajalein. The Marine 22nd Regiment landed at outlying Engebil, supported by the 2nd Separate Tank Co. on 18 February 1944. The Army landing on Eniwetok was supported by light tanks of Co.C, 766th Battalion. The Marines soon joined in the fray and a few dug-in Type 95 Ha-go were overrun. Against such odds, the Japanese infantry was soon decimated in hopeless massed charges. On 22 February, the 22nd Marines attacked Parry Island, and the supporting M4A2 medium tanks made short work of the three Ha-go tanks encountered. The fighting in the Marshalls made it very clear that the Japanese Army had neglected anti-tank defense in the two years since the heady victories in the Philippines and Malaya. Their own tanks were hopelessly obsolete compared to the American M4 medium tank, and the standard 37mm anti-tank gun was nearly useless against American tanks. New tactics and new equipment were clearly needed, but the losses at sea and in the air meant that there were already heavy demands on Japanese industry. The Japanese Army had waited too long to seek better anti-tank weapons, and now their demands were stalling behind higher priority claims for new aircraft and ships.

The Marianas: June-July 1944

The Marianas were the first large islands in Japan's inner defense belt to be attacked by the US. Both Guam and Saipan were close enough to the Japanese Home Islands to serve as airbases for US bombers. As a result, the garrisons were reinforced by the 9th Tank Regiment, belatedly sent some of the new Type 97-kai Shinhotto Chi-ha. While better armor than the American M5A1 light tank, the Shinhotto Chi-ha could not penetrate the M4 medium tank from the front, and had to attack from the side. Japanese tankers were faced with unenviable odds if they encountered their American opponents. Furthermore, the 9th Tank Regiment was split up: the 1st and 2nd Cos. to Guam, the 3rd, 5th and 6th on Saipan. In addition, there were also 9 SNLF Ha-go light tanks on Saipan, and a similar number with the 24th Independent Tank Co. on Guam. The Japanese infantry in the Marianas were in a better position than those on the Marshalls, having finally begun to receive the new Type 1 47mm anti-tank gun, a towed relative of the weapon that armed the Shinhotto Chi-ha tank.

By the time of the Saipan landings on 15 June 1944, the Marine tank battalions had been re-organised with

46 M4A2 medium tanks instead of the original 54 light tanks. Each tank battalion also had an additional 14 to 24 M3A1s Satan flamethrower tanks attached for this operation. The Marine 2nd and 4th Tank Battalions were landed on Saipan on the afternoon of 15 June and were soon broken up into small groups to provide fire support for Marines attacking entrenched Japanese positions. On the night of 15 June, a Japanese SNLF raiding party, supported by several Type 2 Ka-mi amphibious tanks, landed near Garapan on the left flank of the northern beaches. The Marines called in naval star shell illumination, and the Type 2s soon fell victim to Marine bazookas and tank guns. This was the first widespread use of bazookas in the Pacific, and marked yet another disadvantage faced by the Japanese tankers. At dawn, the Japanese SNLF Type 95 Ha-go company and the 4th Co., 9th Tank Regiment attacked the beach-head with supporting infantry. They were devastated by tank fire from the two Marine battalions. On 16 June, the Army's 27th Division landed, supported by Co.B (M4A2) and Co. D (M5A1s) of the 762nd Tank Battalion, and Co.D (M5A1s) of the 766th Tank Bn.

The steady progress of the US forces led Vice-Admiral Nagumo to order the army garrison commander, Lt. Gen. Saito, to launch an all-out counter-attack on the night of 16-17 June. Spearheading the attack were the 44 tanks of Col. Hideki Goto's 9th Tank Regiment. Marines could hear the Japanese tank engines while they were loaded with troops from the 136th Infantry Regiment in the town of Garapan. The Marines requested tank support and received a M4A2 platoon from Co.A, 2nd Marine Tank Battalion and several M3 75mm SPM halftracks. The largest single Japanese tank attack of the Pacific war started at 0200 on the morning of 17 June. The Japanese tank attack came across open ground, and naval star shells quickly illuminated the tanks. The Marines began firing at them with bazooka and 37mm anti-tank guns, knocking out several. In the confusion, several Japanese tanks strayed into nearby marshes and soon became trapped. Several tanks reached Marine lines but were quickly knocked out. As the attack was crushed in a hail of gunfire, the Marine tanks and SPMs began moving into the field, attacking any surviving tanks. Only 12 Japanese tanks managed to escape the slaughter, half Ha-gos and half Chi-has. On 24 June, many of these survivors were lost in an unequal duel with M4A2 medium tanks of Co.C, 2nd

Marine Tank Battalion near Garapan, and the rest were destroyed in scattered encounters with Army M5A1 light tanks.

Saipan was a complete change from previous Pacific campaigns, since the open terrain permitted freer use of tanks. But tank losses were quite heavy to artillery and to hand-emplaced magnetic mines. Japanese mine-teams soon learned that their weapons were especially effective if carefully placed on vulnerable points of the M4A2 medium tank, such as the rear fuel tanks. The Marines soon learned that there had to be close cooperation between the tanks and infantry to defeat these tactics. By now, the Marines had found that telephones mounted on the rear of the tanks were absolutely essential to coordinate their actions with the accompanying infantry. Saipan was declared secure on 9 July 1944.

On 24 July, nearby Tinian was assaulted by Marines supported by the 2nd and 4th Marine Tank Bns. The Marines encountered only light initial resistance, knocking out two Type 95 tanks from a company supporting the Japanese 18th Infantry Regt. The remainder of the Japanese tank company were held in reserve for the predictable night counter-attack, which was repulsed at a cost of five more Type 95s. Tinian was taken by early July.

The 3rd Marine Division assaulted Guam while the Tinian operation was taking place. This operation was supported by the 2nd and 4th Marine Sep. Tank Cos., the 3rd Marine Tank Battalion and the Army's 706th Tank Battalion. Japanese tank units on Guam included the 1st and 2nd Cos., 9th Tank Regiment (29 Chi-ha and Ha-go), and the 24th Ind. Tank Co. (9 Ha-go). Five Ha-gos of the 1st Co., 9th Tank Regiment quickly attacked the Agat beachhead on 21 July, and all were destroyed by bazookas and the M4A2 medium tanks of the 4th Separate Tank Company. The remaining 5 Ha-gos of the 1st Co. attacked the 22nd Marines, and were knocked out by the Marine 2nd Sep. Tank Co. The Japanese 24th Ind. Tank Co. was wiped out during reckless counter-attacks against the same units. The remaining Japanese tanks of the 2nd Co. of the 9th Tank Regiment were withdrawn north to Tarague, and they were gradually lost in a series of ferocious night attacks.

The Saipan campaign made it quite clear that tanks were invaluable in the Central Pacific fighting. Both the Marines and the US Army concluded that further work was needed to

improve tank-infantry cooperation, and the Marines began a program to reinforce their tanks against the threat of close-in Japanese suicide anti-tank tactics by layering wooden planks on the side of their tanks to prevent the attachment of magnetic mines.

The Palau Islands: September 1944

One of the most controversial campaigns was the decision to assault the Palau Islands. Peleliu was another fortified island grimly reminiscent of Tarawa. The 1st Marine Division landed on 15 September 1944. Every one of the first tanks which the 1st Marine Tank Battalion put ashore in the fourth wave was hit by Japanese gunfire. The most dramatic moment came that afternoon when the tank company of the Japanese 14th Infantry Div. with about 15 Type 95 Ha-go light tanks charged across the island's airstrip in a vain attempt to push the Marines back into the sea. Given the Marine's firepower, this charge was suicidal. The Ha-gos had 55 gallon drums lashed to the sides and rears containing bunched-up Japanese infantry. The attack quickly melted under a barrage of fire from bazookas, .50 cal machine guns, 37mm anti-tank guns, 75mm SPMs, three M4A2 medium tanks, and naval gunfire. The Marine tankers were bewildered when their AP ammunition seemed to have no effect on the Ha-gos. In fact, it was penetrating on one side, and passing clear through the other. The gunners switched to high explosive, which blew the small tanks apart. The Marines later found it difficult to determine how many tanks had actually been used in the attack. There was still much fighting after the attack, as the Japanese infantry resisted with their usual steadfastness in spite of the hopeless odds.

The Philippines: 1944-45

The campaign in the Philippines involved the largest tank operations by either side in the Pacific War. It marked the first time that the Japanese Army committed one of its few armored divisions against US forces. The 2nd Tank Division was fielded on Luzon, while Japanese forces on neighboring Leyte included the 7th Ind. Tank Co. (Type 89 Chi-ro mediums) and a company of Type 95 Ha-go light tanks. On the US side, it involved the deployment of seven tank battalions, three tank destroyer battalions and a separate tank company, totalling over 500 tanks and tank destroyers.

The US Army landings began on Leyte in October 1944. The Japanese tank force on Leyte was small and

ineffective. Many of the tanks were knocked out by bazookas, and the US tanks were employed mainly for infantry support missions. On Luzon, Gen. Yamashita was not comfortable with the idea of massed use of tanks against the Americans. As was evident from the one-sided encounter on Saipan, Japanese tanks on a technical level were not well enough armored to survive even the smallest US anti-tank weapons. Nor did the terrain encourage such tactics. Instead Yamashita decided to disperse the 2nd Tank Division to form the nucleus of a series of village strongpoints, intended to slow the US Army advance while his other units withdrew north. The Japanese leadership on Luzon was convinced that such tactics would inflict the maximum casualties and the maximum delay on the US forces.

By the time of the Luzon fighting, the 2nd Armored Division had been heavily reequipped and a large percentage of its tanks were the new Type 97-kai Shinhota Chi-ha. Although much better than the older Chi-ha with its short and ineffective 57mm gun, the Shinhota Chi-ha's 47mm gun could only penetrate the side armor of the American M4 medium tanks, but not the frontal armor. The 2nd Armored Division's tanks were dug into adobe revetments under heavy camouflage and alternative positions were prepared to allow tanks to take up other positions if needed. The size of these tank defensive groups varied widely. The smallest detachment at Urdaneta had only nine tanks. But the Shigemori detachment (7th Tank Regiment) at San Manuel had 45 tanks, and the Iida Detachment (6th Tank Regiment) at Munoz had 52.

In spite of the large number of Japanese tanks on Luzon, there were very few large scale tank-vs-tank encounters, and none similar to the Saipan tank charge. The US Army landed on Luzon beginning on 15 December 1944. There was a small tank skirmish near Binalonan in December, but most of the Japanese deployments were further inland. The first significant tank battle took place on 24 January 1945 at San Manuel. The US 161st Infantry attacked the town, supported by divisional M7 105mm howitzer motor carriages (HMC) and M4 medium tanks of Co. C, 716th Tank Battalion. Opposing them were a large number of scattered Shinhota Chi-has of the Shigemori Detachment. The M7's 105mm howitzers succeeding in blasting away the adobe tank revetments, and the Japanese positions were gradually reduced by infantry attacks. In the early hours of 28 January, surviving Japanese

troops backed by the 30 remaining IJA tanks launched a three-wave charge that was crushed by the heavier firepower available to US forces. The IJA Detachment at Munoz was encircled and routed during the first week of February. Surviving Japanese armor attempted a break-out but were stopped by artillery and the 716th Tank Battalion. The 2nd Armored Division's last regiment, the 10th Tank Regiment at Lupo, was shattered during the fighting there on 7-8 February. By 5 March, the Japanese 2nd Armored Division had been destroyed, already having lost 203 Chi-ha and 19 Ha-go tanks, and two 150mm Ho-ro SP howitzers. Their sacrifice did not substantially affect the campaign, as the poor quality of their tanks were not a serious threat to US Army tanks.

Iwo Jima

Like Tarawa, Iwo Jima would go down in Marine legend as one of their most bitter battles of the Pacific War. Iwo Jima was Tarawa writ large, a sulphuric volcanic island laced with natural caves and extensive Japanese fortifications. However, on Iwo Jima, tanks were landed at the outset of the campaign and played an important role through the entire battle, providing fire support against Japanese infantry attack, and proving a critical ingredient in defeating Japanese bunkers. Three Marine tank battalions were deployed on Iwo Jima, the 3rd, 4th and 5th. By the time of the landings on 19 February 1945, the Marine tank battalions had grown in strength and equipment, now including 67 M4A2 tanks of which nine were armed with E4-5 flamethrowers. By now, standard tactics had been developed to attack the well fortified Japanese bunkers, called "corkscrew and blowtorch" tactics. The bunkers were suppressed with tank fire or satchel charges, and then burned out with flamethrowers. The main threats to Marine tanks on Iwo Jima were mines. Close cooperation between tanks and infantry and the relatively open nature of the terrain limited the Japanese from using their normal close-attack tactics against tanks. The only Japanese armor on the island was the understrength 26th Tank Regiment. Lt. Col. Nishi hoped to use his Shinhoto Chi-ha tanks as a roving fire brigade, but he was ordered to deploy them as entrenched pillboxes. Most were knocked out by Marine bazooka teams or by artillery. Marine tank losses in the fighting were very high, with most battalions operating near half strength for much of the campaign. But in the end, the island was taken.

Okinawa

The largest combined amphibious operation of the war took place at Okinawa in April 1945 on the heels of the Iwo Jima campaign. The Okinawa fighting was the first battle on Japanese soil, and the first involving a significant Japanese civilian population. It was a brutal foretaste of the expected invasion of the Home Islands. After the fruitless experience of the 2nd Armored Division in the Philippines, the Japanese Army decided to hold its best armor for the defense of the Home Islands. The only major Japanese tank unit on Okinawa was the understrength 27th Tank Regiment, with only 13 Ha-go and 14 Shinhoto Chi-ha. The success of US tanks in the Marianas, on the Philippines and on Iwo Jima led to the decision to commit the heaviest US armor force ever, totalling eight Army and two USMC tank battalions, and two USMC independent tank companies, totalling over 800 tanks. In addition there were hundreds of Marine amphibious tanks, Army SP guns, half-tracks and other AFVs. Gen. Shepherd of the 6th Marine Div. later commented that "if any one supporting arm can be singled out as having contributed more than any other during the progress of the campaign, the tank would certainly have to be selected." Japanese tanks were largely ineffectual and most were lost in the ill-fated 5 May counter-offensive.

Burma

Burma saw the most extensive use of tanks outside the Central Pacific area. After the successful use of tanks in the 1943 Arakan fighting, British and Indian forces came to depend more and more heavily on tanks for close support of infantry. By the time of the final offensive push in 1945, there were nearly a dozen regiments in Burma and nearby Indian bases. The offensive pushed the Commonwealth forces into the flatter and less overgrown terrain of central Burma. Tank units spearheaded a record 300-mile advance on Rangoon in three weeks. The Japanese committed little armor to Burma, only the 14th Tank Regiment which has remained since the 1942 campaign. It was so poorly equipped that its 4th Co. used Stuarts captured from the retreating British 7th Armoured Brigade in 1942. This unit was committed in the 1944 Imphal campaign, by the end of which it had been reduced to only four tanks. Some reinforcements arrived from Japan, including the new Type 97-kai Shinhoto Chi-ha. The rebuilt 14th Tank Regiment fought at Meiktila but in

March 1945 its last tanks were wiped out on the Mandalay Road by Shermans of 255th Tank Brigade.

In the Burma Road area the US and Chinese troops formed the jointly-manned Provisional Chinese Tank Group with four battalions of M3A3 Stuarts and two of M4A4 Shermans. They took part in the Chinese offensive in Burma and southern China, and formed the core of later Nationalist Chinese tank units that would fight in the later Chinese Civil War.

Manchuria

Although the Manchurian operation of August 1945 was the largest tank operation of the Pacific war, it is one of the least known outside of Russia. The Soviet Union entered the war in August 1945, overrunning the Kwantung Army in Manchuria in two weeks by a brilliant pincer movement. Manchuria had traditionally been the main operational area for Japanese tank formations, but in late 1944, units in China were gradually weakened as the Japanese Army drew away key units to prepare for the defense of the Home Islands. The IJA 3rd Tank Div. and several regiments took part in the 1944 offensive in China which attempted to capture the B-29 bases there. But by 1945 the Kwantung Army had only the inexperienced 1st and 9th Tank Brigades at Mukden and Sipingchieh, plus a few small divisional units.

The Soviet attack was a three-pronged pincer with the 6th Guards Tank Army driving through the supposedly impassable Greater Khingan Mountains, while the 1st and 2nd Far Eastern Fronts drove south from Khabarovsk and Vladivostok. The three fronts converged at the base of the Korean Peninsula on the Yalu river. The operation involved more than 5,000 armored vehicles, more than at Kursk. Some were old tanks that had been in the Far East since 1940 including BTs, but most were T-34s and T-34-85s manned by veteran crews who had fought against the Germans. There was very little tank fighting during this campaign, as the war ended before the Red Army reached the main defence line where the IJA tank brigades were stationed.

Japanese tank strength in the Home Islands in the summer of 1945 totalled 2,970 tanks in two divisions, six brigades and many smaller units. The US landings planned for November 1945 would have included at least three armored divisions and several dozen tank battalions, had the A-bomb not brought about Japan's surrender in August.

The Imperial Japanese Army invasion of the Philippines in December 1941 was accompanied by two tank regiments, the 4th and 7th Tank Regiments. This is a Type 89 medium of the 1st Company, 7th Tank Regiment crossing an improvised bridge erected to bypass Highway 6 north of Manila on 3 January 1942. Although obsolete by European standards, the Type 89 was still a formidable vehicle when faced with ill-equipped infantry. The *hoshi* (white star) insignia was used by the 1st Company. The four-digit serial number on the side was a standard Japanese Army marking in the late 1930s, the first two digits indicating the tank model number (based on the Japanese calendar year of the tank's introduction into service).



Type 95 Ha-go light tanks of the 2nd Company, 7th Tank Regiment advance past improvised bamboo *pungi* stick defenses during the fighting in the Philippines in January 1942. The Type 95 Ha-go was the most widely used Japanese light tank of the Pacific War, and saw action in virtually every major battle from 1941 through 1945. It was roughly equivalent to the US M3 light tank, but not as well armored. The *sasa* (bamboo leaf) insignia was used by the 2nd Company, and it is also marked with the usual four-digit serial number.



The US Army's principal armor force in the Philippines was the Provisional Tank Group consisting of the 192nd and 194th Tank Battalions, equipped with M3 light tanks. This unit made a determined stand through the campaign, and there were several clashes with Type 95 light tanks of the 4th and 7th Tank Regiments. (Michael Green)

Reinforcing the M3 light tanks of the US Army Provisional Tank Group were M3 75mm gun motor carriages, more popularly called SPMs (self-propelled mounts). These were used in a wide variety of roles including anti-tank defense, artillery fire support and direct infantry support. (Michael Green)



A M3 75mm gun motor carriage abandoned by retreating US Army forces in the Philippines in February 1942. The Imperial Japanese Army captured several of these vehicles more or less intact, and they remained in service in the Philippines through the 1944-45 fighting.



The assault on Corregidor was the combat debut of the Type 97-kai Shinhoto Chi-ha medium tank. This version of the tank substituted the new 47mm gun for the earlier short 57mm which was not very effective when facing enemy armor. The tank detachment from the 7th Tank Regiment that landed on Corregidor consisted of two of these tanks, plus a captured US Army M3 light tank commanded by Maj. Matsuoka.



The Netherlands East Indies Army (KNIL) was in the process of reequipping when the war broke out in December 1941. A total of about 25 of a planned 600 Marmon Harrington light tanks had arrived prior to the Japanese attack, and saw some combat in the fighting for Java. (Just Probst)



The 3rd Company of the Japanese 7th Tank Regiment placed a small number of captured M3 light tanks into service in April 1942 to make up for losses during the Philippines fighting. Here, they are lined up along with other vehicles from the unit for a victory parade in Manila in May 1942 after the fall of Corregidor.



British forces in Malaya and Burma were ill-prepared for the Japanese attack, and were particularly weak in armor due to heavy commitments in the North African desert campaign. Here, Japanese troops inspect captured British equipment after the fall of Singapore including Universal Carriers and Marmon Harrington armored cars.



The Chinese Army was in the process of forming the 200th Mechanized Division in late 1941, which was equipped with a single regiment of T-26 Model 1933 tanks from the batch of 87 purchased from the USSR in 1938. These tanks fought during the battles for the Hukwang valley in March 1942, in an attempt to prevent the Japanese from cutting off Allied supply routes to the Chinese Army running through Burma into southern China.



One of the more unlikely tanks to see combat in the Pacific theatre was the Pz.Kpfw. I Ausf. A. A small number of these equipped the Chinese 3rd Tank Battalion at Nanking in 1937, and saw fighting later in the war. This particular example was captured by Japanese troops and was sent to Japan for inspection, hence the brass star of the IJA on the glacis plate. (Just Probst)

Another of the German armored vehicles purchased by China in the late 1930s was the SdKfz 221 and SdKfz 222 armored cars. China acquired small amounts of armored vehicles from a wide range of sources, including Vickers 6 ton light tanks, and Italian L.3 tankettes in an unsuccessful attempt to match Japanese firepower.





The standard American tank of the first years of fighting in the Pacific was the M3 light tank, seen here on an unidentified beach in the Pacific in Marine Corps service. The first Marine Corps tank units formed in 1942 were light tank battalions, equipped entirely with M2A4 or M3 light tanks.



A M3 light tank of the US Marine Corps 1st Tank Battalion during training prior to the Solomons campaign in November 1942 in New Zealand. This M3 light tank is from the later production batches with the round turret and the added rear stowage bins. Notice also that the tank commander wears the early pattern US tanker's helmet with the thick leather band around the rim.



A M2A4 light tank named "The Blizzard" of the 1st Marine Tank Battalion is loaded into a barge for transport to Guadalcanal during the Solomons campaign in November 1942. This was the only combat use of the M2A4 by US forces in World War 2. The M2A4 was an ancestor to the better known M3 light tank, and is easily distinguished by the higher rear idler wheel, the blunt rear end and the vision ports around the turret. The 1st Marine Tank Battalion had an assortment of M2A4, M3 and M3A1 light tanks scrounged from US Army depots on the West Coast.



A M2A4 light tank leads a column of light tanks from the US Marine 1st Tank Battalion during fighting on Guadalcanal in November 1942. The tankers soon earned a grim respect for the Japanese infantry. The IJA was very poorly equipped with anti-tank weapons, so the Japanese infantrymen would attempt to use the close jungle terrain to approach the tank, and then climb over the rear in an attempt to pry open hatches with bayonets. The Marines soon became accustomed to operating tanks in pairs so that they could spray each other with .30 cal machine guns to clear off the tenacious Japanese infantry.



A M3 light tank of the Marine 1st Tank Battalion is camouflaged under palm fronds while providing perimeter defense during the Guadalcanal battle. The jungle terrain of Guadalcanal was not well suited to tanks, but the M3 light tanks came in handy for close infantry support on many occasions.

A pair of Marine tankers stand guard in front of their M3A1 light tank of the 1st Marine Tank Battalion on Guadalcanal. The 1st Tank Battalion used a pattern of colored turret bands and geometric shapes around the turret to distinguish its companies and platoons as seen here; the meaning of these insignia have been forgotten.





The most powerful Japanese tank force on Guadalcanal was the 1st Independent Tank Company which spearheaded a Japanese attack across the Matanika river in October 1942. It was equipped with the Type 97 Chi-ha tank. The unit was ambushed mid-stream by US Marine 37mm anti-tank guns on the opposite bank. This particular tank has gradually sunken into the river silt by the time this photo was taken in January 1943. This tank is painted in the 1942 three-color camouflage pattern, and carries the tactical unit insignia, the *masu* bisected rectangle in either white or dark blue.



A rear view of a disabled Australian M3 Stuart light tank disabled when it became stuck on a downed coconut tree during the fighting on Cape Endiaidere in late December 1942 while attacking a series of Japanese bunkers. Several interesting details can be seen on the photo including the use of track grousers to improve traction in the jungle, the open lids of special storage bins added by the Australians to these tanks, and the 1st Australian Armoured Division insignia on the right corner of the rear engine deck.



The first Australian tank unit to see combat was the 2/6th Armoured Regiment which was committed to the fighting on Papua New Guinea in December 1942. Their M3 Stuart light tanks were used to support Australian infantry in the capture of Cape Endiaidere in late December. The circle indicates the 3rd Troop, while its yellow color indicates the 2nd Squadron. The insignia of the 1st Australian Armoured Division can barely be seen on the right fender.



A rare view of one of the few Japanese tanks to fight on American soil in World War 2. This Type 95 Ha-go light tank took part in the fighting on Kiska in the Aleutian island chain off Alaska. A handful of these light tanks were landed on Kiska and Attu in June 1942 when the Japanese Army made unopposed landings, but they saw little action in August 1943 when the US Army landed to retake the islands.

A M3 Stuart Light Tank of the 2/8th Armoured Regiment during operations near Popenetta during the fighting in New Guinea in May 1943. The Australians introduced several local modifications on the M3 light tank to make it better suited to jungle fighting, including an armored cover over the turret race to reduce the risk of getting the turret jammed.



One of the most savage battles of the initial Pacific battles took place on Tarawa in the Gilbert Islands in November 1943. The amphibious assault was supported by C Company, 1 Marine Amphibious Corps Tank Battalion with M4A2 medium tanks. Most of the tanks never made it to shore; most of the tanks were either knocked out by point-blank Japanese artillery fire from nearby bunkers, or were drowned in deep shell holes. One of the three medium tanks to make it to the beach on the first day was Condor, which was inadvertently knocked out by a US Navy dive bomber.

The Japanese 7th Sasebo Special Naval Landing Force, an elite equivalent of the US Marines, was equipped with seven Type 95 Ha-go light tanks during the fighting on Tarawa. Most of them fought from prepared entrenchments. This is probably the Type 95 that disabled "China Gal", one of the Marine M4A2 medium tanks during a short duel on Betio.



A view of another of the Type 95 Ha-go light tanks of the tank company of the 7th Sasebo SNLF on Tarawa, being inspected by US Marines after the bloody fighting in November 1943. With the introduction of the M4 medium tank into service in the Pacific at Tarawa, the Type 95 had become obsolete for tank fighting.

Two other M4A2 medium tanks reached the shore on Tarawa, "China Gal" and "Colorado", seen here after the fighting. Colorado was nearly knocked out by Japanese infantry using Molotov cocktails, but survived and provided invaluable fire support during the fighting.





The Marine 2nd Tank Battalion landed a number of M3A1 light tanks on Tarawa in later waves on the second and third day. "Columbus", from C Company, was one of the few that landed safely and took part in the fighting. This photo shows the tactical markings on the Marine light tanks, and also shows that the tankers were outfitted in Marine camouflage fatigues.



The 2nd Marine Tank Battalion took over a stockade area on Betio and established a repair and refueling area during the final mop up operations on the island. The battalion used a triangle insignia to indicate the companies, pointing up, down and to the side to indicate different companies.



During the fighting on New Georgia in the Solomons in the summer of 1943, the Marine 9th, 10th and 11th Defense Platoons were equipped with small numbers of M3A1 light tanks to provide fire support. They were mainly used for direct fire against massed Japanese infantry attacks using cannister rounds. This is a pair of M3A1 light tanks of the 9th Marine Defense Platoon during the fighting near Bibilo hill for the Munda airfield on 6 August 1943.



A M3A1 light tank provides fire support for advancing Marines on New Georgia in the autumn of 1943. By this time, the M3 light tank was widely regarded as obsolete, as its 37mm gun was not well suited to attacking Japanese bunkers, one of the main objectives of many tank missions. Indeed, some Japanese bunkers were so thickly constructed that the tanks were forced to actually drive up to the firing slits and fire directly into the bunkers. With the advent of the new Japanese 47mm anti-tank gun, this became impossible.

While the Marine Corps assaulted Tarawa, the US Army landed on the neighboring Makin atoll in the Gilberts. This atoll was less heavily defended than Tarawa, but the Army prudently reinforced the infantry with the 193rd Tank Battalion. This was the only US Army unit to employ the obsolete M3 medium tank in action in the Pacific. Here, a M3 medium tank with its fording trunks still in place advances through thick undergrowth on Butaritari on 20 November 1943.



A M3 medium tank moves forward while supporting the 165th Infantry during the fighting on Butaritari at the east end of the Makin atoll on 24 November 1943. The Japanese had a small number of Type 95 Ha-go light tanks on the atoll.



The 193rd Tank Battalion taking part in the Makin operation also had a company of M3A1 light tanks. This M3A1 is moving forward near Red Beach in front of the 165th Infantry to eliminate Japanese snipers on 20 November 1943 shortly after the initial landings on Butaritari. The tank still has its fording trunk on the engine deck.



A M3A1 light tank of the Marine 3rd Tank Battalion is hoisted from its transport ship during operations at Bouganville in the Solomons in November 1943. The Marine Corps used a set of geometric shapes as embarkation markings to help organize equipment during transport and landing while still preserving security. The 3rd Marine Division used the diamond, as seen here on the side of the tank. The other diamond on the rear of the turret was a company tactical insignia.

At least one of the M3A1 light tanks of Co. C, 193rd Tank Battalion became trapped in a waterlogged Japanese anti-tank ditch near Red Beach on Butaritari, Makin atoll during the 20 November 1943 operation. Here, one of the crewmen is trying to attach a tow cable to help pull the vehicle out. The yellow triangle with red square tactical insignia over his shoulder is the battalion insignia, while the company tactical number is evident on the other side of the engine deck.



"The Pay-Off", a Marine M3A1 light tank, poses for the camera after landing on Bouganville in the Solomons on 14 November 1943. The two large drums on the rear carry additional fuel. These would usually be dropped before going into combat due to the fire hazard they posed.

The commander of Marine forces on Bouganville, Maj. Gen. Allen Turnage, gets a ride aboard an M3A1 of the 3rd Marine Tank Battalion named "The Pay-Off". The beach area at Bouganville was so muddy that the gun's protective canvas was left on.



The crew of another M3A1 of the Marine 3rd Tank Battalion pose in front of their tank "Pain-in-the-Ass". This unit was much more colorfully marked than most Marine tanks of the period.



US Marine tank battalions began to be reequipped in late 1943 from a light tank organization to a mixed medium tank organization similar to the US Army with one company of light tanks and three of mediums. At this time, the new M3A1 light tank was first introduced into Marine service. The M3A1 received its baptism of fire during the fighting at Cape Gloucester in December 1943 with the Marine 1st Tank Battalion. This tank is painted in a two-tone camouflage pattern, probably field drab or brown over olive drab.





This photograph typifies most stereotypes of tank fighting in the Pacific: a tank moving through a dark and fetid jungle followed at close-quarters by infantry. This type of fighting was certainly typical of the combat in the south Pacific, but far less typical of the large battles in the central Pacific. Here, "Lucky Legs II", a M4 medium tank of the 754th Tank Battalion moves forward in support of infantry of Co. F, 129th Infantry, 37th Division on Bouganville on 16 March 1944 during the Solomons campaign. The 754th Tank Battalion used a system of geometric shapes with small Roman numerals above to signify the platoons and companies of the unit.



Another view of the same operation on Bouganville on 16 March 1944, this time a M3A1 light tank named "Popeye III".



M4 medium tanks of the 754th Tank Battalion along the Bougainville coast in the Solomons in March 1944. This view clearly shows the type of tactical insignia used by the battalion. US markings practiced stressed local initiative in assigning tactical insignia, largely as a measure of security. This unit has painted out the large white stars on their tanks, since they made it easier for enemy anti-tank weapons to target them.



During the fighting in Dutch New Guinea in March 1944, the 41st Infantry Division was supported by the 603rd Separate Tank Company, equipped with M41 medium tanks. The tanks had a pattern of dark brown or earth red painted over the normal olive drab finish. This shows "Sloppy Joe" which knocked out 22 Japanese bunkers during the fighting on Hauwie and Manus islands in the Admiralty group in March 1944.



One of the 4th Tank Battalion tanks, "Hunter", was knocked out by Japanese fire during the fighting on Namur in February 1944. A close inspection of the track will reveal grousers attached, a common practice in the sandy soil of the Pacific atolls where the grousers could help improve traction.

Another view of the M4A1 medium tanks of the 603rd Separate Tank Company during operations around Arara in Dutch New Guinea on 17 May 1944 while supporting the 41st Division.



The landings at the Kwajalein atoll were supported by the Marine 4th Tank Battalion. Here "Hothead" a M5A1 light tank of Co. A, moves up in support of Marines on Namur on 1 February 1944. The 4th Tank Battalion often camouflage painted their tanks as seen here.



A vivid reminder of the growing disparity between US and Japanese tanks by 1944 is this 4th Marine Tank Battalion M4A2 carrying away a trophy Type 94 tankette after the fighting on Namur in March 1944. The Marine 4th Tank Battalion was one of the first units to adopt the practice of layering the sides of their tanks with thick timber planks. These were added after the first Marine encounters with Japanese Type 99 magnetic mines.

While the US Marines were attacking Japanese positions on Roi and Namur, US Army units were landing at Enubuj in the Kwajalein atoll on 2 February 1944. The 767th Tank Battalion, equipped with M4A1 medium tanks, supported the US Army 7th Infantry Division during the fighting. A pair of M4A1 medium tanks are seen here landing with their fording trunks. The fording trunks provided a source of air supply to the engine while in the water.



A pair of M3A1 light tanks of the 767th Tank Battalion during operations on Enubuj, Kwajalein atoll on 4 February 1944. The Japanese force there had been overcome by this time, but there were still pockets of Japanese resistance. The ferocity of the pre-invasion bombardment is evident from the damage to the coconut palm trees.



A M3A1 light tank of the 767th Tank Battalion supports infantry from the 7th Infantry Division during fighting on Carlson Island in the Kwajelin atoll on 31 January 1944.



M4A1 tanks of the 767th Tank Battalion move over the lagoon in the Kwajelin atoll after having destroyed a group of Japanese bunkers on Ebeye Island during the fighting on 4 February 1944. The lead tank is named "Lucky Tiger", while the second is "Miss Dinah".

The striking difference in firepower is illustrated by the side-by-side comparison between a Marine M4A2 medium tank and the Japanese Type 94 tankette. In fact, the comparison is unfair as the Type 94 was an extremely old design intended only for reconnaissance. Nevertheless, the most common Japanese tank of this period, the Type 95 Ha-go light tank, was hopelessly ill-matched against the M4 medium tank.



A camouflaged tank of the Marine 2nd Separate Tank Company moves forward in support of Marine troops during the fighting on Eniwetok in the Marshall Islands in February 1944. This unit commonly camouflage painted their tanks as is evident in this view.



An M4A2 medium tank of the Marine 2nd Separate Tank Company waits along the beach on Perry Island in the Marshalls during the landings there in February 1944. At this stage of the war, the fording trunks were often built by local ordnance teams, and so their shape and configuration differed considerably from the later standardized types.



A M3A1 light tank of the Marine 3rd Tank Battalion comes ashore at Emirau Island in the Bismarck Archipelago in early 1944. This tank has obviously seen some previous action, probably on Bouganville, as its front fenders are missing. Notice that by the time of this campaign, the 3rd Tank Battalion had dropped the practice of painting its tactical numbers on prominent white backgrounds; here the markings are a subdued yellow outline of a diamond with the number 1 inside.



While the Imperial Japanese Army was struggling with US, Australian and New Zealand forces in the central Pacific and with the Commonwealth forces in Burma, an intense but often forgotten war was being fought in southern China with the Chinese Army. Here, a Chinese infantryman stands guard on top of a T-26 Model 1933 tank of the 200th Mechanized Division, knocked out some time ago near Tapa airfield in Kunming, China. This shows the standard markings of the Chinese Army during the war, the blue and white rising sun of the Kuomintang Party on the hull side and rear, and a three digit tactical number at the rear. Most of the T-26 tanks sold to China were fitted with aerials, using the old method of a "clothes-line" antenna around the turret.



A Chinese T-26 Model 1933 moves along the road at the time of the Japanese offensive in November 1944 near Chin Chen-chaing China. This vehicle shows the location of the standard tactical markings on the tank bow. Notice also that this vehicle is fully equipped with searchlights over the gun barrel.

The Japanese captured this T-26 and dug it in as a pillbox on Kuan Lung Po hill. The Chinese knocked it during fighting there with the 82nd Division in 1944.



In January 1945, the Burma road was again opened into southern China and a 21/2 ton trucks tows a 105mm howitzer, part of the Chinese force formed in Burma. Alongside the road is a derelict Chinese L3 tankette knocked out in earlier fighting. China purchased an undetermined number of CV.35 tankettes from Italy in the mid-1930s, some still serving nearly a decade later.

A Marine M3 75mm gun motor carriage, more commonly called a SPM in Marine service, comes ashore at Cape Gloucester in December 1943. Each Marine division had 12 of these in a Special Weapons Battalion. Although originally designed as a tank destroyer, in Marine service they were used most often for direct artillery fire support since Japanese tanks were so rarely encountered.



The Japanese 9th Tank Regiment on Saipan made several attacks against the beach during the landings. At dawn on 16 June, a Special Naval Landing Force tank company attacked the beach with Type 95 Ha-go light tanks, running into intense US tank fire. This Type 95 has been split open by a direct hit by a 75mm high explosive round.



A Type 95 Ha-go light tank of the 4th Company, 9th Tank Regiment knocked out during the fighting near Black Beach 3 on Saipan on the morning of 16 June 1944. This tank appears to have been hit by an anti-tank round on the upper edge of the sponson which not only penetrated the tank, but cracked the armor. The poor protection offered by these tanks gave them little chance when faced by American M4 medium tanks.



The Army's 762nd Tank Battalion was credited with the most tank kills during the fighting along the Saipan beaches against the Japanese 9th Tank Regiment. This is a M5A1 light tank of Co. D, 762nd Tank Battalion, with the beaches evident behind. Although obsolete by European standards, the M5A1 light tank was more than adequate when faced by any of the lightly armored Japanese tanks.

"Fireball", a M4A2 medium tank of the Marine 4th Tank Battalion, is lowered into a LCM during preparations for the invasion of Saipan on 15 June 1944. This battalion adopted the practice of painting the roofs of their tank turrets white with large red numbers to help coordinate airstrikes.



During the night of 15-16 June, the Japanese SNLF marines made their own naval landing near the American invasion beaches on Saipan, attempting to disrupt the US defenses. They were accompanied by a few Type 2 Ka-mi amphibious light tanks. The Type 2 Ka-mi had detachable pontoons at front and rear, and this photo of one of the tanks knocked out in the fighting shows the tank after the pontoons had been dropped.



One of the most deadly enemies of tanks on Saipan were mines. The Japanese occasionally used aerial bombs along likely tank routes. This mine has managed to blow off the front right bogie, snap the drive sprocket, and knock the tank over.



Probably the largest Japanese tank attack of the Central Pacific campaign occurred on Saipan on the night of 16 June 1944 when 44 tanks of the 9th Tank Regiment led by Col. Hideki Goto made an ill-fated charge against US Marine defenses including Co. A of the 2nd Marine Tank Battalion and a platoon of M3 75mm SPMs. Only 12 tanks survived the attack. This is a Type 97 Chi-ha medium tank of the 5th Company, and behind it a Type 95 Ha-go light tank. Notice the numerous hits from armor piercing ammunition on both tanks.

Another view of the battlefield on 16 June 1944 after the ill-fated charge by the 9th Tank Regiment. A 75mm armor piercing round hit the turret of the Type 97 Chi-ha with such force that the plate shattered, causing a gaping hole in the right turret side. The ash around the wheels shows that the vehicle completely burned out.



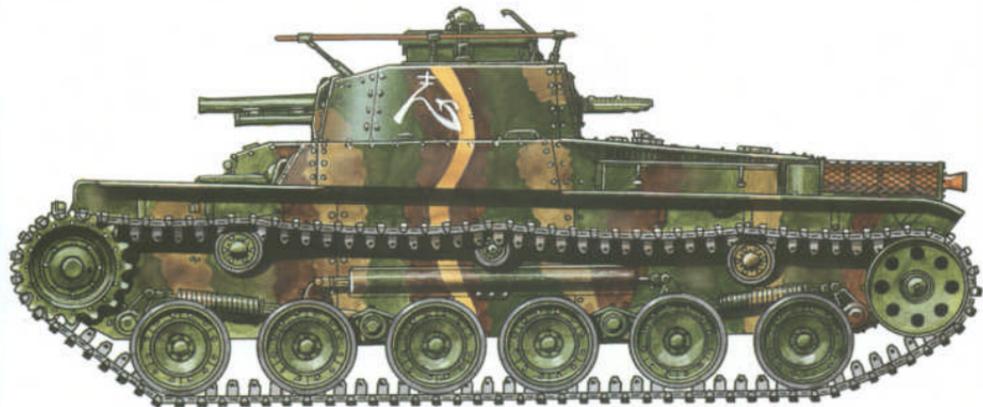
About six Type 97 Chi-ha survived the night attack of the 9th Tank Regiment. This tank of the 5th Company was later knocked out, probably by M5A1 light tanks of the 762nd Tank Battalion. The 57mm gun on this vehicle is missing, and two 37mm hits can be seen immediately below and to the left of the gun mantlet. This view shows the markings of this company: two Japanese flags on the lower bow, and the intricate *kikusui* emblem on the turret side.



The Saipan campaign was the first encounter where the new Type 97-kai Shinhoto Chi-ha was encountered in significant numbers. Although first deployed in early 1942, the low priority assigned to Japanese tank production meant that few were available in the Central Pacific until 1944. The tank's new 47mm made it capable of defeating the M4 Sherman under the right circumstances. This is a tank of the regimental command platoon, evident from the white band markings around the turret.

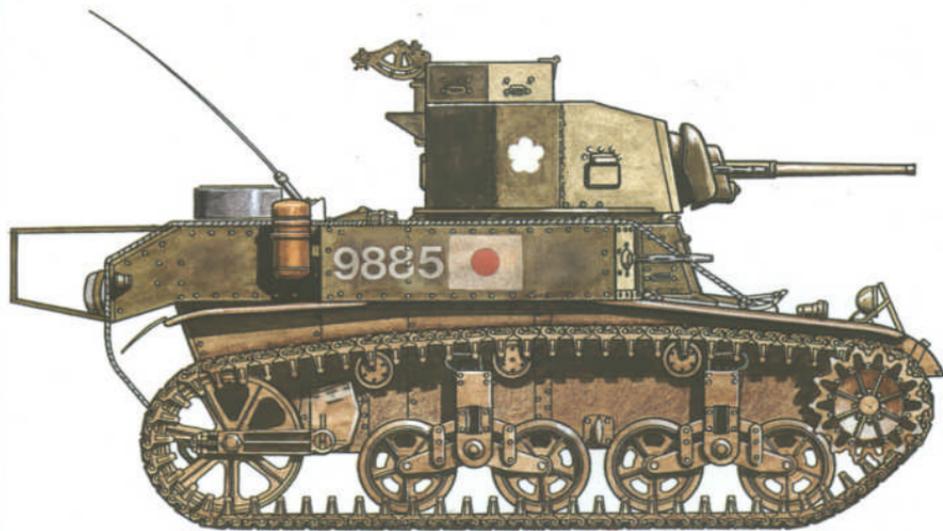


A Type 97 Chi-ha of the 4th Company, 9th Tank Regiment that became bogged down in soft soil during the 16 June attack. Notice that a frame has been attached at the rear of the tank. This was added on many tanks to permit them to carry infantry along during the attack.



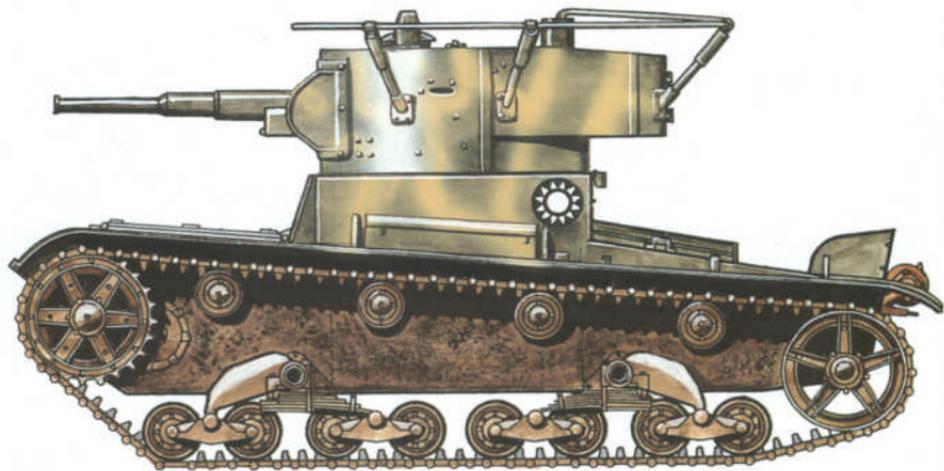
Type 97 Chi-ha Medium Tank, 1st Tank Regiment, Malaya, December 1941

The 3rd Company of the 1st Tank Regiment performed the breakthrough of the British Jitra defense lines during the Malaya campaign. This Type 97 is finished in the standard Japanese tank camouflage scheme of this period. The base color of the tank is called khaki, but is an olive green shade. There are two disruptive colors applied over this: parched grass (a dull sand color), and dark brown. Finally, a thin rolling band of yellow was painted down the center of the vehicle, resembling a wavy cross when viewed from above, with the crux on the turret. Each of the four companies of this regiment had a different letter painted on the turret sides, the four letters when combined forming the word *Tsukushino*, the name of the regiment's home base. Some tanks in the regiment also had a two digit Roman numeral painted on the hull side, though not in the case of this tank.



M3 Light Tank, Japanese 7th Tank Regiment, The Philippines, 1942

The Japanese Army captured a number of M3 light tanks from the US Army's Provisional Tank Group, and the 7th Tank Regiment pressed a few into service in 1942 during the final assault on Corregidor. The M3 tanks were finished in overall olive drab, and so far as is known, carried no markings. After the fighting, the tanks were cleaned up for a victory parade. This included the addition of the 3rd Company's traditional marking, the *oka* (cherry blossom) on the turret side. Curiously enough, a standard four-digit registration number was painted on the hull side, the first two numbers giving the year (in the Japanese calendar) and the last two being the tactical number. These tanks had a luggage rack added at the rear of the vehicle, probably a Japanese rather than an American addition.



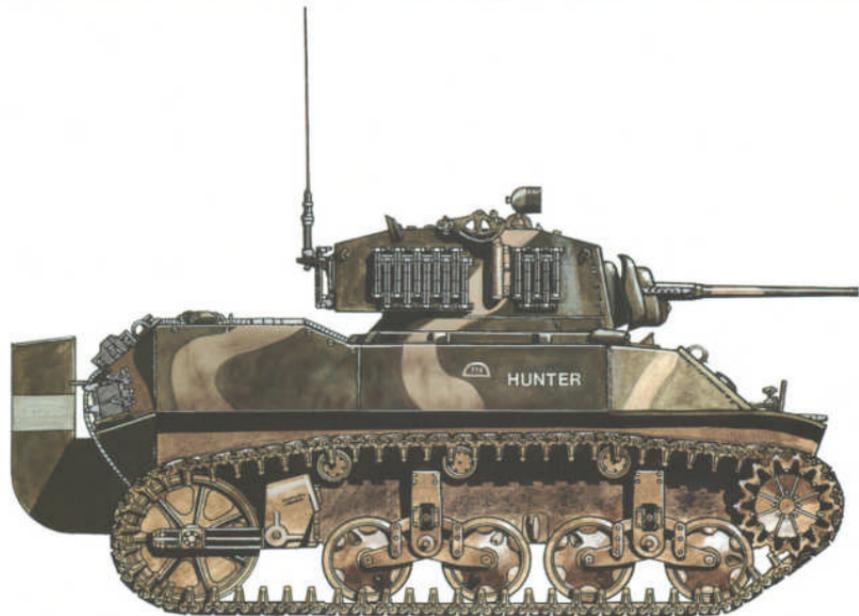
T-26 Model 1933, Chinese 200th Mechanized Division, Burma-Ledo Road, Burma, 1942

The Soviet T-26 tanks delivered to the Chinese Army were finished in the usual dark green color. The Chinese Kuomintang national insignia, a white sunburst on a dark blue circle, was painted on either hull side, and centrally on the lower front and rear bow plate. Some tanks also had a three digit tactical number painted on the bow and stern plate. Although most T-26 tanks of the unit were left in plain dark green, for at least one parade, some of the tanks had an irregular sand color camouflage sprayed on as seen here.



M3 Light Tank, 1st Marine Tank Battalion, Guadalcanal, 1942

When first formed, the 1st Marine Tank Battalion was organized as a light tank battalion, equipped entirely with M2A4 and M3 light tanks. During exercises in Australia prior to being shipped to Guadalcanal, some of the tanks had improvised camouflage schemes painted on, in this case a very irregular pattern of sand and brown over the usual olive drab finish. Later, the tanks had a set of bands and other tactical insignia added.



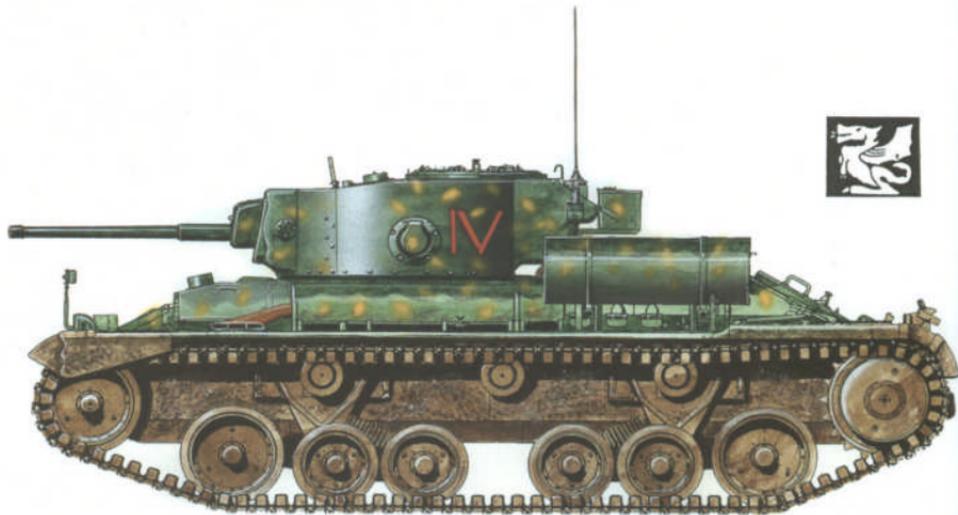
M5A1 Light Tank, US Marine 4th Tank Battalion, Kwajalein, 1944

The 4th Marine Tank Battalion sometimes applied a camouflage color of sand over the usual olive drab finish. Some Marine units followed the Army practice of naming tanks after the company letter, but the 4th Tank Battalion used letters from higher in the alphabet instead: H, I, J, K. The Marine Corps had a practice of marking vehicles and other items with an embarkation marking to help identify units during shipping. The 4th Division used this half-round shape during the Kwajalein fighting, the numbers inside the symbol (512) providing further unit detail.



Type 97 Chi-ha Medium Tank, 9th Tank Regiment, Saipan, June 1944

In 1942, the official instructions for camouflage painting Japanese tanks changed. A second color was authorized as the base color, willow green in place of the normal khaki. However, khaki remained commonly used as seen here. The 1942 instructions also dropped the yellow bands, though these could be seen on older tank types and the practice was still continued in some units. The disruptive colors remained the same parched grass and dark brown as the previous patterns, but units were instructed to paint the suspension and undersides of the tank in parched grass due to its anti-rust properties. This is not evident here due to the mud. One platoon of the 5th Company of this regiment had a *kikusui* (crysanthemum over flowing water) insignia on the turret, a design associated with the 14th Century hero Masashige Kusunoki. The regiment had an elaborate set of small geometric insignia, usually painted in green on white. In this case it is an open rectangle with the final letter "te" of the provincial name "Mitate" as painted on the hull side.



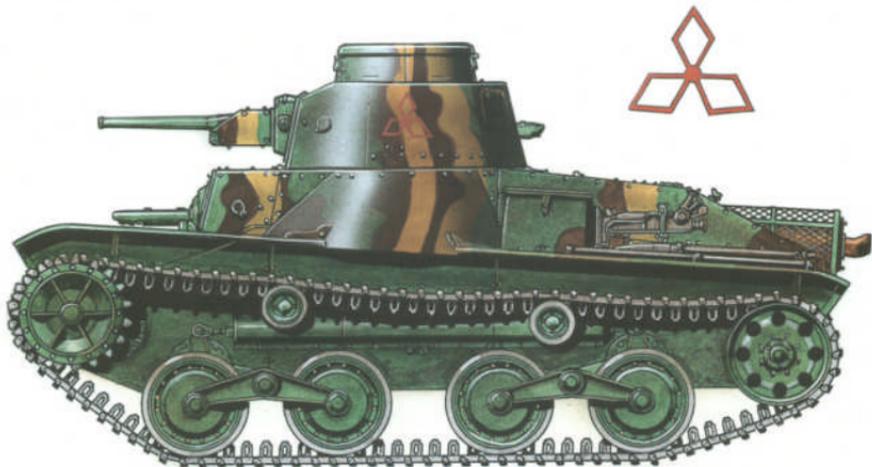
Valentine Mk. III, 3rd New Zealand Division Special Tank Squadron, Green Island, February 1944

The New Zealand Valentines were painted in an unusual scheme of dark green on the turret and upper surfaces of the hull, roughly blending with a pattern of medium green covering the hull sides and lower hull. On top of this was painted an irregular pattern of small yellow-green splotches, intended to represent sunlight filtering through the thick jungle foliage. The tanks in each troop carried the troop number Roman tactical numerals (I through V) on the turret side, rear of the turret stowage bin, and sometimes centrally on the bow. The numerals were color coded, white for the troop leader in a Close Support tank, yellow for the troop sergeant, and red for the troop corporal; hence this is troop corporal's tank in the 4th Troop. The unit's rampant dragon insignia is seen in the inset and was sometimes carried on the bow and stern to the right side, sometimes flanked on the opposite side by the 3rd New Zealand Division kiwi insignia.



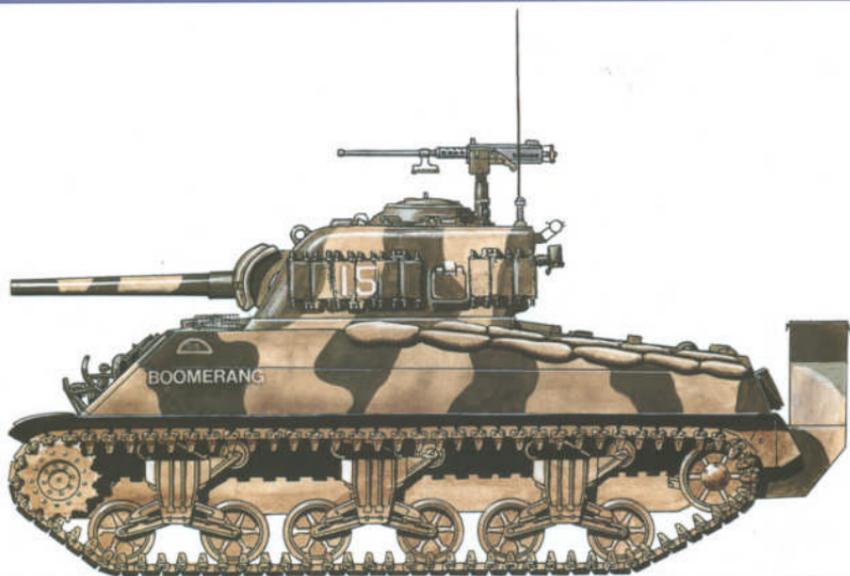
Type 97-kai Shinhoto Chi-ha Medium Tank, 9th Tank Regiment, Saipan, June 1944

This tank was finished in the standard post-1942 scheme of khaki with a pattern of dark brown and parched grass. The 9th Tank Regiment tanks usually had a Japanese provincial name painted on the hull side, in this case, Aso. This was a regimental command tank, evidenced by the broken white band around the turret top. The Imperial Army star painted on the turret sides suggests that this was the regimental commander's tank.



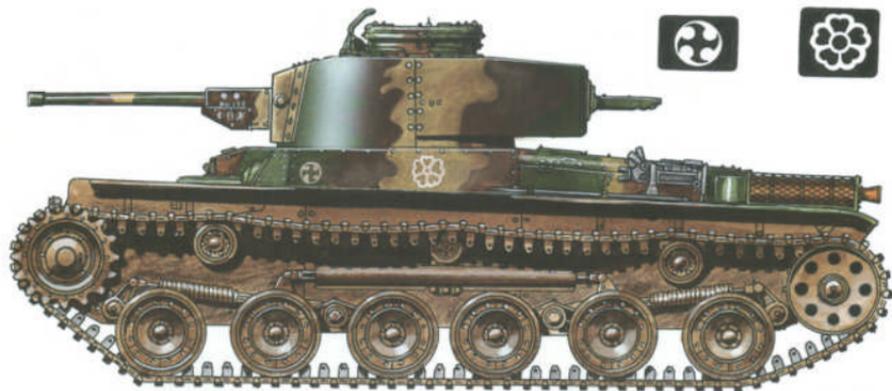
Type 95 Ha-go Light Tank, Tank Company, Japanese 14th Infantry Division, Peleliu, 1944

In 1942, the Japanese Army introduced a new paint scheme for tanks deployed in the tropical regions of the southwest Pacific. In place of the normal khaki/olive green, a new willow green color was introduced. The yellow bands were dropped, and the parched earth color was supposed to cover the suspension and other areas vulnerable to rust. However, these instructions were loosely interpreted as seen here. On this tank, the willow green covered the whole vehicle, including the suspension. This was broken up by the normal pattern of parched grass and dark brown, with the normal yellow bands in the center of the vehicle. The tank company of the 14th Infantry Division used a traditional rising sun emblem which resembles a three pointed star. This insignia varied in detail, some of the designs having an additional central ray within each diamond. Also, the design was painted in several colors including red, white and yellow, which may have been used to designate platoons.



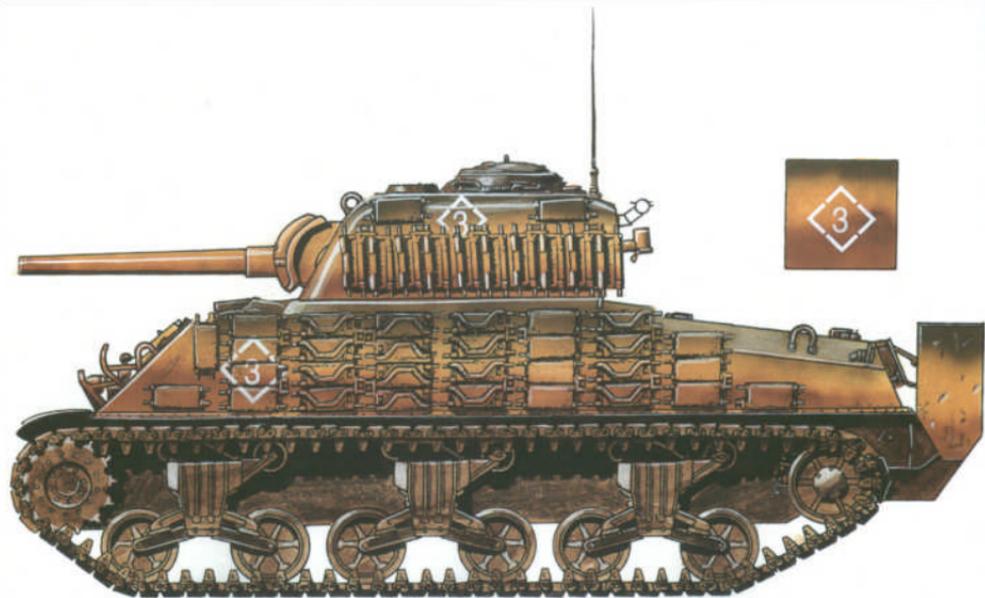
M4A2 (W) Medium Tank, US Marine 4th Tank Battalion, Iwo Jima, 1945

The 4th Marine Tank Battalion heavily reinforced their tanks prior to the fighting on Iwo Jima, some tanks also having planking over the suspension. Once suitable reinforced, the tanks were painted overall in sand and olive drab. The vehicle tactical number 15 is painted in white on the turret side, and the vehicle name Boomerang (for B Company) on the side below the usual divisional embarkation insignia.



Type 97-kai Shinhoto Chi-ha, 7th Tank Regiment, 2nd Armored Division, Luzon, The Philippines, 1945

The 3rd Company of the 7th Tank Regiment traditionally used the *oka* (cherry blossom) insignia as seen in the center of the hull side and in the upper right inset illustration. The insignia forward of this is the traditional *tomoé* design, a popular military emblem associated with the family crest of Kuranosuke Oishi, leader of the 47 ronin warriors who revenged their murdered lord in the 18th Century; the design symbolized the resurgence of samurai virtues. On the side of the gun mantlet are two small white dots, the Roman script No. 125, and the Japanese script *Dai Nippon* (Great Japan) which was an *Ai-koku* presentation marking.



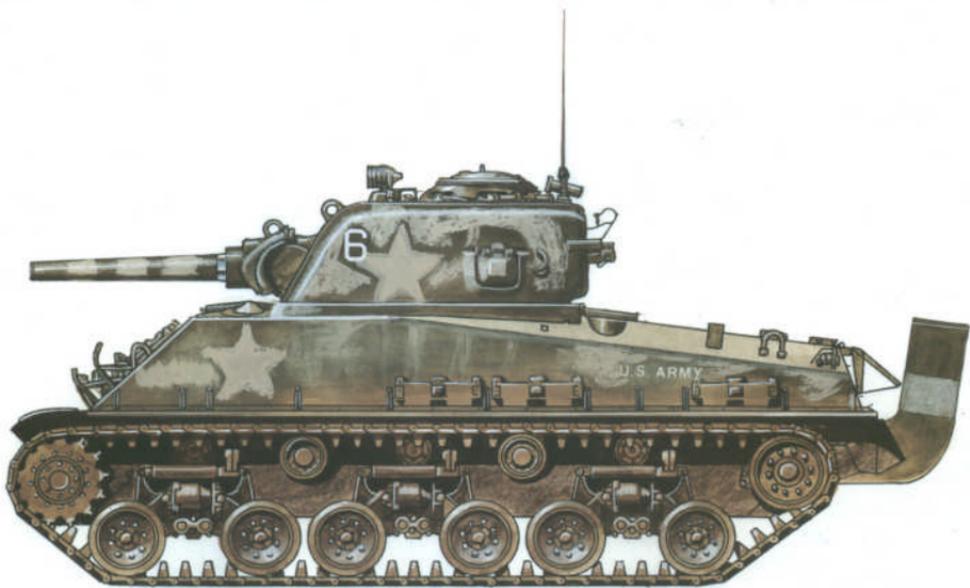
M4A2 (W) Medium Tank, US Marine 1st Tank Battalion, Okinawa, 1945

The 1st Tank Battalion, having learned its lesson in previous encounters with Japanese infantry, heavily reinforced its tanks prior to the Okinawa campaign. This battalion camouflage painted its tanks in a pattern of Earth Red and Earth Yellow or Sand over the normal olive drab. The tanks carried tactical numbers inside geometric shapes, the shape apparently indicating the platoon. This was carried on the turret side, hull side, and on the rear of the fording trunk.



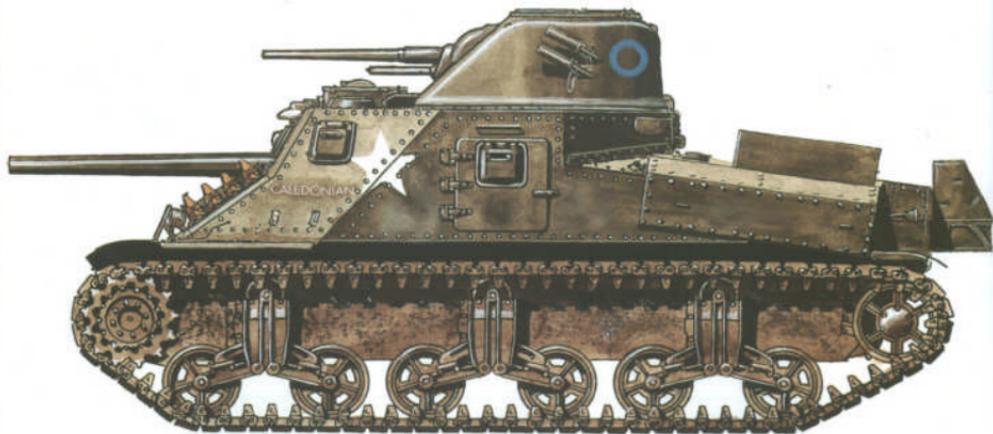
Matilda Frog, Australian 2/1st Armoured Brigade Reconnaissance Squadron, Balikpapan, Borneo, July 1945

Australian Matildas were apparently finished in an overall dark green. They carried certain standardized markings, including red markings along the hull side which indicated safe fording depths. A number of tanks carried a small rectangular marking on the hull side (here repeated on the turret stowage box). The meaning and colors of this marking are uncertain; they may have been embarkation markings patterned after the US practice, Australian tanks followed British tactical markings practice, a triangle indicating A Squadron, but upside down in the case of an independent squadron such as this. The 4th Armoured Brigade insignia shown in the inset was carried on the glacis plate to the right (when facing the tank) with the tactical number 2-1/214 stenciled in the center. The numbers on top of the tactical number indicate the unit.



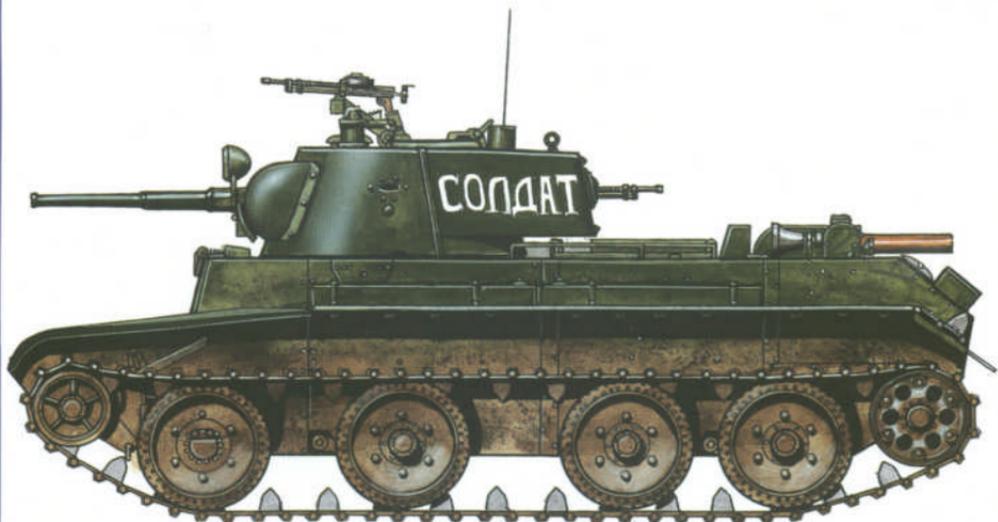
M4 (105mm) Howitzer Tank, US Army 713th Tank Battalion, Okinawa, 1945

US Army tanks in the Pacific were simply marked as seen here on this howitzer tank of the headquarters company of the 713th Tank Battalion. This tank was originally finished with white stars in the usual position, and a white tactical number on either side of the turret and at the center-rear of the fording trunks. However, the crew has brushed on large amounts of mud over the stars to reduce their visibility to Japanese anti-tank gunners. However, once the mud dried, it ended up becoming much lighter in shade than the already dusty olive drab color.



M3 Lee Medium Tank, 150th Regiment, Royal Armoured Corps, Burma, 1945

British armor in Burma followed much the same practice as in Europe at the time. By 1944 a dark olive green had been adopted, close in shade to the US olive drab, to avoid the necessity of repainting Lend-Lease tanks. In Burma, a large white Allied star was employed. On the turret rear is the blue circle of "C" Squadron. The vehicle name, CALEDONIAN, is painted on the hull front. Other squadron names included Centurion and Cossack. The tanks of this unit had an extra layer of armor added over the rear hull sides to protect the engine, and stowage bins, apparently taken from M3 Stuart light tanks, added at the rear. Notice also that the British sometimes removed the commander's machine gun cupola and added standard smoke mortars.



BT-7M, Soviet 77th Tank Brigade, Manchuria, August 1945

Soviet tanks during the August invasion of Manchuria were finished in the standard scheme of overall dark green. Some units had a thick white band painted down the center of the tank and hull roof as a form of aerial identification. This is an unusual example of a BT-7M that survived the war in the Far East, fighting in the final battles of World War II. It carries the word SOLDAT (Soldier) on the rear turret side.

The Type 97-kai Shinhoto Chi-ha medium tank of Lt. Nishidate, the commander of the 3rd Company, 9th Tank Regiment. The gun appears to have become locked in battery, probably from battle damage during the 16 June 1944 engagement. On this tank, the company insignia was attached on a thin metal plate and has come loose on the turret side.



A M4A2 named "Jenny Lee" of the Marine 4th Tank Brigade moves forward on Saipan in July 1944 near Magicienne Bay. This shows the widespread use of wooden planking on the hull side as a form of protection against hand-emplaced Japanese magnetic anti-tank mines, an American equivalent of German zimmerit. Notice also that the tank has a thin coating of concrete applied over the glacis plate, rather than wood, for the same purpose.

"Dusty", a M3A1 flamethrower tank of Co. D, 2nd Marine Tank Battalion during the Saipan fighting in June 1944. Company D had 12 Satan flamethrowers, which replaced the usual 37mm gun. The general consensus was that the Satan flamethrowers didn't have enough range, and their capacity of 2-minutes of fuel was also deemed inadequate. Two of the Marines display war trophies including a Japanese machine gun and a rifle.





A M3A1 Satan flamethrower tank escorts a LVT-3 amtrac during the fighting near Tanapag, Saipan on 7 July 1944. Notice that the front hull machine gun of the flamethrower tank was blanked off since this was removed to provide needed storage.



A M4A2 named "King Kong" of Co. C, 4th Marine Tank Battalion supports Marines during the fighting near Marpi Point on 8 July 1944. Many of the crews did not bother to remove the rear wading trunk, although the upper deck trunk was normally removed since it interfered with the traverse of the turret. This tank has the planks on the side typical of this battalion on Saipan, and also has an irregular camouflage pattern, probably applied with mud, on the turret and hull sides.



An Army M8 75mm howitzer motor carriage during operations on Saipan. This was based on the M5 light tank chassis, but with a new open-top turret. There were six of these assigned to each armored cavalry squadron, providing fire support to other vehicles in the unit with their short-barreled 75mm howitzer.



"Nannie", a M5A1 light tank of Co. D, 4th Marine Tank Battalion, escorts a M3A1 Satan flamethrower tank during the fighting against Japanese infantry holed up in caves in the cliffs at Marpi Point. Flamethrower tanks were usually accompanied by normal gun tanks to provide protection. By this stage in the war, the anti-personnel cannister round had become one of the M5A1s main weapons, due to the lack of Japanese tanks.



A platoon of composite hull M4 medium tanks of Co. C, 706th Tank Battalion during operations near Agana on Guam on 2 August 1944. The Guam operation followed the Saipan landings. The composite hull M4 was similar to the basic M4 medium tank, but the hull front was a single casting rather than being constructed of the usual welded plates.

The effectiveness of the new Japanese 47mm anti-tank gun is very evident in this view of "Toro", a M4A2 medium tank of the Marine 2nd Separated Tank Company, knocked out during the fighting on Guam on 26 July 1944. At least two impact holes can be seen on the plank applique protection on the hull side. The 2nd Sep. Tank Company was one of the few Marine tank units to regularly camouflage paint their tanks. Besides the usual tactical markings, this tank also has degree marks painted along the turret ring, probably to assist in laying the gun for indirect fire missions.



A Type 95 Ha-go light tank, is recovered by a M32 armored recovery vehicle of the Marine 3rd Tank Battalion. It is named "Almighty" and carries the elephant insignia of the 3rd Tank Battalion.



"Corsair", a M4A2 (W) of Co. C, 2nd Marine Tank Battalion, comes ashore at Tinian on 25 July 1944. Tinian was the third of the major islands in the Marshalls attacked by the US forces in July 1944. The Marshalls campaign saw the combat introduction of the late production M4A2 medium tank with the revised 47 degree hull front and wet ammunition storage. By this stage, the deep fording trunks are becoming more standardized than during previous landing operations. This particular tank appears to have a rough coat of camouflage applied over the hull, possibly with mud.



A good detail view of the tactical markings of the 3rd Marine Tank Battalion late in the war. The unit was derived from the 1st Marine Amphibious Corps Tank Battalion that had first seen combat on Tarawa, and so it kept the elephant insignia. The winged star insignia was also peculiar to this unit, and was adopted after the Guam fighting. The small outlined diamond is the divisional embarkation marking of the Marine 3rd Division; the triangle maybe a company marking for Co. D.

"Caesar", a M4A2 (W) of Co. C, 2nd Marine Tank Battalion moving forward in the rolling hills of Tinian. The Marshalls actually provided good tank country, and there were no fewer than six US tank battalions committed to the fighting there, versus one Japanese tank regiment. This gave the US forces a four-to-one numerical advantage in tanks.



"Ding Dong", a M3A1 Satan flamethrower tank of the 2nd Tank Battalion is landed on Saipan on 25 July 1944. Notice that an improvised tube has been added instead of a standard deep wading stack.

"Goldbrick Jr.", a M4A2 (W) medium tank of the Marine 4th Tank Battalion during the initial fighting near the cliffs on the southern end of Tinian. Although this is one of the tanks with the later production hull, applique armor has been added over the hull side.





A composite hull M4 medium tank named "Bloop" of Co. B, 763rd Tank Battalion on Anguar in the Palau group following the landings there in September 1944. During the fighting on Anguar, the 763rd Tank Battalion supported the US Army 81st Division. The battalion insignia, a diamond inside a rectangular outline, is evident on the transmission housing. The lower portion of the white star insignia is obscured by waterproofing added around the turret ring.



M4A2 medium tanks of the Marine 1st Tank Battalion control Peleliu airfield during the Palau campaign of September 1944. During the fighting on Peleliu, the tank company of the Japanese 14th Infantry Division made a charge across this airfield, only to run into intense fire from M4A2 tanks, M3 75mm SPMs and other anti-tank weapons. The tankers found the normal anti-tank projectile to be ineffective against the Type 95 since it tended to penetrate one side and go out the other. High explosive 75mm rounds, however, proved devastating.

A disabled Type 95 Ha-go light tank of the 14th Infantry Division sits alongside a Marine LVT-A1 amtank near Peleliu airfield in September 1944. The attack by this tank company during the Peleliu battle culminated in the complete destruction of the unit, along with the loss of many Japanese infantrymen riding on the light tanks.



The heaviest use of armor by either side took place in the Philippines in October-November 1944. Here a M5A1 light tank named "Ginny" of the US Army 44th Tank Battalion moves forward on Leyte Island on 20 October 1944 in support of the US Army 1st Cavalry Division.



A pair of M8 75mm howitzer motor carriages support the 1st Cavalry Division on Leyte shortly after the landings. The M8 HMCs still have their deep wading stacks attached.



The Japanese 7th Independent Tank Company on Leyte was still equipped with the antiquated Type 89 Chi-ro medium tanks in October 1944. This pair were knocked out during fighting on 23 October 1944.

Another of the Type 89 Chi-ro medium tanks knocked out at Dulag, on Leyte in late October 1944. One of these tanks, possibly this one, was later sent back for technical evaluation by the US Army at Aberdeen Proving Ground, where it remains today in the Ordnance Museum there.



"Bushmaster", a composite hull M4 medium tank of the 763rd Tank Battalion, is thoroughly bogged down in the mud while supporting the 96th Infantry Division during operations on Leyte on 23 November 1944. Comparing this photo to others in this book of the 763rd Tank Battalion, it will be noted that by the time of Leyte, the tankers had painted out the overly visible white stars since they made good aiming points for Japanese anti-tank guns.



A M4A1 medium tank named "Man O'War" moves through the town of Jualita on 24 October 1944. Notice that the tank has grousers fitted to the track, in an attempt to aid the traction of the smooth rubber block tracks in the frequently encountered mud of Leyte.



"Southern Cross", a composite hull M4 medium tank of the US Army 44th Tank Battalion, leads a column forward near Limon on 28 November 1944. The 44th Tank Battalion used an intricate system of geometric shapes as tactical markings during the Philippines fighting.



The fighting on Leyte was followed by US landings on Luzon. Here, a M4A1 medium tank of the 754th Tank Battalion passes in front of the capitol in Manila on 9 January 1945 during the bitter fighting for the city. Tanks were instrumental in the fighting, providing heavy firepower for the infantry during the bloody urban skirmishes.



More armor from the 18th Armored Group comes ashore at Lingayen Gulf on Luzon on 11 January 1945, including this M4A1 light tank of the 44th Tank Battalion. The deep wading stacks were necessary even when the LSTs brought the tanks close to shore as seen here, as tank engines could become easily flooded.

"Black Beauty", a M4A3 (W) of Co. B, 716th Tank Battalion, shortly after landing at Lingayen Gulf on Luzon in January 1945 with its deep wading stacks still fitted. This battalion adopted a wolf's head insignia, which can be seen painted on the turret side.



On 29 January 1945, the US Army 637th Tank Destroyer Battalion encountered a column of tanks and trucks from the 10th Tank Regiment of the Japanese 2nd Armored Division, knocking out four Type 97-kai Shinhoto Chi-has near Clark Field as seen here. The tank to the left had the whole rear of the turret blown in by a direct hit by a high explosive round.



A Japanese column of eight tanks and 30 trucks from the Japanese 2nd Armored Division attempted to push through US lines near Umungan on Luzon on 30 January 1945. This was the lead tank, and it was hit by two bazooka rockets and heavy machine gun fire. One bazooka round shattered the front drive sprocket. One of the curious details here is the use of spare track links by the crew as a form of improvised armor; this was very uncommon on Japanese tanks during the Pacific war.



During the Luzon fighting, the Japanese SNLF Marines attempted a major raid behind US lines at Ormoc Bay on 6 January 1945. The attack included Type 2 Ka-mi amphibious tanks of the Kule 101st SNLF, including the one seen here. The stack behind the turret is a deep wading trunk like those used on American tanks to prevent water from flooding the engine. This tank has already shed the two pontoon sections carried on the front and rear which made this tank amphibious.



A rear view of one of the Type 2 Ka-mi amphibious tanks knocked out during the fighting at Ormoc Bay. These tanks had propellers which gave them reasonable good handling characteristics in the water during landing. The two crab-claws at the rear of the hull were used to attach the rear pontoon.

A composite hull M4 medium tank named "Battle Baby" of Co. B, 775th Tank Battalion is led up a sharp curve by the company commander, Lt. Jack Belts, on the Villa Verde Trail on Luzon. These composite hull M4s used the new wet ammunition stowage and large driver's hatches typical of late production M4 medium tanks.



A M5A1 light tank of Co. D, 706th Tank Battalion, leads a motorized column from the 40th Infantry Division shortly after the landings on Negros Island in the Philippines on 29 March 1945. This is a late production model of the M5A1, evident from the cover over the turret side machine gun mounting.



A composite hull M4 medium tank supporting the 1st Cavalry Division opens fire at a concealed Japanese anti-tank gun which had knocked out another M4 tank moments before. This unusual overhead photo clearly shows the large white identification star carried on US tanks in the Philippines to prevent accidental air attacks on US units.



A rear view of a Type 1 Ho-ni 75mm self-propelled gun that was captured by the US Army's 37th Infantry Division near Aritao on 6 April 1945. This vehicle later was sent back for evaluation to Aberdeen Proving Ground, and now rests in the Ordnance Museum there. The white circle insignia surrounding a red circled rectangle was the company insignia of the unit equipped with the Ho-ni.

The most potent Japanese armored vehicle from the Japanese 2nd Armored Division were these Type 1 Ho-ni 75mm self-propelled guns, attached to the division's mechanized artillery regiment. These consisted of 75mm guns mounted on a Chi-ha medium tank chassis, and were one of the few Japanese armored vehicles capable of destroying M4 medium tanks at long range, but there were only a handful in service in 1944.





An equally rare vehicle was the Type 4 Ho-ro self-propelled 150mm howitzer which mounted a 150mm howitzer on a Type 97 tank chassis. This was a new assault gun which only entered production in 1944. There were two assigned to the 2nd Armored Division, and they were knocked out in fighting in March 1945. This one was shipped back to the United States for technical evaluation, but it was destroyed during a Korean War scrap drive.



A composite hull M4 named "Batti'N Virgin" of Co. B, 775th Tank Battalion engages in a duel with a Japanese bunker along National Highway 3 between Banangan and Baguio on 16 April 1945. A careful inspection of the transmission housing will reveal the battalion insignia, a white circle with a triangle inside. Each of the battalions of the 19th Armored Group adopted simple geometric shapes as insignia rather than the normal numerical bumper codes used in Europe.



A construction bulldozer from the 117th Engineer Battalion is used to extricate a composite hull M4 of the 775th Tank Battalion that struck a landmine on a small bridge near Baguio, Luzon on 22 April 1945.

A composite hull M4 medium tank moves up a hill overlooking the center of the city of Baguio during the fighting near the city on 27 April 1945.



The crew of a M4 of Co. C, 754th Tank Battalion pose in front of their tank, named "Dragon Lady", after the cartoon character in the popular Milton Canniff cartoon strip, "Steve Canyon". This is an intermediate production M4 with the M34A1 gun mantlet, but before the introduction of the improved hull. Notice that this battalion uses the same pattern of markings as during the fighting on Bougainville, but that they have been moved up to the hull side instead of the hull rear.



A composite hull M4 medium tank fitted with a M1 dozer blade from the 775th Tank Battalion moves forward in support of infantry from the 37th Division during the fighting for Lantap on Luzon on 12 June 1945. The soldier in the foreground is armed with a BAR (Browning automatic rifle). The M4 tank is fitted with an additional stowage rack on the turret rear.





By late in the Philippines campaign, the tanks of the 775th Tank Battalion began to sport more colorful markings. Here, a company of tanks from the unit rest while awaiting orders to move forward from Baguio. The significance of the dice insignia is not known.



A group of composite hull M4 medium tanks of Co. B, 44th Tank Battalion that led the flying column that captured Santo Toman University in Manila on 3 February 1945 pose for photographers in August 1945. By this point, their tanks have been cleaned up. The 44th Tank Battalion used an unusual set of markings as seen here, details of which are unrecorded.



Although considered obsolete in the European theatre, the M3 Lees were welcomed by Commonwealth forces fighting in Burma. The British 3rd Carabiniers first demonstrated the value of tanks in the tough jungle terrain during the fighting in early 1944. This shows a M3 Lee medium tank in action during the operations towards Rangoon. (IWM)



The M3 Lee medium tanks were quickly adapted to the local surroundings like this vehicle of the 150th Regiment RAC during fighting by Major Campbell's C Squadron in Mandalay in February 1945. The spare track was added to the front as expedient armor against Japanese anti-tank guns. During the Mandalay fighting, one Lee was hit no fewer than 13 times by 37mm anti-tank gun fire, yet still remained in action. (IWM)



Led by a M3 Lee medium tank named "Cossack" of C Squadron, 150th Regiment RAC, troops of the 19th Indian Division, 14th Army advance on Fort Dufferin on 10 March 1945.

During the later phases of the Burma campaign, M4A4 Sherman V tanks became available in the Burma theatre, like this group from B Squadron of the Indian 5th King Edward VII's Own Lancers (Probyn's Horse) being used to provide fire support during operations on 31 December 1944.



A column of Sherman Vs of B Squadron, Probyn's Horse during the advance on Waw in April 1945 with infantry from the Bombay Grenadiers onboard. The charging bull insignia on the rear of the tank is the insignia of the 44th Indian Armoured Division. (IWM)



It was originally planned to land Australian troops in the Philippines in support of US forces, but in February, plans were changed to North Borneo. On 1 May 1945, C Squadron of the Australian 2/9th Armoured Regiment landed on Tarakan Island in Borneo as part of Operation Oboe 1 in support of the 26th Infantry Brigade. The awful terrain of Tarakan was pungently described as a "raft of mud in the Celebes Sea", giving the Matildas tough going against determined Japanese resistance. Australian engineer troops try to reinforce the shoreline to support the weight of the tank.

A Matilda of the 2/9th Armoured comes ashore from the US Navy LST-580 at Tarakan on 1 May 1945. Notice that the ship allotment is chalked on the fender, while the unit tactical number is on the glacis plate. Although well armored, the Australian crews have further reinforced the Matilda's armor with spare track links. PSP planking has been liberally welded over the engine deck, to prevent Japanese satchel charges from becoming lodged in the grills.



On 1 July 1945, the 7th Australian Division landed at Balikpapan in Borneo in Operation Oboe 2, supported by A and B Squadron of the Australian 1st Armoured Regiment. This Matilda of B Squadron supported the 18th Brigade during the fighting near the oil refinery facilities on 3 July 1945. Although the Japanese were poorly equipped with anti-tank weapons, the Matildas proved invaluable in the Australian attacks.



In 1944, a new Chinese tank force was assembled and trained at the Ramgarh Training Center in India for eventual commitment into Burma and southern China. These are a formation of M3A3 Stuart light tanks of the 3rd Tank Battalion.



The Chinese 1st Provisional Tank Group was committed to action near Kabani, Burma in January 1945. Here, infantry from the 5332nd Brigade climb on board M4A4 Sherman and M3A3 Stuart tanks. The M3A3 Stuarts are heavily covered in chicken wire to attach foliage for camouflage.



A Japanese Type 97 Te-ke tankette knocked out by a bazooka team from the 112th Regiment, 38th Chinese Infantry Division during the fighting in Burma in December 1944.



A M4A4 Sherman medium tank of the Chinese 1st Provisional Tank Group during fighting near Lashio on the Burma road early in 1945.



The Sherman tank battalions of the Chinese 1st Provisional Tank Group marked their M4A4 tanks with colorful tiger markings, evident on this tank passing through Hsenwi, Burma on 24 March 1945.



A M3A3 Stuart light tank of the 3rd Co., 1st Battalion of the Chinese 1st Provisional Tank Group during operations in Burma on 4 March 1945.

A column of M4A4 tanks from the 1st Provisional Tank Group cross the Nam Yao river inspite of a downed bridge. This is the same tank seen earlier in Hsenwi, number 313, and this view shows the tiger markings on the front of the tank more clearly.

Another view of the M4A4 Sherman column of the 1st Provisional Tank Group. The precise colors of the elaborate tiger markings painted on these tanks is not precisely known.



The Chinese Army used a variety of other Lend-Lease equipment, including this camouflaged M3A1 scout car, armed with a water-cooled .50 cal Browning heavy machine gun on an anti-aircraft mount.

Chinese armor units were supported by a variety of armored vehicles, including these Australian Pattern Universal Carriers during training operations at Ramgarh in India prior to the commitment of the Provisional Tank Group to Burma.





There was less development of specialized armor in the Pacific theatre than in Europe. This is a mine flail developed by US Navy Seabee engineers, however it was never used in combat. Although mines were often a problem during operations, there was no confidence that such flails were practical.



There were a number of experimental rocket launchers tested in the Pacific theatre as a potential source of fire support. This M4A2 medium tank named "Detour" is fitted with the 7.2 inch M17 "Whizbang" rocket launcher. So far as is known, none of these were actually used in combat in the Pacific.



With the experiences of previous campaigns, Marine tank deployed on Iwo Jima in February 1945 were well prepared to deal with Japanese infantry anti-tank tactics. This M4A2 (W) of the Marine 5th Tank Battalion has planking on the side to prevent the attachment of magnetic mines, and penny nails welded to the turret hatches to prevent the attachment of satchel charges intended to blow open the hatches. This tank became bogged down near the landing beaches in the soft volcanic soil.



A pair of tanks from Co. B, Marine 4th Tank Battalion along Blue Beach #2 at Iwo Jima while in support of the 24th Regiment. The huge invasion fleet is evident in the background. Both tanks are well protected by sandbags and plank armor, typical of this unit.



M4A2 (W) medium tanks of the 5th Marine Tank Battalion in a bivouac area on 24 February 1945 on Iwo Jima. This shows the characteristic pennynail protection on the hatches used by this battalion, as well as the camouflage painting over the side plating. Many Marine tanks on Iwo Jima had a pattern of sand and red brown painted over the normal olive drab.

A M4A2 medium tank leaves its LST on the beaches of Iwo Jima as seen from this unusual overhead view taken from the bow of the ship. The winged star identifies this M4A2 as belonging to the 3rd Marine Tank Battalion. This vehicle has an improvised wading trunk over the engine grill consisting of a 55 gallon drum. Notice that this battalion did not use additional armor as was common with other Marine tank battalions late in the war.



A column of M4A2 medium tanks from the Marine 3rd Tank Battalion move forward from the beach during the attack on Airport 2 on 24 February 1945. The 3rd Tank Battalion did not use applique armor on its tanks on Iwo Jima, and the unit can easily be spotted by the winged white star insignia on the hull side, and the use of "speed numbers" on the turret front. "Speed numbers" were the tactical numbers painted on the turret and were used to identify tanks over the radio.

The crew of "Davy Jones", a M4A2 (W) medium tank of the 5th Marine Tank Battalion loads 75mm ammunition into the vehicle. This gives a good close-up of the attachment of the extra planking on the hull side, as well as the positioning of the penny nails.



Another view of "Davy Jones" and its crew, providing a better view of the suspension. This tank has "duck-bill" end connectors on the track to provide better floatation in the soft soil. Notice also the planking over the suspension bogies, intended to prevent attacks by Japanese anti-tank teams with satchel charges and other improvised anti-tank weapons.



"Coed", a M4A2 (W) tank of the 4th Tank Battalion at the edge of Motoyama airfield. Shortly after this photo was taken, Japanese infantry launched a massed charge against Marine positions, and this tank played a key role in the carnage that followed, firing deadly cannister rounds with considerable effect against the infantry.



A M4A2 (W) medium tank "Nightmare II", a replacement tank sent to the 5th Tank Battalion on 23 March 1945 shortly before the end of the fighting. On this tank, the protection over the hull hatches is different than the usual 5th Tank Battalion penny nail style.



A M32 armored recovery vehicle in the foothills of Mount Suribachi. The soft volcanic soil of the island meant that these vehicles were often put to good use. The American flag raised on Mount Suribachi can barely be seen in this view.



This close-up view of the rear end of "Calcutta", a M4A2 (W) of Co. C, 4th Tank Battalion, shows many small markings details. The Target Clock painted on the wading trunk was intended for Marines using the infantry phone attached nearby. This was to remind them to call out targets using the clock method to identify directions. The fuel container on the deck has apparently been rigged for carrying water, with a spigot mounted near the tank phone. Notice also that the tank name is repeated on the rear of the wading trunk.



"Doris", a M4A2 (W) of the 4th Tank Battalion, is resupplied with ammunition from trucks. This gives a good view of the metal grating fixed over the engine deck area to act as stand-off protection from Japanese satchel charges. The extra spacing was intended to give the explosives room to vent, minimizing the damage transmitted to the tank.



The largest amphibious operation in 1945 was the assault on Okinawa. This is a M4 16-ton high speed tractor towing a 155mm "Long Tom" gun off a landing pier at Keise Shima on 31 March 1945, the day before the main landing. The artillery was deployed on Keise Shima to conduct artillery bombardment prior to the main landing.



Composite hull M4 "blow-torch" medium tanks and M4 105mm howitzer tanks of the 713th (Flamethrower) Tank Battalion take up positions along a ridge line during the landings on Okinawa in April 1945. The tanks in the foreground are flamethrower tanks. The 105mm howitzer tanks are new production vehicles with HVSS suspension. These vehicles were used by the headquarters company in tank battalions to provide fire support. Many of the vehicles have improvised camouflage, and all have their white identification stars painted out. By this stage of the war, most Japanese infantry regiments had been equipped with 47mm anti-tank guns, which were very effective against the M4 medium tank at the usual battle ranges in the Pacific theatre.



A M4A2 (W) medium tank of the 1st Marine Tank Battalion during fighting on Okinawa in April 1945. The tank still has its deep wading tank attached. The material on the side is apparently intended to offer protection, but it is not clear what type of material it is made from. Normally, Marine tanks used either spare track blocks or wooden planking.



A M4A2 (W) medium tank of the 1st Marine Tank Battalion on Okinawa loaded with timbers. These were used to fill Japanese anti-tank ditches. Japanese engineers often created elaborate tank traps in front of defensive positions to hinder tanks and force them into killing zones covered by anti-tank guns or mines. This also gives a good impression of the extensive applique armor added to Marine tanks by the time of the Okinawa fighting.



A platoon of M4A2 (W) medium tanks of the Marine 1st Tank Battalion during the fighting near Naha in May 1945. The extensive use of track blocks was intended to protect against anti-tank guns and various types of hand-emplaced anti-tank mines. The suspensions of the tanks were often covered with timber or wood planking to prevent Japanese infantry from striking the thin hull armor with lunge mines or with explosive devices.

A Marine M4A2 (W) medium tank of the 1st Marine Tank Battalion on Okinawa. This is one of the late production types with the new commander's all round vision cupola. This unit painted its tactical insignia on the upper edge of the turret due to the use of extensive track blocks, in this case a circled number 1.



There was only one major Japanese tank unit on Okinawa, the understrength 27th Tank Regiment. However, many infantry units had small detachments of these machine-gun armed Type 94 TK tankettes. This tankette was knocked out during the fighting for Shuri on 30 June 1945.



A M4 Blow Torch of the 713th Flamethrower Tank Battalion in action during the fighting along Coral Ridge on 17 May 1945. The usual tactics of the 713th Tank Battalion was called "Corkscrew and Blowtorch". Gun tanks would attack enemy bunkers or caves with the normal 75mm tank guns to weaken defenses and prevent the Japanese infantry from returning fire, and then the flamethrowers would move up and attack. The later flamethrower designs like the POW-CWS-H1 were mounted in the gun tube, and so could not be easily distinguished from other tanks.



A composite hull M4 medium tank, possibly a flamethrower from the 713th Tank Battalion, comes under fire from Japanese artillery while supporting the 382nd Infantry during fighting on Okinawa on 4 June 1945. Notice the telephone box added on the far left side of the hull rear, a vital new addition to help in tank-infantry coordination.



The crew of a M4A3 (W) named "Angel" of Co. A, 711th Tank Battalion hurriedly repair a thrown track while under Japanese sniper fire during fighting near Nakaza on Okinawa on 16 June 1945. Note that the track is fitted with extenders to lower ground pressure.



A composite hull M4 Blow Torch of the 713th Flamethrower Tank Battalion attacks Japanese infantry hidden in caves on the southern shores of the island. The fighting on Okinawa, the first fought on Japanese soil, was particularly bitter, and often the local civilians joined the soldiers in the cave.

By the end of the Okinawa campaign, the US Army tank battalions were showing more interest in the Marine practice of adding applique armor to protect against close Japanese infantry attack. This is an example of a composite hull M4 fitted out in an Army ordnance yard on Okinawa towards the end of the campaign.



In August 1945, the Soviet Union entered the war, launching a massive tank attack on Japanese forces in Manchuria. Many of the Soviet tankers were veterans of the recent campaign in Europe, and this tank brigade, equipped with new T-34-85 tanks, rests on the shores of the Pacific at the end of the lightning campaign.



Through much of the war, the bulk of the Japanese tank force was in China. In late 1944 and 1945, the Imperial Japanese Army began shifting many units back to the Home Islands for the final defense. These are Type 97 Chi-ha tanks of the 34th Tank Regiment, one of only four such units to remain behind to defend the Kwangtung Army against the Soviet onslaught. This tank carries the unit's kikusui marking on the turret, and an Ai-koku presentation marking on the hull side next to the tactical number.



Although the Japanese tanks encountered through most of the Pacific fighting were inferior to the M4 Sherman medium tank, by the end of the war, the Japanese had developed a new and powerful medium tank, the Type 3 Chi-nu armed with a 75mm gun. These were saved for the final defense of the Japanese Home Islands, but ultimately never fired their guns in anger.



A view of a huge tank park at Hakata, Fukuoka prefecture on Kyushu shortly after the end of the war. In the foreground are some Type 3 Chi-nu medium tanks. Some of the vehicles in the background are the new Type 3 Gun Tank No-ni III, an improved version of the Ho-ni tank destroyer on the Type 97 medium tank chassis, but with a fully armored gun compartment.

TANK BATTLES OF THE PACIFIC WAR 1941-1945

