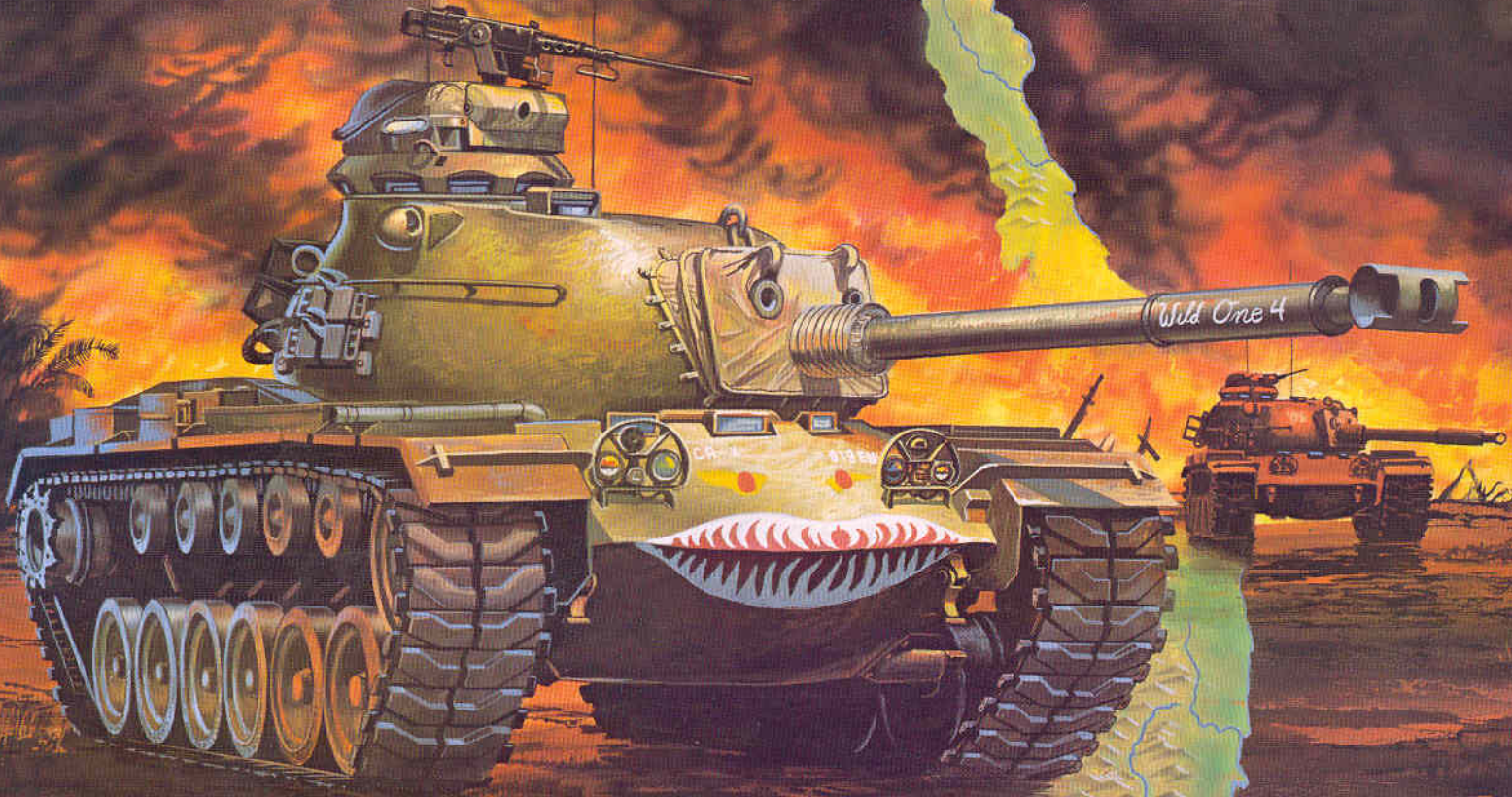


ARMOR IN VIETNAM

A Pictorial History



squadron/signal publications inc.

By Jim Mesko

CHINA

NORTH VIETNAM

LAOS

GULF OF TONKIN

SOUTH VIETNAM

SOUTH CHINA SEA

DIEN BINH PHU

PHUOC YEN

KEP

HANOI

HALPHONG

MINH BINH

BAN ME THUOT

CAM RANH BAY

TAY NINH WEST

NUON CO

SAIGON

PHUO RANG

VUNG TAU

ARMOR IN VIETNAM

A Pictorial History

by Jim Mesko

illustrated by Don Greer



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Dedication

This book is dedicated to all the members of the U.S. and allied forces who fought in Indochina and Vietnam but especially to those who gave their lives, and to my parents who suffered an "emotional tour" of Vietnam equal to my physical tour. To all of them this book is humbly dedicated.

Authors Note:

This book portrays one aspect of the war in Vietnam. It does not attempt to glamorize the war for there is little glamor in war. The vehicles shown here are instruments of death. They were part of a vast array of weapons which the United States used to fight a brutal and vicious enemy. The American fighting men who used them fought with great courage and tenacity. Many of them sacrificed their lives for the ideal of freedom. Over 50,000 U.S. soldiers lost their lives in the conflict yet the victory they fought so hard for was not to be gained. They were betrayed by weak-willed politicians, inept military leaders, and an unconcerned nation. They felt abandoned by their own country as they gave the best they had. Perhaps someday the country will appreciate what these men did. This book is in tribute to all of them.

Acknowledgements:

As in any book numerous people helped in the preparation of it. In particular I would like to thank Dana Bell and his wife Doreen for all their help and kindness on my various trips to Washington, IPMS Washington for their "non-research" help, the staffs of the various service photo agencies who were extremely helpful, and George Balin for his great generosity.

Photo Credits

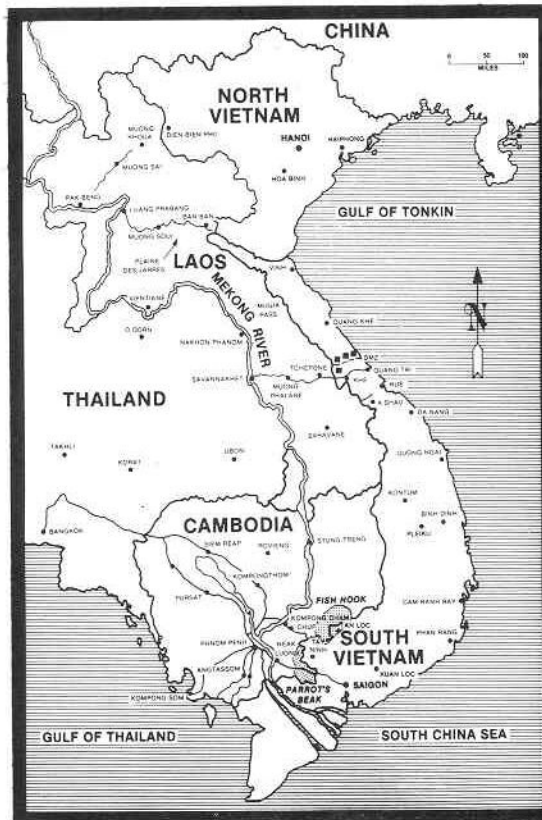
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Introduction

When the word Vietnam is mentioned, the vision of a hot, swampy jungle pops into mind. Though partly true, the Vietnamese terrain runs the full gamut from coastal lowlands to rugged mountains. As such, certain types of weapons were limited in their areas of tactical employment and usefulness. In *Armor in Viet Nam* I have attempted to deal with one such weapons system and though the "armor purist" may take issue with the various vehicles covered in this book, the decision was made early in the work to include any vehicle which was used to improve the mobility of personnel, weapons, and provide support. Consequently included among this multitude of vehicles, are a number of so-called "soft-skinned" vehicles, which played a major part in the combat role. However the majority of the material concentrates on the true Armored Fighting Vehicles (AFVs) used in the conflict.

In order to present an accurate and understandable photo essay demonstrating the use of armor in Vietnam, I have chosen to tell its story in a chronological sequence starting with the French effort during the *First Indochina War*, and progressing step by step through the Army of the Republic of Viet Nam (ARVN) development, United States involvement, and ending with the North Vietnamese Army (N.V.A.) armored thrusts into the South. Looking back over the history of Indochina and Vietnam, the war is consistently referred to as a guerrilla war, yet the final blows that shattered the Saigon government were not dealt by guerrillas, but by massive waves of conventional infantry, supported by armor and artillery. This was just the opposite of what the French, the U.S. and ARVN forces had been fighting for so many years.

During my tour in Vietnam I witnessed the 1972 Easter invasion and faced the real possibility of confrontation with N.V.A. armor. At one point their tanks were only a two hour drive from Saigon. At night I watched the sky redden and felt the ground shake as B-52s carried out strikes against the enemy armor. As events turned out I did not face enemy tanks, but at the time it was an eventuality that seemed to loom just over the horizon. Day by day N.V.A. forces rolled through numerous ARVN fire bases and towns, drawing closer to the major South Vietnamese strongpoints. Radio reports told of vicious fighting near An Loc, Pleiku, and Quang Tri. Finally, backed by massive U.S. airpower, the South Vietnamese ground forces regrouped, counter-attacked, and finally brought to a halt the N.V.A. offensive. My own experiences, perhaps somewhat atypical of what most G.I.s experienced in Viet Nam, influenced my feelings toward the use of armor in this conflict.



THE WET SEASON

SOUTH VIETNAM

Tank, APC inoperable
 Tank inoperable



THE DRY SEASON

The reader is asked to keep in mind that this book deals with the subject of armor in Vietnam in general. It is not designed to be a detailed history of each and every armor battle or operation. I have not gone into great detail on any specific battle but tried to highlight a few of the more important ones. Any reader interested in a more detailed account should read *Mounted Combat in Vietnam*, from the U.S. government's Vietnam Studies series. Published by the Superintendent of Documents this book covers the use of armor in Vietnam in great detail and is highly recommended to anyone with an interest in armor or Vietnam.



This M-48, from the 3rd Tank Battalion, U.S.M.C., takes part in OPERATION STARLITE, the first use of U.S. armor in the Vietnam war. The operation took place in August 1965. Note the wading exhaust in the rear and the tank's relative clean and uncluttered look. (U S M C)

The First Indochina War 1946-1953



M-5 from LeClerc's 2nd Armor Division which landed in Vietnam in 1946. Note unit markings on side of hull and white star, which helped embitter many Vietnamese against the U.S. (Balin/E.C.P.)

An M-8 Howitzer Motor Carriage (H.M.C.) helps provide convoy security in the Tonkin area. Note mixture of bogey wheel types and the rubber block type track. (Balin/E.C.P.)

When France fell to the Germans in May 1940, the colonial administrators in French-Indochina faced a serious dilemma. Though supposedly under the control of Marshall Petain's Vichy regime, they were basically on their own. To bolster their defenses an attempt was made to have French arms contracts in America diverted to the colony. Washington vetoed this idea and most of this material was taken over by the British. Washington's refusal left the French in a precarious position. Although there were some 70,000 French troops scattered throughout Indochina (Vietnam, Laos, Cambodia), they were woefully ill-equipped. The air force had only one squadron of modern fighter aircraft and the armored force only one tank company. The French were left with no alternative but to try and accommodate an increasingly belligerent Japan which wanted bases in Indochina for future aggression. In September 1940, fighting broke out between French and Japanese troops in northern Vietnam which resulted in an eventual armistice and agreement whereby the Japanese were allowed to station troops in specified areas of the country. In January 1941, Thailand, a Japanese ally, attacked Cambodia and Laos. After some initial losses, the French drove the Thais back, but the Japanese stepped in and forced territorial concessions from the French. As 1941 progressed Tokyo expanded her hold on Indochina by sending in additional troops and acquiring a number of airbases.

After the outbreak of war with the U.S. in December 1941, Japan used Indochina as a springboard for the conquest of allied territories in Asia. By the summer of 1942 Tokyo had reached its pinnacle of success, but from that point on her fortunes ebbed. As defeat followed defeat the Japanese became more demanding and suspicious of the French. Allied airpower began regularly hitting Japanese airfields and shipping in and around Indochina which made them wonder if the French were providing the allies with intelligence. Finally, in March 1945, the Japanese carried out a series of surprise attacks against the remaining French installations in Indochina. After much bitter and brutal fighting most of the French troops were captured. A few managed to escape but most were placed in prison camps where they received extremely harsh treatment at the hands of their Japanese captors.

By this time the allies were planning the re-conquest of Indochina. French forces were scheduled for redeployment from Europe to join in the allied attack in late 1945 under the command of Lord Mountbatten. The sudden collapse of Japan following the atomic bomb raids in August 1945, caused Mountbatten problems. Since there as yet were no French troops available to reoccupy the area, the decision was made to have Chinese and British troops move into Indochina until sufficient French forces became available. The Chinese were responsible for control over northern Vietnam while the British moved into the southern portion. While this was going on a Vietnamese communist group, the Viet Minh, moved into the local power vacuum created by the Japanese surrender. Led by Ho Chi Minh, they began to occupy strategic positions throughout the country. In the north Chinese troops, being more interested in looting than in controlling the country, left the Viet Minh alone. In the south, as British troops attempted to control their areas, "incidents" began to occur. There was fighting and eventually even Japanese POW troops were used to stamp out centers of armed resistance. By the end of 1945, the situation seemed to finally have been resolved. The Viet Minh realized that their aims might be better obtained through diplomacy rather than fighting.



An agreement was finally reached whereby British and Chinese troops were replaced by French units but the Viet Minh were allowed to have some degree of autonomy in the areas they controlled, primarily in the north. The first French units landed in the spring of 1946 at Haiphong and Hanoi under the command of General LeClerc, the famous armored leader from World War II. This force, known as the French Expeditionary Force (F.E.F.)* included seasoned armored units from the Second Free French Armored Division. They were equipped with M-3 and M-5 Stuart light tanks, M-4 Sherman medium tanks, M-3 halftracks, M-3 White scout cars, M-8 and M-20 Greyhound armored cars, and M-7 Priests and M-8 Gorilla self-propelled howitzers. Later British supplied Coventry armored cars and Humber scout cars were used, along with pre-war French Panhard armored cars and even a few captured Japanese tanks.

During their initial deployment French forces fanned out along the main routes of communication. Due to the war and lack of care, the road system was in a high state of disrepair and only tracked vehicles could operate freely. Since the truce allowed the French to re-occupy the area, the Viet Minh offered no resistance. The French were fortunate for had they been forced to fight along this dilapidated road network they would have suffered grievous losses. The uneasy truce between the French Expeditionary Force and the Viet Minh lasted until December 1946 when French and Viet Minh forces clashed in Hanoi, setting off full-scale hostilities. Following the outbreak of open warfare, the Viet Minh faded into the countryside, leaving the French in control of most of the larger cities. In the outlying areas, however, the elusive guerrillas began cutting roads, blowing up bridges, and attacking isolated French outposts. In their initial attempts to come to grips with the Viet Minh, French forces moved out along the roads, which allowed the Viet Minh the opportunity of engaging them at will. Numerous convoys and relief columns were, of course, ambushed, resulting in heavy losses in men and material. Armored vehicles were employed piecemeal and suffered correspondingly. In particular, halftracks and armored cars, lacking cross-country mobility in wet locale, were restricted in their movement and presented relatively easy targets to the guerrillas.

Following these initial setbacks, the F.E.F. began to seek ways to more effectively employ their armor and to increase their mobility in the soft countryside. The arrival of some new US amphibious vehicles, the M-29 C Weasel and the LVT 4 Alligator helped to increase mobility in marshy areas. The Weasals, renamed Crabs by the French, were used for troop and supply movement. Without armor plating they were susceptible to enemy small arms fire, but when properly deployed, the Crabs were able to provide valuable support. The Alligators were more versatile than the Crabs, not only could they carry troops and supplies, but the LVT(A)4 armored version could provide fire support. Some were modified to carry Bofors 40MM guns or recoilless rifles, providing much needed fire support when the terrain limited other types of AFVs. Though not ideal vehicles, they did provide a degree of off-road mobility and firepower to French units.

Unfortunately the piecemeal use of armor went on, partially out of necessity, since the Viet Minh rarely concentrated their forces for any length of time, but also because of a failure to realize just how vulnerable unsupported armor was. For example, three full-armored platoons scattered piecemeal along the border forts facing China, were simply swallowed up during General Giap's fall offensive of 1950. During the Viet Minh's attempt to cut the supply line to Haiphong, another platoon was lost defending Mao Khe, their armored cars buried in the town's rubble with the crews acting as infantry. More armor was lost at Tu-Vu during the battle to keep open the road to Hoa Binh, a town recaptured from the Viet Minh in November 1951. An outpost designed to protect a portion of the supply route to Hoa Binh, Tu-Vu was

defended by two infantry companies and a five-tank platoon of M-5 Stuarts. The tanks directly supported one infantry company, while the other infantry company dug in on the other side of a small river. On 10 December 1951, the Viet Minh first wiped out the isolated company, then five communist battalions attacked Tu-Vu quickly overrunning the infantry. The tanks extracted a terrible toll, but were finally engulfed and destroyed by hand grenades, satchel charges and bazookas. The tankers died to the last man, roasted alive inside their vehicles.

*Also referred to as French Union Forces (F.U.F.)



Sherman moves up in support of Vietnamese infantry in operations near Bac Ninh, 1952. Insignia on turret is unknown. (Balin/E.C.P.)

Stuart mounted with Vietnamese infantry, crest the top of a village dike. Note the searchlight mounted in tandem with the machine gun and the variety of the infantry's clothing. (Balin/E.C.P.)





(Left) M-8 H.M.C. near the Noire River, 1952, with a mixed French/Vietnamese crew. Unit crest on turret is same as Stuart named *Malplaquet*. Both are equipped with the metal cleat-type tracks. (Balin/E.C.P.)

(Middle Left) Dragon, an M-5 A1, during operations in Cochinchina, south of Saigon. Name is either in white or yellow. It was a very common practice to name vehicles within a unit with the same first letter, or on occasion, to have all vehicles carry the same name. A jury-built rack is also evident at the rear. (Balin/E.C.P.)

(Middle Right) Stuart from Mobile Group 1 near Phu Ly, in Upper Tonkin 1952. Again a searchlight is mounted with the machine gun to aid in night combat. (Balin/E.C.P.)

(Bottom) M-4 A1 descends into a dry rice paddy in Upper Tonkin, while supporting an infantry unit. Shermans were gradually replaced after the late 1940's by new M-24s from the U.S. (Balin/E.C.P.)





An M-36 Jackson, part of a tank battalion formed in 1952 against possible Chinese intervention. However, they were used mostly as infantry support in the Tonkin area since the Chinese threat never materialized. Note additional armor applied to turret and machine gun. (Balin/E.C.P.)

Bren gun carrier fitted with an anti-grenade wire screen and armed with a water-cooled .30 caliber machine gun. A few of these small tractors were received from the British during their occupation of southern Vietnam but were quickly replaced by U.S. vehicles. (Balin/E.C.P.)



Vietnamese unit in front of a French/Vietnamese manned LVT 4 Alligator. This mixing of personnel became a very common practice as the war continued to drag on. (Balin/E.C.P.)





Crab (weasel) prepares to go on an operation in northern Vietnam. It was standard procedure to raise the forward shield for improved visibility of the low seated driver. (Balin/E.C.P.)



An alligator, armed with a 40MM Bofors, sits atop a dike and fires on Viet Minh positions. In the background is a column of Crabs. Armed LVTs were often needed to back up the Crab sections. (Balin/E.C.P.)

A Panhard 178 armored car, of pre-World War II vintage, is prepared for convoy duty. These were used until the French departed in 1955 and some survived to see use with the South Vietnamese army. *Carmen* appears to be on a dark green background and covers up an earlier name. (Balin/E.C.P.)





(Above) Coventry Mark I, equipped with a 2 pounder, believed to be from the 5th Regiment de Cuirassiers. Note the application of the name to the front glacis plate. (Balin/E.C.P.)

(Below) M-8 Greyhound moves along a road in the Tonkin region, 1951. In addition to its name the vehicle also carries a heart symbol on its turret, a practice used by the French in 1939/1940. Searchlight adaption is rather unusual. (Balin/E.C.P.)



(Above) Coventry armored cars cover a minesweeping operation in support of Montaguards in Anman, 1950. Vehicles are from the 4th Reconnaissance Squadron. (Balin/E.C.P.)

Unit commander directs M-8's fire during fighting at the Noire River, January 1952. Fenders were often removed due to battle damage or because they collected large quantities of mud. (Balin/E.C.P.)





(Above) M-8 leads two Stuarts on a patrol near a village. The lack of external stores indicates that this is a local operation near their base, rather than a sustained field action. (Balin/E.C.P.)



(Left) Unusually modified M-3, possibly a command vehicle, in a town in northern Vietnam. A number of halftracks were so modified. (Balin/E.C.P.)

(Right) Column of Chaffees rest outside a Tonkinese village in 1951. The large amount of external stowage is evident on each tank. (Balin/E.C.P.)



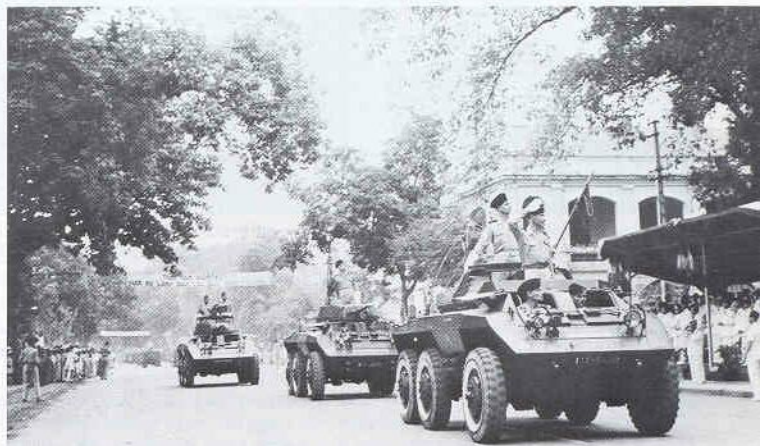
(Below) M-24 light tanks await orders to move out along with their accompanying infantry support. Note heart insignia on first and third M-24's turret side and U.S. star on top of second Chaffee's turret. (Balin/E.C.P.)





(Above) M-3 armored car passes in review during a parade. From the anchor insignia on car's side it appears it is from a marine or naval commando unit. (Balin/E.C.P.)

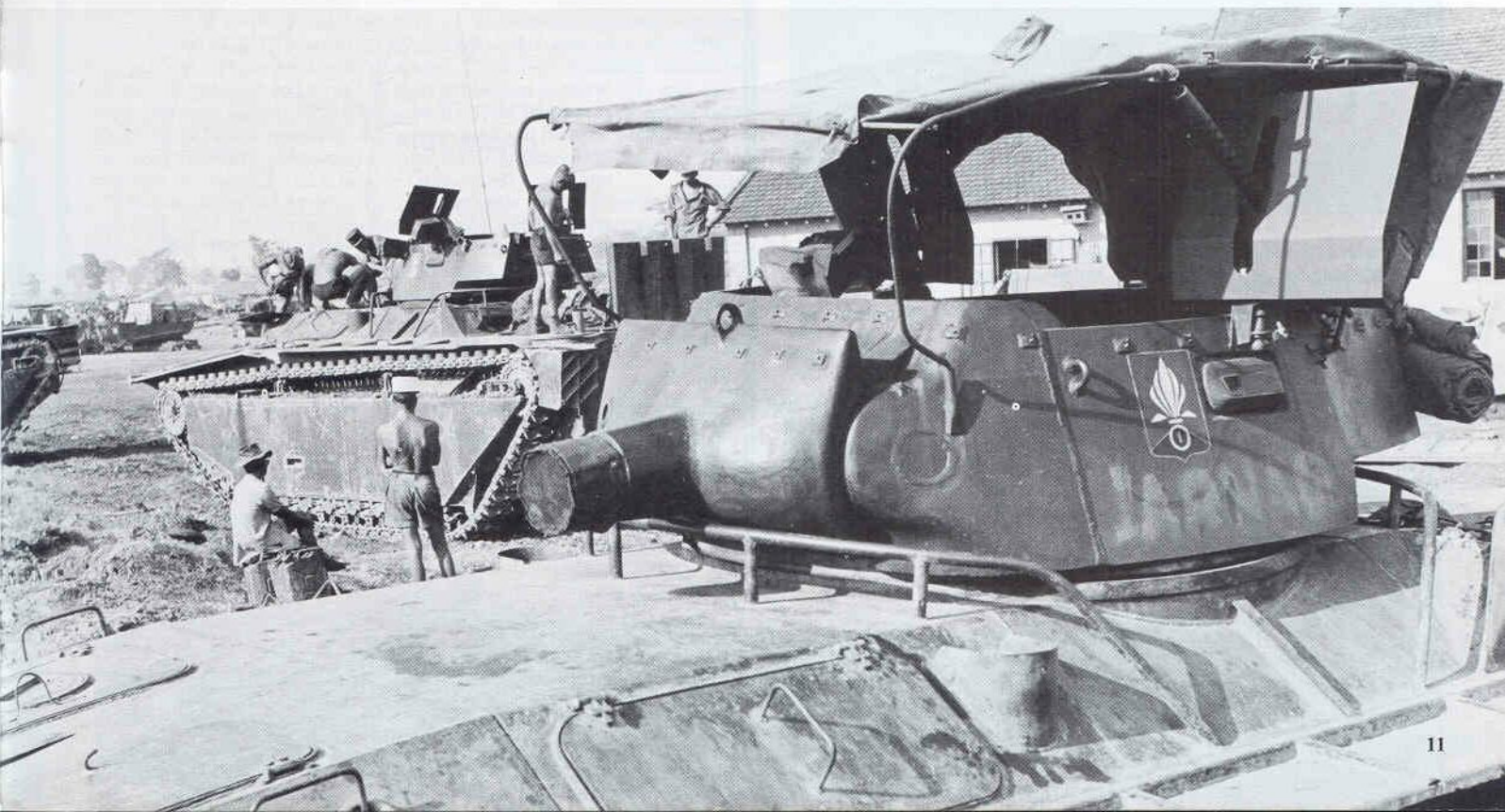
(Right) M-20 leads parade of M-8s and crabs. All three lead vehicles have white wall tires and white gloved crews, typical of the military fondness for pomp and pageantry.



(Left) M-24 on patrol in upper Tonkin. Note vast variation in soldiers uniforms and external storage. Barely visible is a name and serial numbers on the upper front glacis plate. All serial numbers were preceded by the French tricolor and the prefix IC-9. (Balin/E.C.P.)



(Below) An LVT(A)4 from a composite amphibious group. Normally six LVT(A)4s formed a support platoon, but three were also attached to each LVT troop of eleven vehicles. (Balin/E.C.P.)



Through setbacks like these the French learned. New American equipment, like the M-24 Chaffee provided better mobility and firepower. Formations of armored groups (groupements blinders or G.B.s) and reconnaissance groups (groupes d'escadrons de reconnaissance or G.E.R.s) provided greater flexibility. Mobile groups (groupements mobiles or G.M.s) were developed to provide faster infantry reaction to enemy assaults. These units were basically organized along the following lines.

armored group (G.B.): one M-24 tank company and two infantry companies in M-3 halftracks.

reconnaissance group (G.E.R.): One M-24 tank company, three platoons of M-8 armored cars, one M-8 self-propelled howitzer platoon, and an infantry force.

mobile group (G.M.): one M-24 tank platoon, three truck mounted infantry battalions, and a towed 105MM howitzer battery.

The French also reorganized their amphibious units in the following manner:

amphibious group: two M-29 Crab companies, three LVT-4 Alligator troops with nine infantry troops, with three 75MM LVT 4 (A) in each troop, and one support platoon of 75MM LVT 4 (A)'s.

While this tactical reorganization did much to help the F.E.F. regain some of its lost initiative, Viet Minh forces could still attack and withdraw at will. In an effort to draw the enemy into a set piece battle, the French developed the concept of "air heads", a base set up by paratroops in the Viet Minh's rear area, hoping to force the guerrillas to mass their troops so that French firepower could deal with them.

The most famous of these air-heads was Dien Bien Phu. Dien Bien Phu is a small village located in northwest Vietnam near the Laotian border. It is in a valley twelve miles long and four miles wide and is surrounded by a series of hills covered by dense jungle. In November 1953 French paratroopers seized the village and an old airstrip and began pouring in thousands of troops. These troops brought with them ten disassembled M-24s which were reassembled and formed into a composition squadron of three platoons. Four M-16 quad .50 caliber halftracks were also brought in to supplement the tanks firepower. These units would provide the garrison with mobile fire support when the Viet Minh attacked. The idea behind the "air-head" was logical if the enemy did not have artillery to close the airstrip and destroy the French positions. In the past this was true but at Dien Bien Phu this was not the case. The Viet Minh had acquired captured American 105MM howitzers from the Chinese and through superhuman effort had moved them through the jungle to the hills overlooking the base. The 105s were dug into bunkers so cleverly camouflaged that the French were never able to neutralize them with counter-battery fire from their own artillery which were in open positions.

At the start of the actual battle for Dien Bien Phu the tanks were distributed in the following manner.

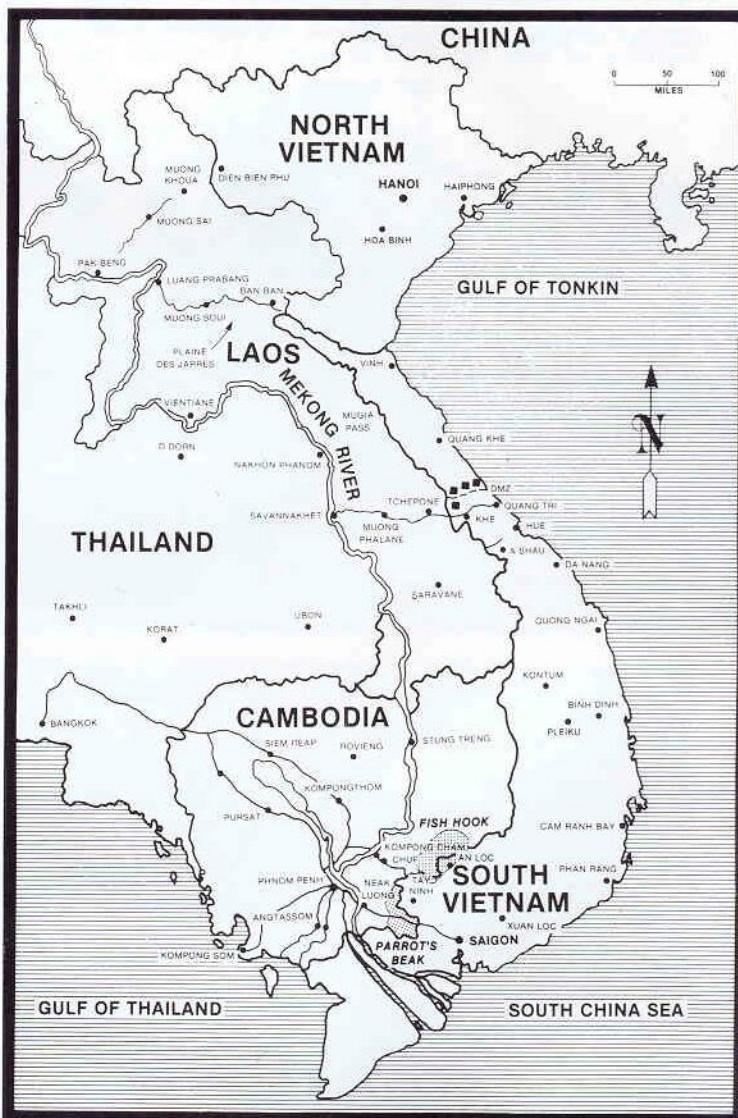
Main position at Dien Bien Phu

Unit	Tank's Name
Headquarter Squadron	<i>Bazeille</i>
First Platoon	<i>Conti</i> <i>Douamont</i> <i>Ettlingen</i>
Second Platoon	<i>Auerstaedt</i> <i>Posen</i> <i>Smolensk</i>
Strongpoint	<i>Isabelle</i>
Third Platoon	<i>Ratisbonne</i> <i>Neumach</i> <i>Mulhouse</i>

Throughout the seige the small armored squadron was in constant demand to extricate pinned down units, or to support counterattacks. The M-24s, nicknamed "Bisons" by the F.E.F saw action nearly everyday. Though often damaged by bazookas or recoilless rifles, they continued to operated as long as crews were available. As they were damaged beyond repair, they were put to use as pillboxes. In the end the sheer weight of enemy firepower put most of the "Bisons" out of action. When the decision was made to surrender, the crews of the few remaining tanks attempted to destroy them. They were only

partially successful since the Viet Minh were able to salvage one or two for propoganda usage. Following the surrender order numerous breakout attempts were made, but of all the troops in the valley only the tank platoon at Isabelle was able to escape as a unit. Most of those captured would die in captivity, either on the forced march to the prison camps or in the camps themselves due to the brutality of Ho Chi Minh's guards. Nearly 27,000 French troops had been captured from the war's beginning up to Dien Bien Phu where an additional 10,000 were taken. When the war ended, of the 37,000 prisoners, less than 11,000 were still alive and over half of these desperately needed medical attention. Few of the survivors were from Dien Bien Phu.

One of the questions raised about Dien Bien Phu was the strength of the tank unit. In post-action reports the armored personnel maintained that a full strength unit of seventeen M-24s could have saved the position. In light of their numerous successes during the battle this opinion has a great deal of credibility. But the piece-meal employment of armor perhaps robbed the French of their most important victory. Within a short time of the fall of the fortress, the two sides concluded a peace treaty in Geneva, Switzerland. Aside from a few advisory personnel, the French presence in Indochina was over.



Army Of The Republic Of Vietnam



South Vietnamese Armor The Early Years

M-8s from the 3rd Squadron, with French commanders, prepare to move out on patrol. (Balin/E.C.P.)

In their effort to "Vietnameze" the war the French had integrated Vietnamese troops in their units, and also formed separate Vietnamese units. In 1950, the Vietnamese Armor Corps was established with training and officers being supplied by the French. The Vietnamese gained valuable combat and tactical training under French tutelage which laid much groundwork for the future.

With the signing of the Geneva Agreements, the French pulled out of Indochina. In the southern portion of the country, Ngo Diem, a popular leader formed a separate government from the communist led government in the north — The Republic of Vietnam. The nucleus of the Republic's new army was the units and personnel trained by the French. The name given to this force was the Army of the Republic of Vietnam (ARVN). It was organized into conventional divisions, and assigned to the four military regions of the country. Each division was supported by an armored regiment, equipped with M-5 and M-24 light tanks, M-3 halftracks, M-3 scout cars, M-8 armored cars, and M-8 Howitzer Motor carriages. These were the same vehicles that the French had used and most had been left behind by the F.E.F. and were in extremely poor condition. ARVN used the same piecemeal defensive tactics that the F.E.F. had practiced. The armor was used in static positions, or for road security. They were rarely committed to actions in the field because of poor tactical training and a lack of cross-country mobility.

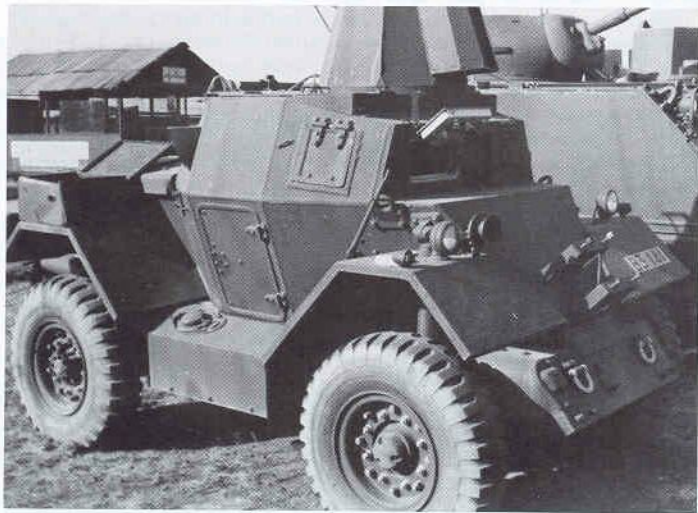
With the arrival of American advisors in early 1956 a general reorganization took place within the Vietnamese Armor Corps. It quickly became patterned after the U.S. Army units. Training was instituted in gunnery, maintenance, communications, and numerous other areas that ARVN was deficient. However, like other advisors, the few armored officers faced the indifference of their ARVN counterparts, who were often political appointees. These ARVN officers were usually more interested in furthering their own careers than in increasing their unit's effectiveness.



Infantry move up to support an M-8 from the 3rd Squadron, Vietnamese Army. Numeral is either White or Yellow. (Balin/E.C.P.)

Vietnamese M-8 HMC and M-8 armored car engage Viet Minh near Phu Ly in July 1954. Vehicles are from the 3rd Reconnaissance Regiment. (Balin/E.C.P.)





British manufactured Dingo scout cars were used by ARVN for base and road security. One eventually was reconditioned for use with the U.S. 4th Cavalry. M-113 in background has turret from M-8 armored car mount on it, a very rare modification. (U.S. Army)



Modified ARVN halftrack as a wreck and barrier removal vehicle. (U.S. Army)



(Above) Camouflaged M-24s parade down the center of Saigon. Patterns appear to be fairly similar on all vehicles. (U.S. Army)

(Below) Newly arrived M-113 is tested just after the battle of Ap Bac. Exposed positions of commander and crew are quite evident. (U.S. Army)



One of the terms in the Geneva Agreement had been for a free election to unite the two Vietnams. Diem refused to abide by this and by 1957 both portions had separate governments. The new South Vietnamese government began to spread control throughout the country. Some Viet Minh who had stayed in the South in violation of the Geneva accord now began forming guerrilla bands. Directed from the North, these guerrilla units began attacking isolated outposts and convoys. By the early 1960s, the countryside was again aflame with fighting. U.S. advisors, realizing that drastic steps were needed, requested more men and equipment to bolster ARVN. Armored units received the new M-113 Armored Personnel Carrier (APC) in the spring of 1962, two companies in the Mekong Delta being outfitted with them. These were misused at first but ARVN troops gradually began to employ the M-113s effectively. The cross-country mobility of the M-113 was superior to any other vehicle in the South Vietnamese inventory and gave their troops new hitting power. The Viet Cong (VC) were surprised by this new vehicle and initially suffered heavy casualties. The A.P.C.s were successfully used as a light tank but had some severe shortcomings. The .50 caliber machine gun had no armor protection for the gunners. Even though they were amphibious the carriers often got bogged down in rice paddies or could not climb the slippery paddy dikes. Gradually, as the shock wore off, the V.C. were able to adapt their tactics to the new weapon. They began operating in terrain where the M-113s had difficulty operating and began using heavier weapons against the APCs. ARVN casualties again climbed dramatically. In the battle of Ap Bac, southwest of Saigon, a large V.C. unit stood and slugged it out with a South Vietnamese force which included M-113s. Caught in the open while attacking, fourteen gunner's were killed while manning the exposed .50 caliber machine gun. ARVN's attack quickly turned into chaos which allowed the V.C. unit to escape after inflicting substantial casualties on ARVN troops and their U.S. advisors.

Ap Bac was a catalyst for the Armor Corps. The M-113-s performance in the battle was heavily criticized in the after-action report. In particular the severe losses suffered by the exposed machine gunners prompted a demand for better protection. A combination shield and turret was designed for use by the gunners which later became standardized on the M-113. It was also noted that for the first time the V.C. had stood and fought regular ARVN units when they could have withdrawn. To counter this new enemy aggressiveness the existing armor units were expanded and new ones created. The old M-24 Chaffee was slowly phased out, being replaced by the M-41 light tank which had better cross-country performance and mounted a 76mm gun. The new M-114 reconnaissance vehicle which had been tested along with the M-113 was found to be ill-suited for use in Vietnam. It had poor cross-country performance and experienced great difficulty in entering or leaving rice paddies. Vietnamese units which were equipped with it received M-113s and it was dropped from ARVN service.

During this time armor units also began to play a prominent part in the politics of the Saigon government. The Vietnamese president, Diem, was under constant pressure from dissident factions. On a number of occasions Diem had been faced with the real possibility of a coup by the military. Armored officers usually were political appointees, and their units were often kept close to Saigon in order to suppress any such revolt. This policy not only tied up valuable armor, but also adversely affected morale. Capable officers were often times passed over for promotion since few of them had political connections. The majority of the promotions went to political lackeys who



Self-propelled railroad armored cars, called *Wickums*, were used, along with armored trains, to keep the rail lines opened. They proved unable to cope with the elusive Viet Cong forces. (U.S. Army)



Armored troops helped overthrow Diem in November 1963. Here ARVN M-113s guard a strategic point during the coup. Colors are Olive Drab and a brownish Tan, number is in white. (U.S. Army)

ARVN M-114, with M-113 in background, maneuver during training. The M-114 proved to be totally unsuited for use in Vietnam and was quickly phased out. (U.S. Army)





were usually incompetent. With little training and no action the armored units soon became virtually worthless except as "coup" troops. Eventually dissatisfaction with Diem's regime led to a coup which toppled him in November 1963. Armored units helped the dissident factions force Diem to flee his palace. Diem was later captured and murdered while waiting at a railroad crossing in a M-113. Even after Diem's demise armored units were still kept in reserve around the capital to provide the current leadership with a quick strike force to combat any takeover.

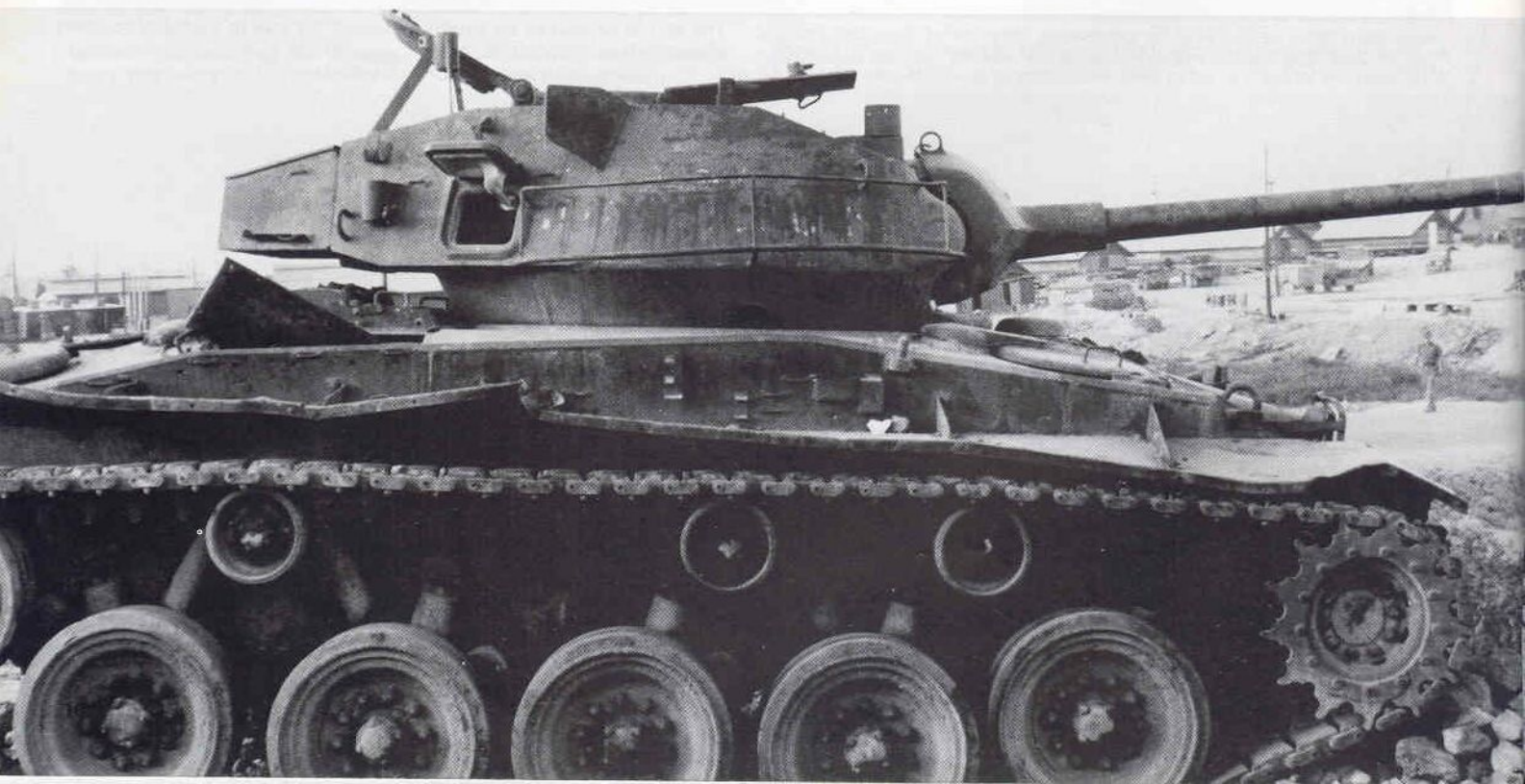
Following Ap Bac and Diem's overthrow, the Cong stepped up their attacks. With low ARVN morale and constant turmoil within the Saigon government the V.C. decided that the time had come to deal the *killing* blow. They abandoned their guerrilla tactics and began staging multi-battalion attacks against government units and positions. Rather than fading from a battlefield the V.C. held their ground, inflicting heavy casualties on government troops. Armored units which moved to relieve beleaguered forces were often caught in well-laid ambushes and suffered grievous losses. This continued throughout 1964 and by the beginning of 1965 South Vietnam was in danger of falling. As the situation worsened the V.C. expanded their terrorist attacks against U.S. personnel and installations. In an effort to protect these, President Johnson ordered U.S. Marines to Da Nang. Soon American units were deployed in the countryside and by the fall of 1965 Americans were in combat throughout Vietnam. Soon more units, including armor, were sent to fight as enemy strength increased. Regular units from the North Vietnamese Army (N.V.A.) were sent South to help counter the U.S. build-up. A whole new war had begun. A whole new chapter in the history of armored warfare was about to be written.

M-24 relegated to use as a static pillbox around camp perimeter. (Harvey via Bradford)

Newly arrived M-114 moves through a village. Though hard to detect, it carries a reddish-brown and Olive Drab camouflage pattern. Note added gunshield to rear .30 caliber and how commanders' weapon is reversed. (U.S. Army)



South Vietnamese armored car, believed to be based on a Canadian chassis, awaits repair near Saigon. (U.S. Army)



UNITED STATES MARINE CORPS



Armor By Mistake

It is surprising that the first U.S. armor force to deploy to Vietnam was not an army unit but the 3rd Marine Tank Battalion. This unit, equipped with M-48 A 3s landed in March 1965 in Da Nang. At that time the U.S. Military Assistance Command Vietnam (MACV) had not planned to employ armor in the country for a variety of military and *political* reasons. However, when the Marines were ordered to deploy *in-country* they took *all* their heavy equipment with them, "The Marines just didn't know any better". When this was learned numerous high U.S. officials were *very upset* with this "escalation" but as far as the Marines were concerned they could have cared less. Since the tanks and other armored support were already in Vietnam, it was used as the Marines saw fit. By the end of the year most of the 1st Marine Tank Battalion would also be ashore, but these were the only Marine tank units deployed prior to their withdrawal in 1969.

The bulk of Marine armor was made up of three types of vehicles: the M-48 A 3, a diesel powered tank armed with a 90MM gun, and two machine guns. A variation of this, the M-67 with a flame thrower in place of the cannon was also part of the tank battalion. To back up their tanks, the Marines brought along two other armored vehicles, the Ontos and the LVTP-5. The Ontos was a fully-tracked vehicle with light armor and carried six 106MM recoilless rifles mounted atop it. Designed as an anti-tank weapon, it carried a crew of three and had a 30 caliber machine gun for close-in defense. These equipped the 1st and 3rd Anti-Tank battalions. The LVTP-5 amtrac was the Marines general assault, personnel, and cargo carrier. Different versions of

M-67 flame thrower tank, guards perimeter of Hoa Long, during a sweep of the area. Unusual is the mounting of a machine gun atop the cupola, while retaining the internal cupola gun. (USMC)

this vehicle were developed for specific purposes. The LVTR was used as a repair retriever vehicle, the LVTE was designed to clear away mines and obstacles during combat operations, and the LVTH was a support vehicle equipped with a 105MM turret mounted howitzer. Each vehicle was also fitted with one or two machine guns for self defense. These were assigned to the 1st and 3rd Amphibious Tractor Battalions.

By the end of 1965 the total U.S.M.C. armor strength totaled 65 M-48s, 12 M-67s, 65 Ontos, 157 LVTP-5s, and a number of LVT variants. This was a sizable force of armor and the only U.S. armored force in Vietnam since the army was still *restricted* from deploying their tank and mechanized units.

The Marine concept of armor employment centered around one idea, the close support of *grunts*. Though it might be occasionally used for convoy escort or base security, it was, first and foremost, there to support the grunts. As such it was parcelled out to the various regiments, battalions, and companies in size ranging from a single company to sometimes a single tank. Despite the obvious failure to concentrate their armor, the Marines seemed to experience very few tactical problems while employing their armor in this fashion.

Within a short time following its deployment, Marine armor carried out the first action of the war for any U.S. armored unit. Throughout the first part of the summer of 1965, the Marines carried out small patrols and sweeps

Marines hitch a ride on an M-48 during a patrol north of Dong Ha. (USMC)





Ontos provide support for marines on a sweep near Phu Bai. Extra food and water are carried to resupply the infantry. (USMC)

around their bases but no large scale combat resulted. In the beginning of August, however, intelligence reports indicated that the 1st V.C. Regiment planned to attack the base at Chu Lai. To forestall this, OPERATION STARLITE, a multi-battalion spoiling attack, was launched against suspected enemy positions. Coordinated ground, helicopter, and amphibious assaults trapped the enemy force with their backs to the sea. Unable to slip away, the V.C. were forced to fight it out. In the week long battle, Marine armor provided much needed fire support and inflicted numerous casualties on the V.C., while helping to keep down U.S. losses. Though on occasion hampered by muddy rice paddies and dense jungle, the tanks, Ontos, and amtracs were able to keep up with the grunts, proving that armor could effectively operate in most areas of Vietnam. However, other lessons were also learned. A resupply column of three tanks and five amtracs, without infantry support, ran into a V.C. force and was pinned down. Though able to hold off and inflict sizeable casualties on the attacking enemy, this action underscored the fact that in jungle combat, armor must have infantry for close-in protection.

STARLITE set the pattern for future use of armor by the Marines until their withdrawal. The M-48s and Ontos' battalions were continually being broken down and parcelled out piecemeal to infantry units providing them

with needed support. This was done to a lesser degree with the amtracs since these were normally used to move troops or supplies for battalions or regimental operations which required them in large numbers. When not supporting field operations, the armor was often used in static defensive positions, protecting bridges, base camps, support bases, or as escorts for convoys. It was normal practice to give every tank or Ontos an assigned defensive position when they came into a base camp or fire support base. Their armament was integrated with that of the base and used to supplement the base's own firepower in case of a ground attack by Charlie. In static positions the M-48 and the Ontos were used as self-propelled artillery. They were bunkered in and sited to provide direct fire support to base defenders.

During the siege at Khe Sanh in 1968, there were five M-48s and two Ontos platoons from the 3rd Tank and Antitank Battalion. These provided much needed mobile support within the base and had the enemy attempted to overrun the garrison, would have provided invaluable mobile support. Since many people compared the siege of Khe Sanh to Dien Bien Phu it would have indeed been interesting to see what would have occurred if the N.V.A. had attempted a massive ground assault. In the only serious ground attack on the base the N.V.A. was repulsed with heavy losses. Had more assaults taken place the siege of Khe Sanh might have been one of the biggest victories for the U.S. of the entire war.

LVTH ferries marines across a river during a search and destroy south of Da Nang. Vehicle is armed with a 105mm howitzer. (USMC)

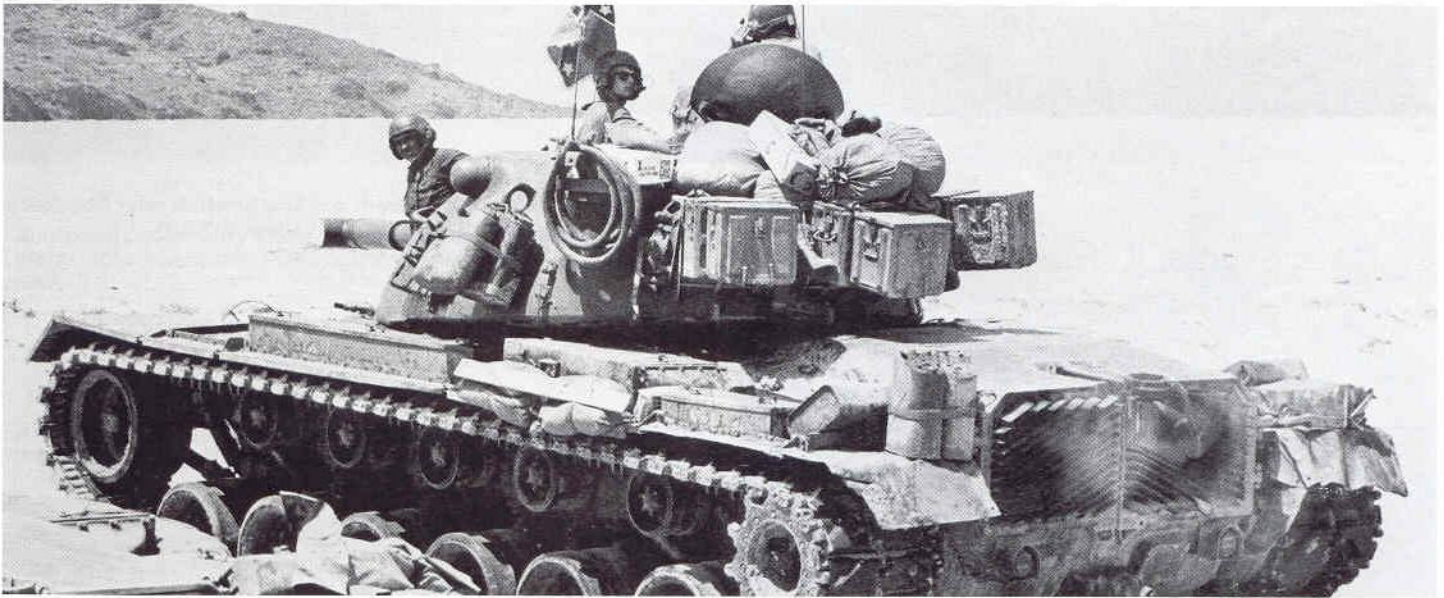


ARTILLERY AND MISCELLANEOUS ARMOR

While the siege of Khe Sanh was going on, Marine armor was called upon to play a role it had not previously experienced in Vietnam. As part of their general Tet offensive, the N.V.A./V.C. launched the equivalent of a full division against the city of Hue, which quickly fell to the attackers. Caught off guard, U.S. and ARVN forces were now faced with the prospect of digging out a heavily armed, city-entrenched enemy force in vicious house-to-house fighting. Due to the close confines of the city and extremely poor weather conditions, air and artillery support were of very little use. The Marines were constantly forced to call on the armor to provide them with cover fire. The M-48s and Ontos proved invaluable in this role, and although the Marine casualty rate was high, without the armor they would have been far higher. When the dust of battle settled the enemy was decimated. Most of his troops committed to the battle were lost, due in no small part to the armored units involved.

Though Tet proved to be a severe military defeat for the N.V.A. and V.C., it was the *political turning* point of the war for the U.S. Following it, the policy of Vietnamization started to take hold, and some of the first units involved in returning stateside were the Marines. By mid-1971 all Marine combat forces had either left Vietnam or were in the process of standing down prior to redeployment.

Like the Army, the Marines also employed a variety of self-propelled artillery in support of their own and other Allied units. The general practice with these vehicles was to employ them at firebases scattered throughout the Marines Tactical Area Of Responsibility (TAOR). They were usually *bunkered-in* and provided fire support to the units in the field. The main vehicles used in this role were the M-53 and M-109, both mounting a 155MM gun in an enclosed turret. The enclosed turrets especially helped protect the guns and crews from enemy fire. This was particularly needed along the Demilitarized Zone (DMZ), where many firebases, such as Con Thien, were subject to N.V.A. artillery and rocket attacks from across the border. In the latter stages of the war, army troops were moved in to support the Marines. They brought with them the M-107 self-propelled gun armed with a 175MM cannon. These were often used to aid the Marines since their long range was extremely helpful. These 175MM cannons achieved notable success during the Battle of Khe Sanh when they provided general artillery support from Camp Carroll to the besieged outpost, along with suppression fire into Laos.



During OPERATION ARCADIA, M-48s move through heavy sand in support of the 1st Battalion, 1st Marine. Turret mounted searchlights proved invaluable during night fire fights. (USMC)

(Above) M-48s come ashore from an LST during ARCADIA, loaded down with extra gear and a rebel flag. Note sandbags below turret and 7-UP box by loader. (USMC)





Infantry receive fire support from a 155mm howitzer near Phu Bai. Interior is White while markings are in Yellow. (USMC)



M-76 "Otter", based on M-56 chassis, delivers supplies through rice paddies during OPERATION CHINOOK II, northwest of Hue. (USMC)

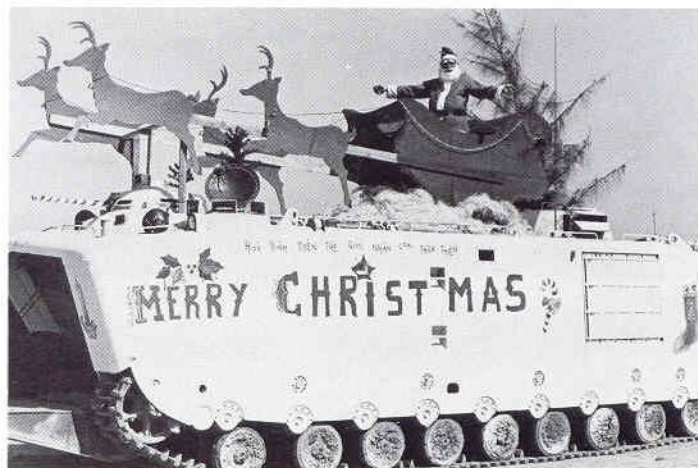


Flamethrower tank in action south of Da Nang. Nicknamed *Zippos*, they were never used extensively because of the availability of napalm from marine aircraft. (USMC)



Three Pattons from the 3rd Tank Battalion at a base camp north of Hue. The first two have had their cupolas modified with an additional section to increase visibility. (USMC)

Amtrack fitted to carry Santa. Nicknamed the *Jingle Bell Special*, the Vietnamese inscription reads *peace on earth, good will toward men*. (USMC)



War Wagon, a five ton truck, one of a number which were armored to provide convoy security. Note variety of uniforms among crew. (USMC)





(Above) Damaged M-48 surrounded by marines during KENTUCKY V. Inscriptions on cannon barrels were very common for marine and army M-48s. (USMC)

(Below) Sandbagged Ontos moves towards a new position during OPERATION IOWA. Note raised slats on sides to help carry more gear and the use of vegetation to break up the vehicles outline. (USMC)



(Above) M-67, heavily loaded, cover marines during OPERATION HICKERY II. Extra treads on turret provided protection from enemy anti-tank weapons. (USMC)



(Below) LVTEs, equipped with plows for mine clearing, go out on a patrol. Eyes are Red and White while card is White and Black. Note that the driver has an ace of spades painted on his helmet. (USMC)





Jungle vines are cleared from an M-48's antennae. Often the enemy rigged vines with explosives to kill or wound crewmen and passengers. Dense growth required close support of infantry. (USMC)

In addition to these vehicles, the Marines experimented with a number of other types to test their effectiveness under combat conditions. None of these ever became standard issue following their trials, and were quickly eliminated from Marine inventory.

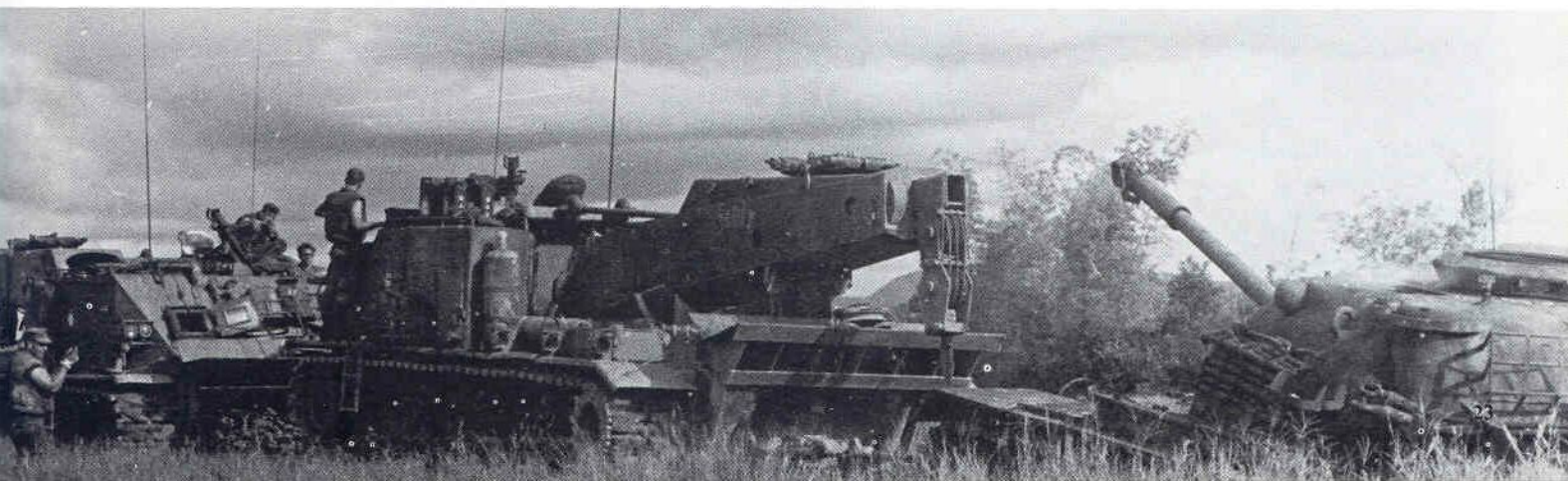
In support of the armor, Marines employed the M-51 tank retriever and the LVTR to extricate damaged vehicles. Very few tanks were actually destroyed in combat with the enemy. However, various enemy hand-operated weapons, and mines disabled a great many tanks. Many others suffered mechanical breakdown or became mired down in marshes and rice paddies. As a result the retrievers were in constant use. Without them, the Marines would have had a much lower number of serviceable tanks in the field.

The Marines also used armored trucks for escort duty. Convoy security was always a serious problem since the N.V.A. and V.C. were specialists in ambushing these lucrative targets. To help the M-48 and Ontos in convoy duty a number of trucks were provided with armor and automatic weapons. They were interspersed with the regular trucks and provided fire support against enemy attacks. The armored trucks were helpful in curtailing attacks on the convoys. But the Marines never employed them to the extent that the army did.

(Below) Two M-51 tank retrievers, *Bull* and *Bandit*, extricate a damaged M-48 south of Da Nang. Note how machine gun cupola has been removed prior to recovery. (USMC)



(Above) Ontos moves through brush during OPERATION MOBILE south of Chu Lai. Vehicle is believed to be from the 1st anti-tank battalion. (USMC)



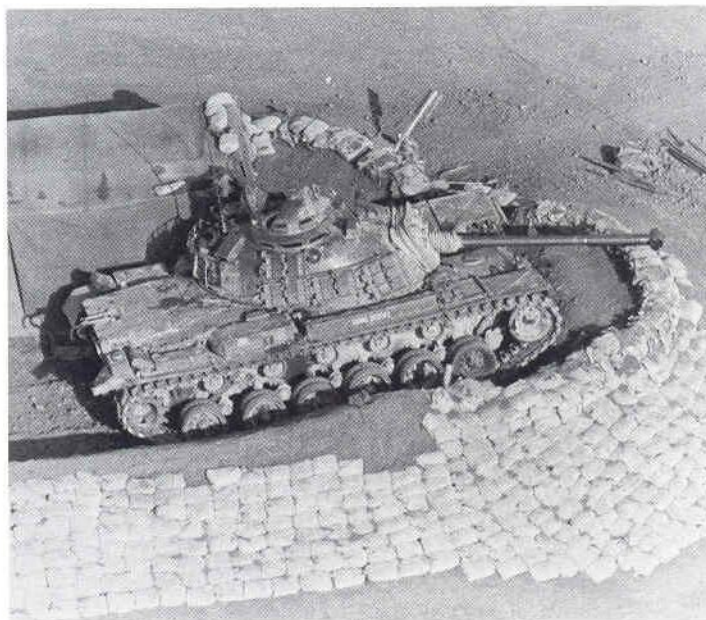


(Above) Marines receive support from LVTE during fire fight with V.C. near Danang. (USMC)

(Below) Dug in M-48 at Camp Carrol, a fire base south of Cam Lo. The sandbags and dirt wall protected all but the tank's turret from direct fire weapons. (USMC)



(Above) 106mm recoilless rifle, mounted on a M-274 mechanical mule, fire on enemy positions near Khe Sanh. These lightweight vehicles were often helicoptered in to provide marines with a small mobile support weapon. (USMC)



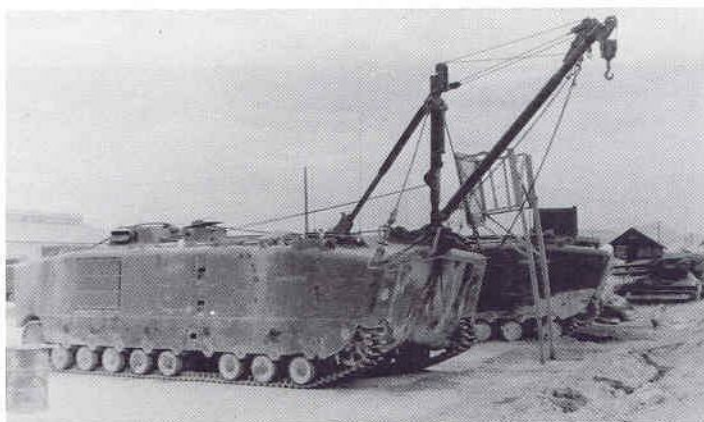
(Below) Using a bunker as protection, an Ontos is sited to cover part of the perimeter of Hill 41, a marine position south of Hue. (USMC)





(Above) A platoon of M-48s from the 3rd tank battalion aided in defending Khe Sanh during the siege. Shown here in a revetment is *Fujimo II*. (USMC)

(Below) An LVTR fitted to recover or repair damaged heavy equipment. These carried no standard armament. (Harvey via Bradford)



(Below) *Chosen Few*, one of a number of army supplied 175mm guns the marines used in I Corps. Their long range was particularly helpful in hitting enemy positions in Laos and DMZ. (USMC)



(Above) Fierce looking LVTE, loaded with marines, moves across a rice paddy. It appears to have some sort of container wedged behind the plow. (USMC)





A heavily sand-bagged LVTE moves out to help secure a road during amphibious operations south of Danang. Vehicle is from the 7th Marine Regiment. (USMC)



Unusually modified Ontos carries a large searchlight for night firing. Very few vehicles of this type were so equipped. (USMC)



Assassin, one of the 155mm M-109s from K Company, 3rd Battalion, 2nd Marine await fire support call. Part of the unit's designation can be made out on the turret door. (USMC)



Loaded with extra water, food, and ammo, *Funky Ride*, an M-48 moves up toward a treeline during OPERATION ARIZONA, southwest of Danang. Behind the name on the barrel can be seen the tanks number in Yellow. (USMC)

TULA, an M-48 from C Company 1st Tank Battalion, moves over rough terrain south of Danang during OPERATION PIPESTONE CANYON. The Iron Cross is painted on the searchlight cover, a common practice by both army and marine tankers. (USMC)



Ontos and LVTP-5, part of OPERATION DECKHOUSE VI, prepare to move out after the initial landing south of Quang Ngai. Note the placement of I.D. numbers on the LVT and the unit insignia on the side of the Ontos. (USMC)





A line-up of M-116 amphibious personnel carriers belonging to the 11th Motor Transport Battalion. These were tried out but never saw extensive use in Vietnam. (USMC)



A M-733 carrier, also from the 11th, armed with two M-60s, a .50 caliber, and an automatic grenade launcher. Tried out like the M-116, these too never gained widespread acceptance. Unit insignia is on the side with Yellow crest and Red letters. (11 over MT) (USMC)



(Above) Interestingly marked LVTP-5 crashes through a hedgerow south of Danang. Troops preferred to ride outside because if a mine detonated, the fuel tanks would often rupture and incinerate those inside. (USMC)

(Below) *Sun Downers*, from the 3rd 175mm gun battery, fires into Arizona territory, a constant trouble spot for the marines southwest of Danang. (USMC)





An Ontos, with its guns at full elevation to increase their range, prepares to fire during OPERATION MOBILE, near Chu Lai. Note the unusual artwork on the fender, rarely seen on the Ontos. Closest jerrycan is marked on its side so as not to be contaminated with gas or water. (USMC)



(Above and Below) Two views of the same tank six months apart. Disaster from the 1st Tank Battalion prepares to move out on an operation south of Danang. Note how the I.D. number is on the barrel, fender, and air cleaner hatch. In the second photo, taken during OPERATION BARREN GREEN, in Arizona territory. The name and number have been removed from the barrel, however, the I.D. number has been painted in large Yellow numerals on the rear deck. (USMC).



U. S. ARMY

THE EARLY BUILD-UP

In mid-1965 the decision was made to commit U.S. troops to Vietnam. The employment of armored units was considered by General Westmoreland, his staff, and the U.S. embassy in Saigon. Three factors had a major effect on their judgment. First and foremost, they felt that the terrain and type of war being fought did not justify the use of armor. Despite the fact that American advisors had been with ARVN units since 1957, little was really known about their experience with armor. Also, the common view of Vietnam was that of swampy, jungle terrain which was unsuitable for tanks or A.P.C.s. This almost total lack of information or knowledge of conditions along with the earlier French problems and defeats resulted in little serious consideration being given to the possible use of armor.

Secondly, the early U.S. commitment had *political* limits as to the number of troops which could be brought in. Westmoreland desired to get as many combat troops *in-country* as possible. He felt that infantry units were best suited for this role since they needed less logistical support than tank or mechanized units. Since Westmoreland viewed armor as being of little value in the jungle terrain he did not want to waste his limited manpower on it, or its logistical support. He and most of his staff felt that only infantry would be of any real value in the guerrilla war they new faced.

Finally, at this stage of the war the U.S. government wanted to keep a low troop profile so as to not give the impression that U.S. soldiers were taking over the war effort from the ARVN. This would be extremely difficult to do if there were numerous tank and mechanized units clanking about. This view very quickly lost credence as more and more U.S. troops were committed to Vietnam. But initially it was an important political factor against sending armored or mechanized units to Vietnam.

As a result of these feelings incoming units were seriously restricted in the types of equipment they were allowed to bring with them. Specifically this led to the reorganization of mechanized units as dismounted infantry and the elimination of the tank battalions in divisions. This happened to the 1st Infantry Division when it deployed in the summer of 1965 although it was permitted to bring a single squadron of M-48s and M-113s for field tests. However, so many restrictions were placed on the employment of these armored units — restrictions that so severely limited their field use — that few meaningful results were obtained from the trials.

M-48 of the 1st Battalion, 69th Armor, with troops of the 25th Infantry Division, moves to south of Pleiku during OPERATION LINCOLN.

ACTION AND INNOVATION

In spite of the restrictions the few armored units in the field began to achieve results. During November 1965 M-113s from the Cavalry Squadron of the 1st Infantry Division repulsed a series of determined V.C. attacks on a defensive position near the village of Ap Bau Bang. The squadron was hit repeatedly by mortars, recoilless rifles, and automatic weapons fire, yet the cavalry inflicted substantial losses on the enemy. Five APCs and mortar carriers were lost in the battle, but the unit suffered only light personnel casualties.

Actions like this resulted in a two-fold benefit for armor. It showed upper echelon officers that armored units could play a positive role in the war. Earlier misgivings, based in part on misinformation, were re-evaluated which led to a more receptive atmosphere for additional armor employment. The field experience also showed how to improve the M-113s for jungle use, modifications such as additional machine guns and armored shields — the same lessons that ARVN units had learned three years earlier. Unfortunately this information had either not been passed on to U.S. units or had been ignored by the brass. Through trial and error effective tactics gradually evolved. As officers rotated stateside they brought this knowledge back to armor training centers. By the end of 1966 many of the reservations about armor's usefulness in Vietnam had been proven invalid.

Some of the tactics which became standard during this early period were quite innovative. Throughout the war one of the prime targets for the enemy was supply convoys. Armored units were often detailed to provide security for these vulnerable targets. To compensate for the enemies ability to *hit and run* these when he so desired, the herringbone formation was developed. This enabled the convoy to overcome the initial shock and confusion of an ambush. At the onset of an attack the armored vehicles would stop and pivot outward either left or right. Any softskin vehicles then headed for shelter behind them as supression fire was directed at the attackers. Supporting fire and reaction forces were brought in to help defeat the enemy. Sometimes convoys were used as bait to draw enemy units out of hiding and into a position where they could be fixed and hit by superior firepower. The key to success lay in *instant* reaction to the enemy attack. This tactic allowed the convoy to immediately deliver heavy fire on the initial assault. The first few minutes of ambush were the most critical for if the convoy's defenders were confused and disorganized the ambush stood a good chance of success.

Note uncluttered, clean look of tank. Field experience will soon cause a change to this. (US Army)



Throughout the war these tactics helped convoy after convoy to survive carefully laid traps.

Another tactic involved small night patrols along roads to cut down on mining and ambush preparations by the V.C. or N.V.A. Known as *Thunder Runs*, armored units moved down roads and firing at potential ambush sites. This denied the enemy free access to the vital arteries at night. A similar type of operation, nicknamed *Roadrunner*, involved larger units which went *looking for trouble* along roads, by both day and night. This type of operation often lasted several days in duration. If an ambush site was detected, the armor would deliberately move into the area to set off the trap. When the enemy attacked he was met by withering fire. After some very heavy losses the V.C. and N.V.A. became extremely leery of attacking any sizeable armor formation.

THE BLACKHORSE REGIMENT

As successes mounted and tactics improved the army decided to deploy the 11th Armored Cavalry Regiment (Blackhorse Regiment) to Vietnam. It arrived in September 1966, and was the only *true* armored force deployed in-country. The other armored units were part of an infantry division or brigade but the 11th was a fully equipped armored regiment trained specifically in the armored role. It had been considered for deployment a year earlier but misgivings of higher staff officers and attempts to modify its organization held up the units deployment. Upon arrival in Vietnam it was assigned to III Corps and used extensively for road clearing operations. Yet even this unit suffered from the meddling of armor antagonists. It often had units detached piecemeal which denied the regiment the chance of concentrating itself into an effective armored battle force. This was especially frustrating to its highly trained armored officers who were being forced to break their units down by non-armored officers who had little concept of how to effectively employ armor to its full potential. Ironically, these same officers who so blatantly parcelled out tanks piecemeal would never have considered doing this with infantry or artillery units. Problems of this nature continued to plague armor commanders throughout much of the war.

1965-1966 were the formative years for armor in Vietnam. 1967 saw it reach maturity. The mechanized units which originally deployed without their M-113s were reequipped *in-country* during the early part of the year. Tanks and APCs began to assist in search and destroy operations in conjunction with other units or as separate task forces. In particular their participation in operations CEDAR FALLS and JUNCTION CITY during January of 1965 proved invaluable. In these missions allied units moved into War Zone C and the Iron Triangle which were notorious enemy controlled areas near Saigon. In both actions tank and mechanized units played a vital role. They were used to cordon off areas and trap suspected enemy elements. Once an area was encircled armored units led sweeps through them in search of the

Mortar carrier of the 4th Cavalry takes up a blocking position during OPERATION MAKAHA near Phuoc My. Sandbags were used for additional protection from small arms fire and shrapnel. (US Army)

V.C. Numerous base camps and supplies were discovered during CEDAR FALLS but action was light.

The story was far different in JUNCTION CITY. This operation covered an area much greater in size than CEDAR FALLS and resulted in some of the fiercest actions of the war. During the first part of this operation resistance was light as the V.C. tried to avoid contact. Gradually, as they lost room to evade U.S. units the action picked up. Fire support bases were particularly tempting targets since the enemy could strike on his own terms.

At Prek Klok II and Ap Bau Bang II armored units helped turn back multi-battalion attacks against their positions. On the evening of 10 March Charlie began shelling Prek Klok which was defended by an M-113 battalion of the 1st Infantry Division. A ground assault followed which was supported by anti-tank fire, recoilless rifles, and rocket-propelled grenades (RPGs). There were two main assaults but both were turned back. At daylight 197 V.C. bodies were discovered, three defenders were killed. The heavy fire from the M-113s accounted for many of the V.C. dead and had been instrumental in keeping the attacks from gaining momentum. At Ap Bau Bang M-48s and A.P.C.s from the 5th Cavalry Regiment turned back a desperate attack on the night of 19 March. During the battle enemy troops penetrated the outer perimeter and swarmed over the M-113s. The tanks killed many of these by point blank fire with canister rounds*. Some of the vehicles were destroyed and the armor fell back to tighten the perimeter. While the V.C. regrouped, relief elements moved from two directions toward the position. These fought their way into the fire base and reinforced the perimeter. Another V.C. assault was repulsed and a cavalry troop counterattack forced the V.C. to pull back a half mile. This was the last action of the night as the enemy never regained the initiative. When the sun rose over the battlefield, 227 Viet Cong lay scattered around the perimeter. A number of A.P.C.s were destroyed and three American soldiers died in the six hour attack.

Unfortunately not all fire support bases had armored units to protect them. At Fire Base Gold only infantry elements were available to protect the artillery. In an unprecedented daylight attack five battalions from the 272nd Viet Cong Regiment hit the base on March 21st. In a series of determined assaults the enemy overran the perimeter in three places. The infantry and artillerymen fell back to shorten the perimeter as the V.C. pressed in. Ammunition ran low. As Charlie closed to hand grenade range, tanks and A.P.C.s burst through the jungle growth, taking Charlie in the rear by surprise. Units from the 22nd Infantry (M-113s) and 34th Armor (M-48s) had heard the fire bases call for help. Their commander had immediately ordered them to relieve the besieged position. Casting caution to the wind the force had advanced through dense jungle and arrived just as the V.C. were on the threshold of victory. As the tanks and A.P.C.s advanced the enemy soldiers tried to swarm them. Many were crushed under the vehicles' tracks or cut down by machine gun fire. The few V.C. that made it onto the vehicles were killed by the crews' personal weapons. When the smoke cleared the remains of over six hundred V.C. were counted on the battlefield. But it had been costly for the Americans also. Thirty-one American soldiers were dead and

* Shells with thousands of pellets, a shotgun shell for tanks.





(Above) M-577s lead a truck column across dry rice paddies near Phuoc Vinh, north of Saigon, in OPERATION SILVER SPRING. Column belongs to the 3rd Brigade of the 1st Infantry. (US Army)

M-48 and A.P.C.s refuel from drums and rubber bladder at an airstrip. Close scrutiny of M-48 reveals an irregular camouflage pattern on turret and upper hull, rather uncommon in Vietnam. (USAF)



over a hundred were wounded. Had the armor not arrived to turn the tide of battle, the losses would have been far greater and the position might have been lost. The armor had played a vital role in defeating this unusual V.C. daylight attack. This enemy force was one of the best regular Viet Cong units in Vietnam. It was one of the few which had the strength and equipment to engage an American unit in daylight. At Fire Base Gold it had nearly achieved an impressive victory but the courage and determination of the U.S. troops held the position and denied the enemy the sweet taste of victory until help arrived. This was the last significant engagement of JUNCTION CITY.

But even with such successes the armored units had to constantly be alert. The V.C. never lost the ability to inflict serious losses when the chance arose. A unit of the 11th Cavalry suffered such a blow on a routine convoy mission. In a well-laid ambush it suffered 100% casualties of which half were killed. The ambush site had been cleared earlier in the day, but the V.C. swiftly reset the trap and caught the convoy unprepared. In another instance a squadron from the 9th Infantry Division was heading south from Saigon to Vung Tau at night to pick up a convoy. On the way it was caught in a well-laid trap and lost nine of eleven vehicles to the enemy ambush. In both cases the enemy sprang its ambush when it was least expected. Following the initial attack, confusion and disorder set in since neither unit had a battle plan. The enemy exploited this disorder and inflicted substantial losses on both units. Though disasters of this type were not normal occurrences, complacency and poor planning were an open invitation to the V.C. Any unit which failed to keep alert ran the risk of giving the enemy a golden opportunity for a victory.

TET 1968

In 1968 the armor forces saw acceptance by all but the most determined doubters. Its ability to fulfill a vital role in combat was dramatically proven during the surprise Tet offensive at the beginning of 1968. This attack caught the U.S. and ARVN commands completely off-guard. The V.C. targets were mostly rear area bases and South Vietnamese cities which were lightly defended by a few Military Police and infantry units. Prior to the enemy offensive most of the action had been directed away from these cities and bases. Thus, most allied units were out of position to react swiftly to the surprise V.C. assault. Only the armor and mechanized units were mobile enough to mount immediate counter-attacks against Charlie. At Saigon, Tan Son Nhut air

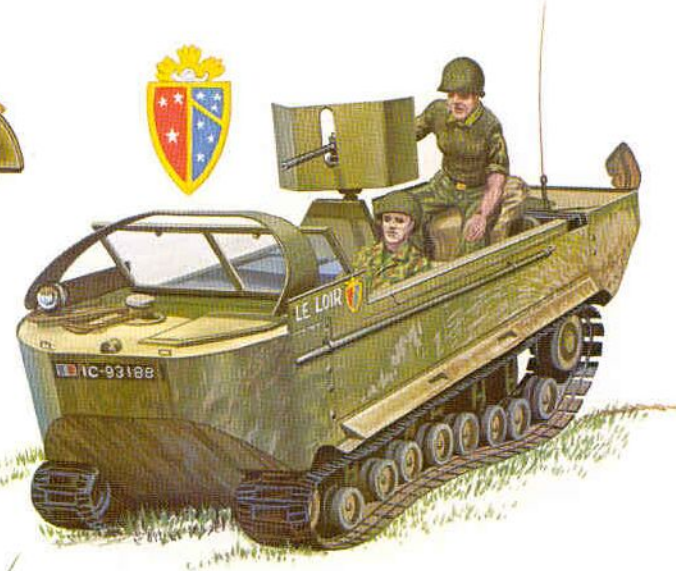
base, Long Vinh, Bien Hoa and Hue, armor was instrumental in repulsing the V.C. thrusts. In the close confines of the cities the M-48s and M-113s provided the much needed firepower to root out the dug-in Viet Cong. Without their support the infantry and M.P. units would have taken far greater casualties in the bitter house-to-house fighting. The toll on the vehicles was high. Many tanks and A.P.C.s received multiple hits from R.P.G.s in the close street fighting. As losses mounted, replacements became harder to get. This was particularly true with the diesel powered M-48 A 3. So many were damaged that the gasoline powered M-48 A 1 was substituted in some units. This version was very unpopular with the crews because of its more limited range and the higher fire hazard. Despite heavy vehicle losses the V.C. inflicted only minimal casualties among the crews of the tanks and A.P.C.s. Gradually the enemy offensive subsided and although there were future attacks none ever approached the ferocity of the initial Tet offensive.

With enemy forces seriously depleted by Tet, the allies moved quickly to counterattack. Armor provided the spearhead for many of these actions. The attacks pushed the enemy back toward the border areas and isolated them from the people and cities. These were so successful that the V.C. and N.V.A. were forced to move their base camps to the sanctuary of Cambodia. From these bases the enemy made occasional attacks into Vietnam when their supply situation permitted. When these occurred reaction forces contained the initial assault while airmobile and mechanized units cut the line of retreat. Throughout the remainder of 1968 and 1969 this type of action, along with frequent ground sweeps and road security, were the main duties of the armored units. The V.C. and N.V.A. would never be overly successful using these small hit-and-run tactics, but as long as the sanctuaries in Cambodia remained inviolable the war would drag on. But mounting political pressure on the U.S. government to bring the troops home led to plans to hit these sanctuaries.

CAMBODIA

With the military successes of 1968 and 1969 U.S. units began to deploy home and the process of "Vietnamization" began. But time was still needed to turn ARVN into a viable fighting force. To insure that sufficient time was available plans were drawn up to invade the sanctuaries in eastern Cambodia. The hope was that these attacks would so disrupt the V.C. and N.V.A. forces that no major attacks could be carried out until ARVN troops were fully

EL ALAMEIN an M5A1 Stuart light tank of the French 2nd Demi Brigade in Cochin China, January 1946.



LE LOIR an M29C Crab of the French 1st Regiment de Chasseurs during operations in the Tonkin in 1953.



TOGO a French M-8 Greyhound in the upper Tonkin during 1951.

French M-24 Chaffee, believed to be at Dien Bien Phu, 1954.





(Above) A camouflaged M-113, unit unknown, pulling out of a fire base. Camouflage was tried on a small scale early in the war but was found to be of little value. (Papson)

Angelique 'd Morte, (Angel of Death), an M-113 from the 4th Cavalry, halts while moving along a road through a rubber plantation in the Iron Triangle. Unit is engaged in OPERATION CEDAR FALLS during January 1967.(US Army)



trained and provided with more modern equipment. These attacks were aimed at positions in the *Parrot's Beak*, a curved projection of Cambodia jutting into South Vietnam, and *Fishhook*, a narrow projection west of Quan Lao. In these operations armored and mechanized units were invaluable since much of the terrain was excellent for tracked vehicles. On May 1st the *Blackhorse* Regiment in conjunction with ARVN troops led one of the attacks into the *Fishhook*. Its goal was to link up with 1st Cavalry (Armored) which had been airlifted in as a blocking force. Other mechanized units led the pincer attacks on the *Fishhook's* western section. Throughout these areas the enemy could not stand up to the firepower of the mobile forces. In vicious fighting numerous enemy battalions were decimated. As the allied units swept forward large caches of supplies were found and many base camps were uncovered. By the end of June all U.S. units had withdrawn, but some ARVN troops continued operations in these areas. The armored units played a vital part in this operation. Their speed, mobility, and firepower caught the enemy unprepared and cost him nearly 20,000 casualties and large quantities of supplies. These operations were also the last large scale employment of U.S. armor against the V.C. and N.V.A. From this point on, the U.S. effort was gradually cut back as ARVN troops took over.

Although the operation caused widespread repercussions in the United States, it was considered a military success by field commanders. The disruption of these base areas insured that it would be some time before the V.C. and N.V.A. would be able to carry out any major attacks into Vietnam. Unfortunately it also exposed the inability of the Cambodian government to control their own country. Opponents of the war constantly claimed that the

U.S. had "invaded" a neutral country. Yet these same critics never try to explain why the Viet Cong and North Vietnamese forces were operating from inside Cambodia. The Cambodians did not want them in their country, but they were militarily unable to do anything about it. The enemy used a neutral country as a base to launch attacks which killed and wounded U.S. and allied troops. The attack into Cambodia was the only logical answer to the problem of the sanctuaries.

THE FINAL DAYS

As "Vietnamization" was being carried out, the massive redeployment of U.S. troops home moved into high gear. Between 1970 and 1971, some 300,000 men left Vietnam. As part of the residual force armored units were among the last slated for redeployment. Over half of the combat forces remaining *in-country* in 1971 were armored. It was felt they were best suited for the limited actions that U.S. forces were support to play during the withdrawal. The only major event in which these troops played a significant role was in support of the ARVN attack into Laos, LAM SON 719, in the spring of 1971. Otherwise American units were gradually pulled back toward rear area bases as ARVN units took over. As this occurred the units which remained, confined themselves to local security and reconnaissance missions. The last armored units stood down in April, 1972. The U.S. armor participation was over.



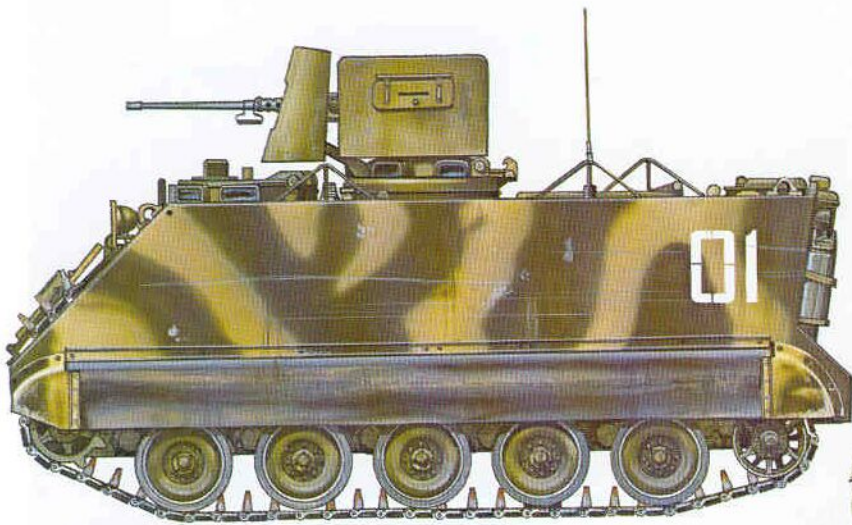
Two M-48s, from an unidentified unit, on patrol. Ace of spades on turret was often used on vehicles because of its death connotation to the Vietnamese. (US Army)

A modified M-113 with side-firing parts during OPERATION CEDAR FALLS. Troops were reluctant to use them as visibility was limited, and the danger existed of being trapped in the A.P.C. if it was hit by enemy fire. Only a few were tested and the project was dropped. (US Army)

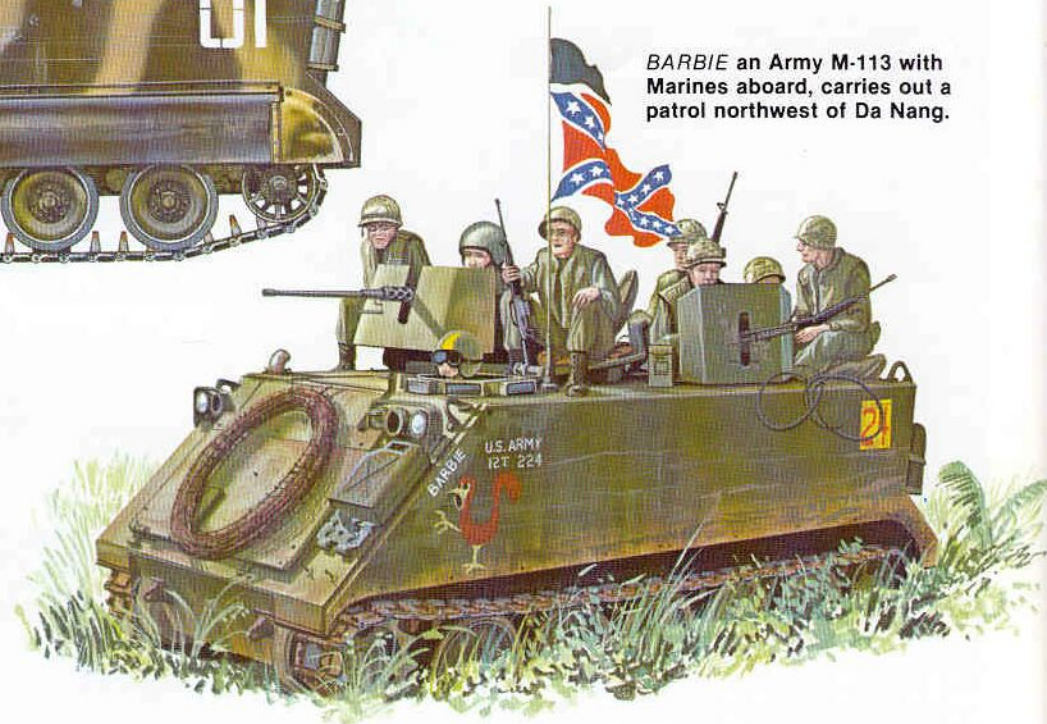


Early U.S. vehicles had numerous White markings which the enemy used for aiming points. Troops soon painted them over or in the case of this M-113 used Olive Drab tape to cover the star and some lettering. (US Army)



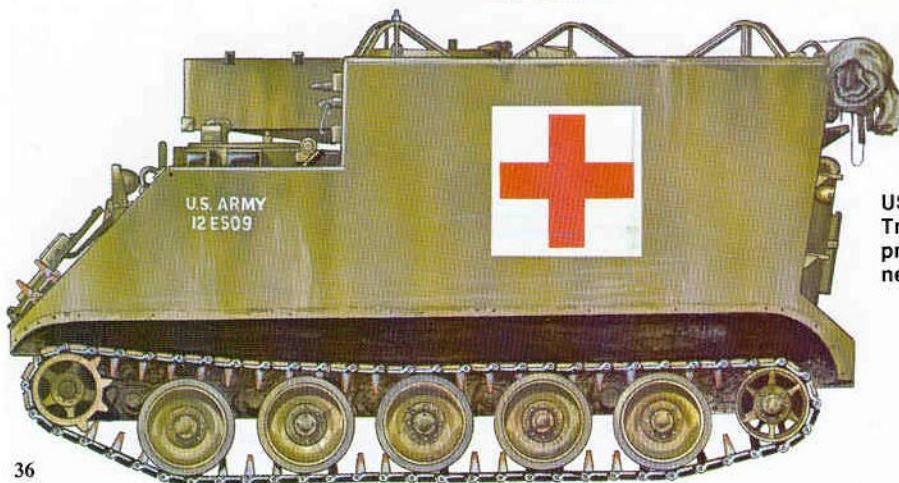
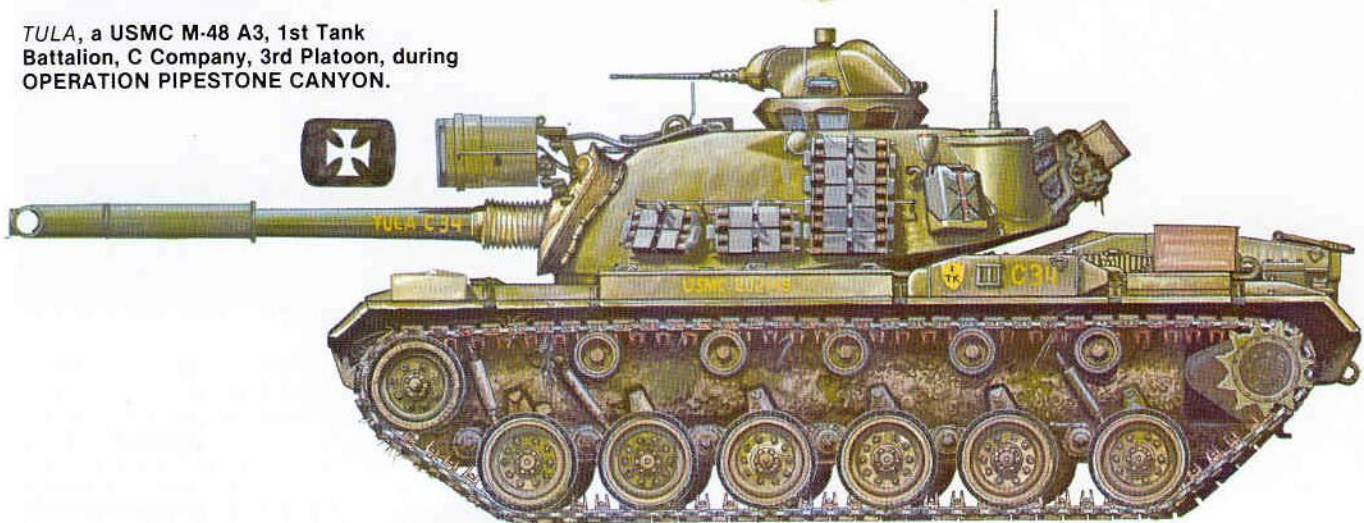


South Vietnamese M-113 used in the November 1963 coup which ousted President Diem. Scheme is Tan over Olive Drab with a White 01. Note unusual machine gun shields.

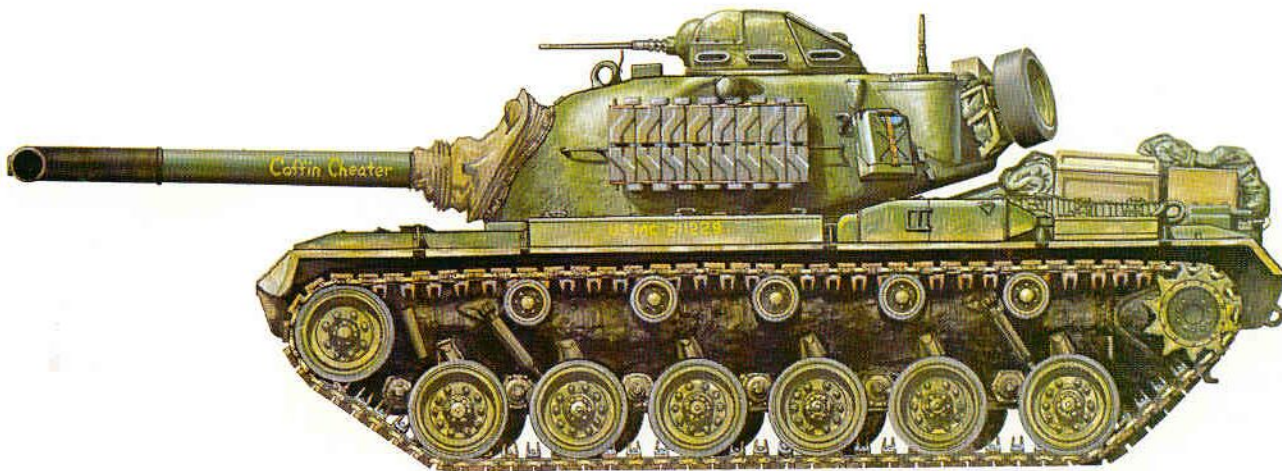


BARBIE an Army M-113 with Marines aboard, carries out a patrol northwest of Da Nang.

TULA, a USMC M-48 A3, 1st Tank Battalion, C Company, 3rd Platoon, during OPERATION PIPESTONE CANYON.

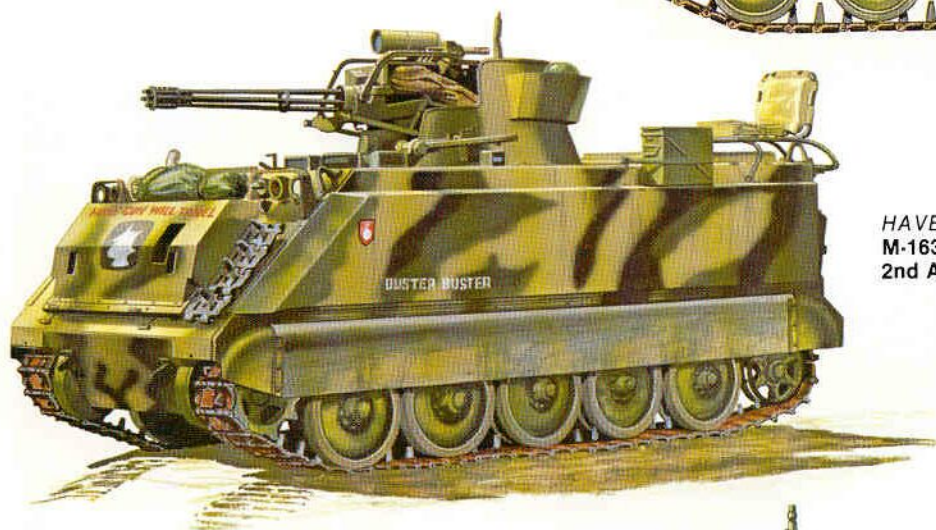
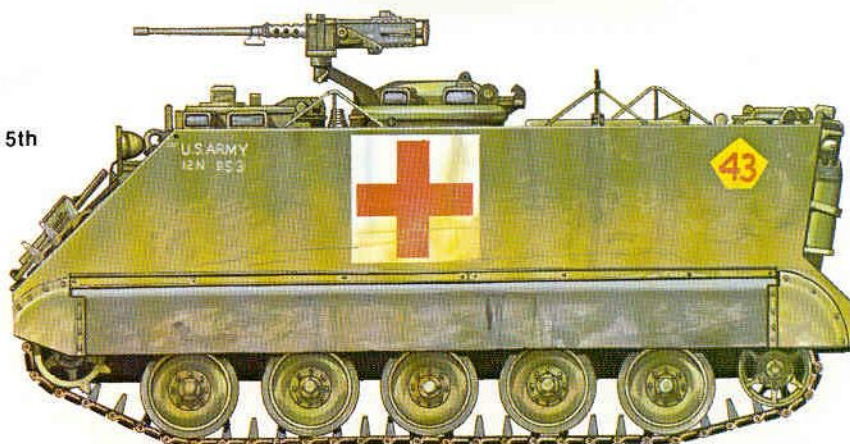


US Army M577A1 Field Aid Station of HQ Troop 2nd Squadron 11th Armored Cavalry providing medical support for G Troop near Xua Loc, January 1967.



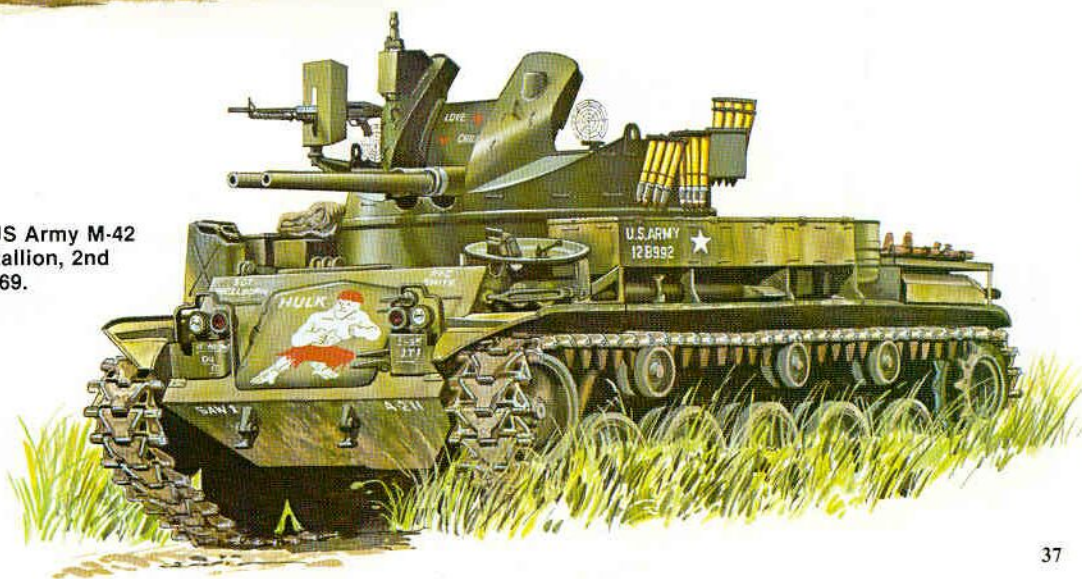
COFFIN CHEATER a USMC M-67 flame thrower tank near the DM2 in 1967.

U.S. Army M-113 Ambulance from the 5th Cavalry, 9th Infantry Division.



HAVE GUN WILL TRAVEL, a US Army M-163 Vulcan of C Battery, 5th Battalion, 2nd Artillery at Dong Tam.

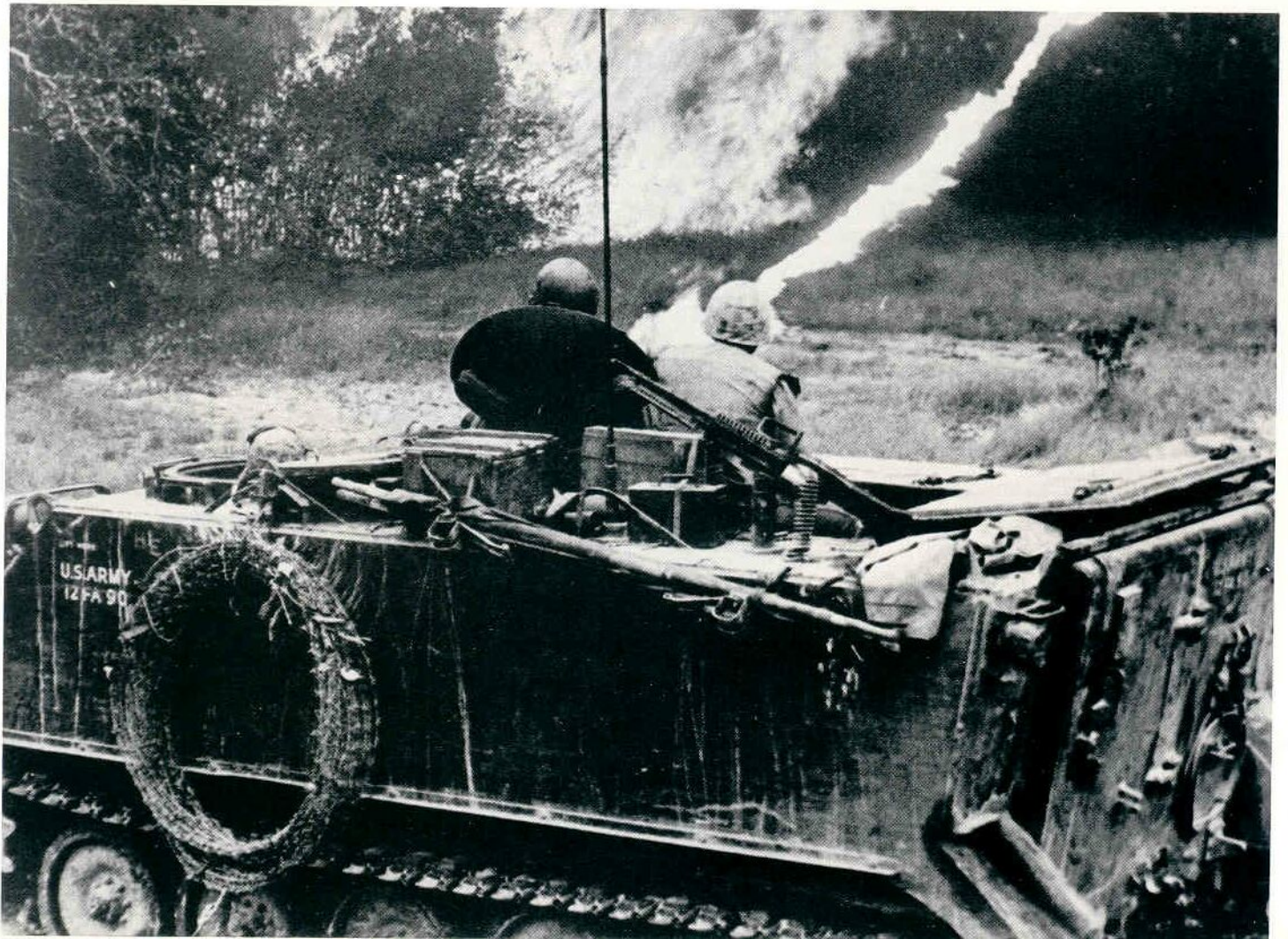
LOVE CHILD - HULK a US Army M-42 Duster from the 5th Battallion, 2nd Artillery at Lai Khe in 1969.





(Above) M-48 from the 1st Battalion, 69th Armor, attached to the 4th Infantry Division. It is engaged in OPERATION PERSHING in the An Lao Valley with units of the 1st An Cavalry Division. Note Tiger head in Yellow on hull. (US Army)

An M-132 flamethrower burns away brush from potential ambush site during CEDAR FALLS. It belongs to the 1st Battalion of the 4th Cavalry. (US Army)





M-113 ACAV fitted with additional shields and machine guns. Note how star is painted out, and the spade insignia on hull. Nicknamed *Trailblazer* it is from the 11th Cavalry. (US Army)

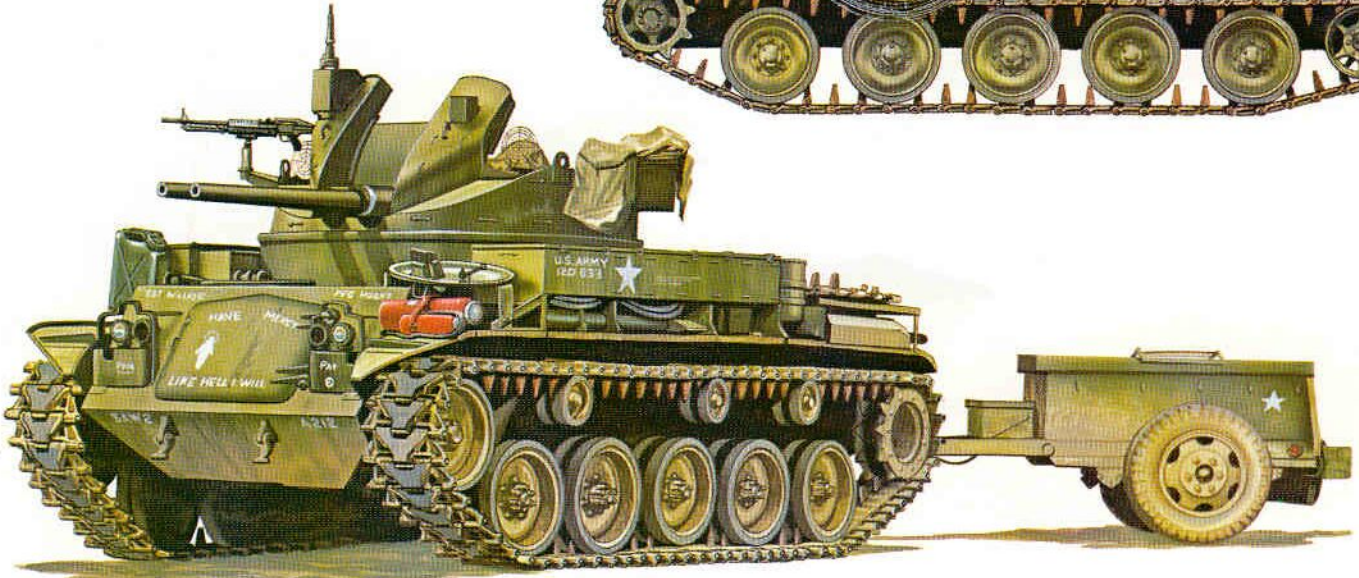
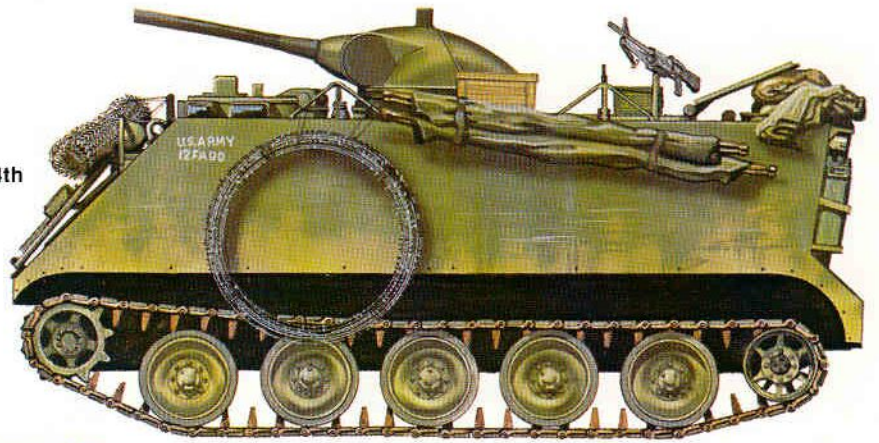
Heavily damaged M48A3 awaits repair at Long Binh. Tank has been hit by rockets (RPGs) on turret and hull, along with machine gun fire. (US Army)



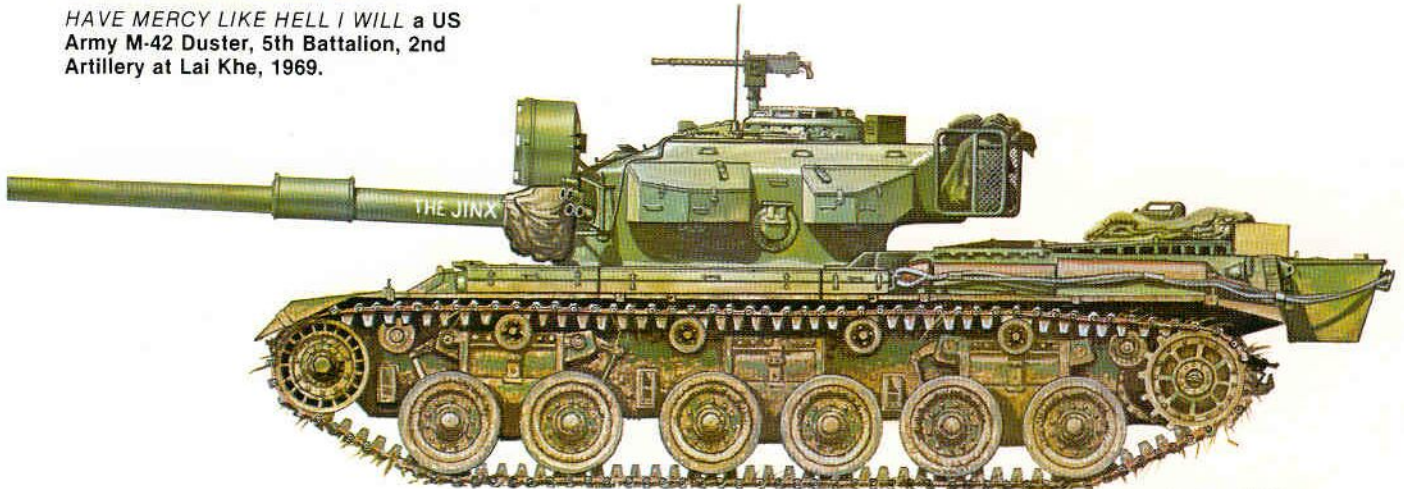
M-577A1, fitted as a mobile aid station, from the Headquarters Troop of the 11th Cavalry. Vehicle is participating in a search and destroy mission near Xuan Loc, east of Saigon. (US Army)



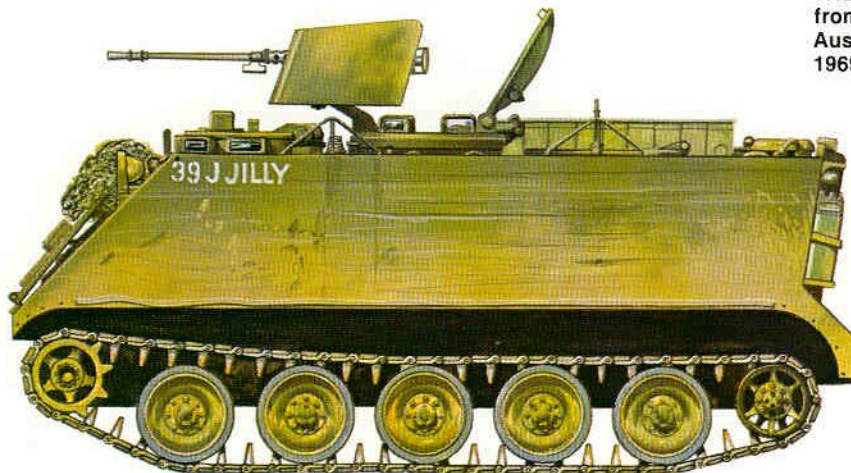
U.S. Army M-132 Flame Thrower of the 4th Cavalry, 25th Infantry Division.



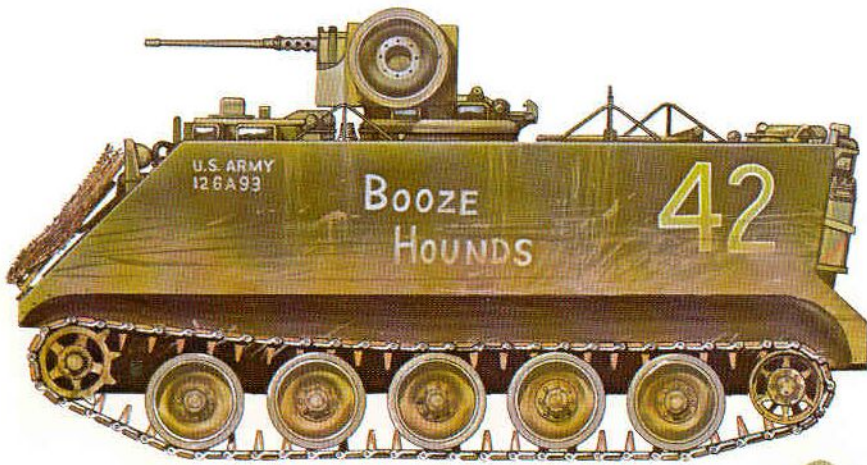
HAVE MERCY LIKE HELL I WILL a US Army M-42 Duster, 5th Battalion, 2nd Artillery at Lai Khe, 1969.



THE JINX as Australian Centurian MK5 from C Squadron, 1st Armoured Regiment, Australian Task Force, near Vung Tau in 1969.

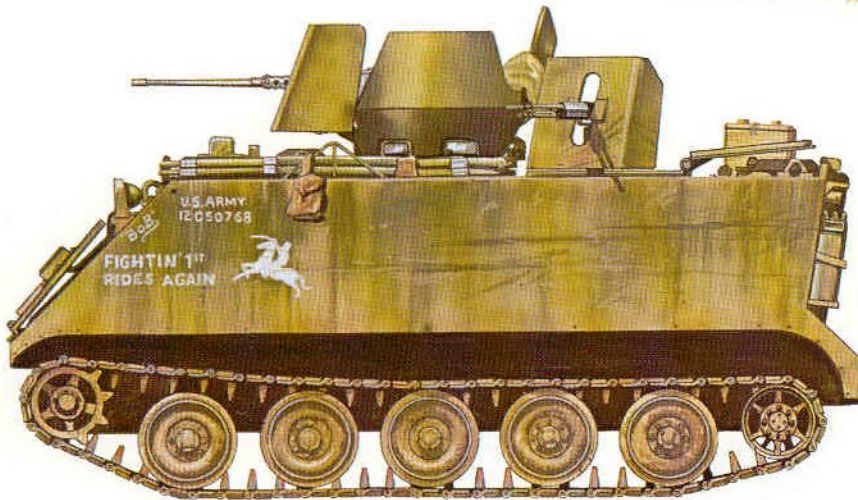
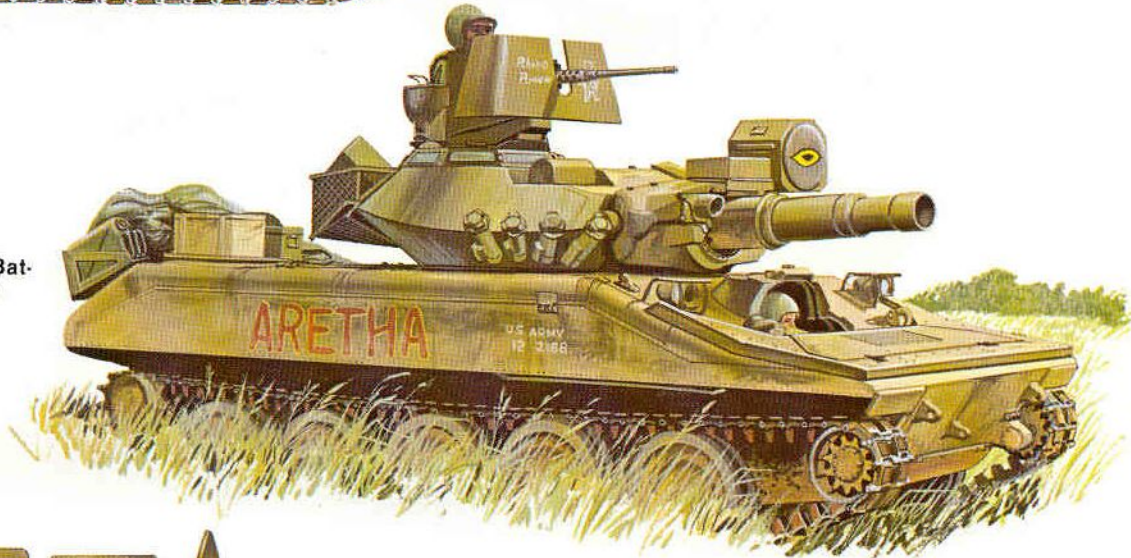


JILLY an Australian M-113 of B Squadron, 3rd Cavalry Regiment during OPERATION MATILDA.

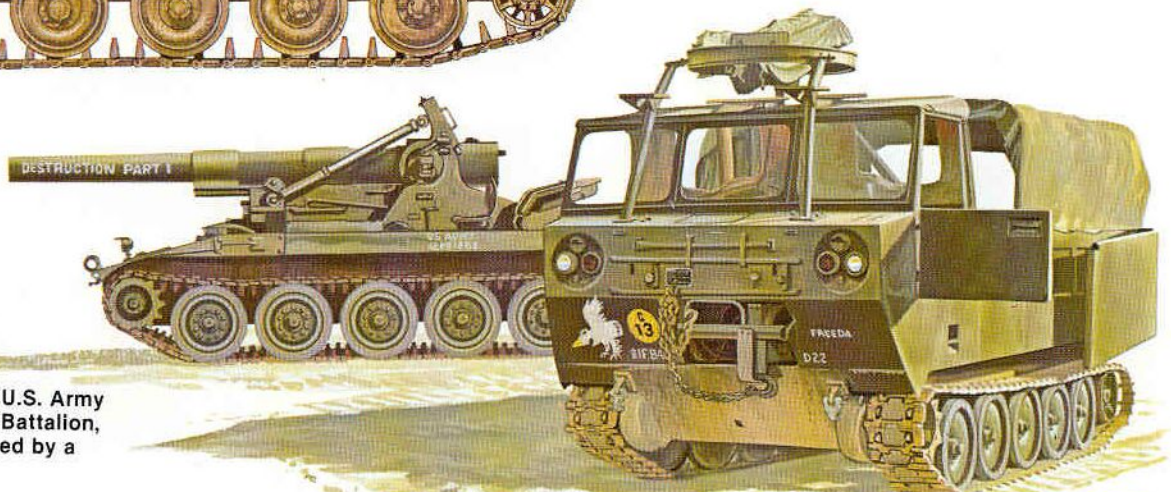


BOOZE HOUNDS, a U.S. Army M-113 during 1969.

ARETHA, a US ARMY M-551 Sheridan from Troop A, 1st Battalion, 11th Armored Cavalry Regiment.



"BOB" FIGHTING 1st RIDES AGAIN, a U.S. Army M-113 from the 1st Squadron, 4th Cavalry, assigned to the 1st Infantry Division at Lai Khe, 1969.



DESTRUCTION PART 1, a U.S. Army M-110 from D Battery, 1st Battalion, 84th Artillery, being serviced by a M-548 Tractor.



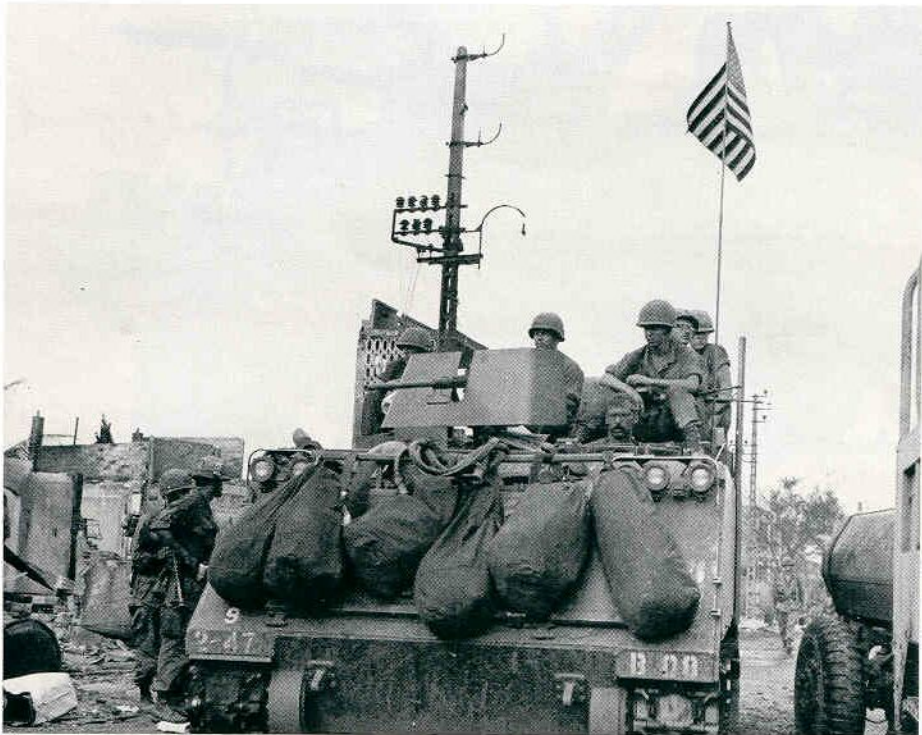
An M-48 equipped with an M-8A1 dozer blade moves down a road during a search mission. Note how the tank's suspension is compressed in front from the dozers weight, and the numerous personal effects of the crew, including a mattress on the turret. (Papson)

Wyss Woad Wunner, prepares to set up in a night defensive lager. This is one of the early M-113s sent to Vietnam which has yet to receive any armored shields. Concertino wire on front hull will be strung around vehicle during bivouac as part of the defensive set-up. (US Army)



A camouflaged M-132 in Olive Drab and light Green colors. Barely visible below the flamethrower turret is the name *Holocaust*. It is taking part in OPERATION SANTA FE. (US Army)





An M-113 from the 2nd Battalion, 47th Infantry in Saigon during Tet. Note how duffle bags are arranged on front hull to provide protection from B 40 R.P.G.s. (US Army)



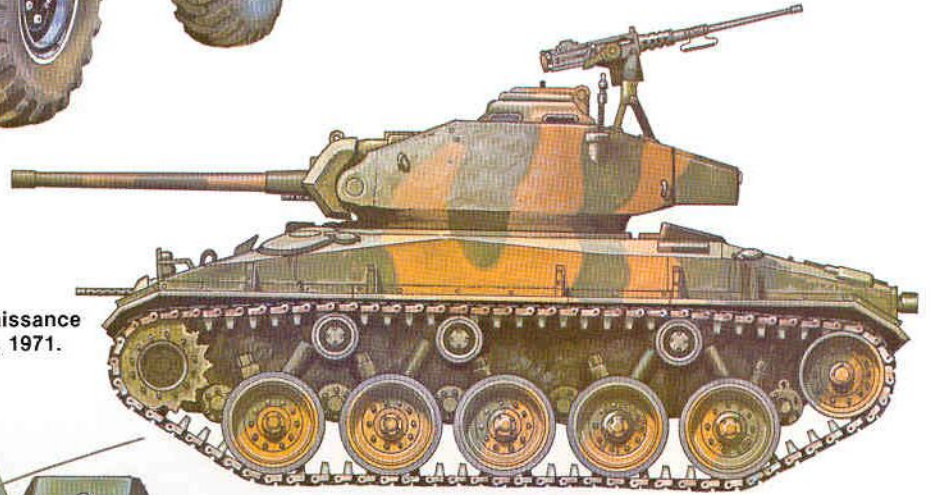
M-48 of the 4th Cavalry, 25th Infantry Division, provides fire support for ARVN Rangers in Saigon during the Tet offensive. Cupola has been fitted with a vision block ring to increase visibility. (US Army)



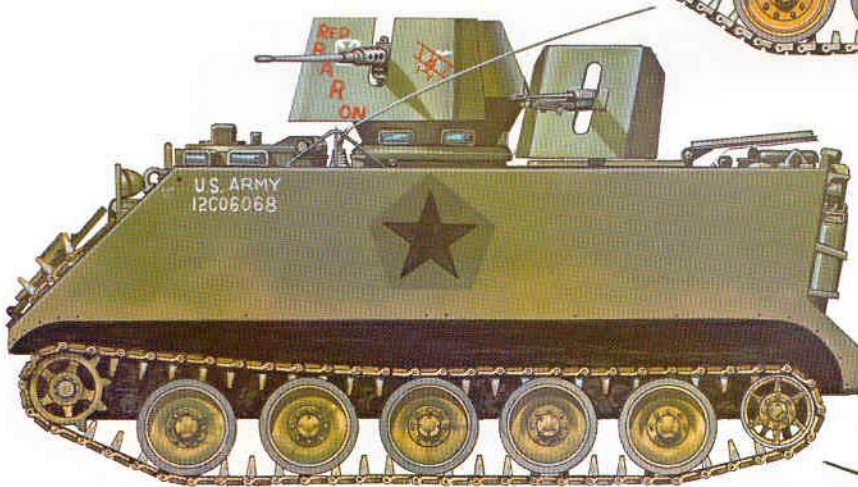
Shortages of M-577 Command Post Vehicles led to some M-113s being converted to Mobile Command Posts, with the designation M-113 MCP. Their configuration did not set them apart from other A.P.C.s as much as the M-577 did, thus making it harder for the enemy to pick them out. (US Army)



The UNEXPECTED, a U.S. Army V-100 of the 560th M.P. Company a Phu Tai, 1971-72.

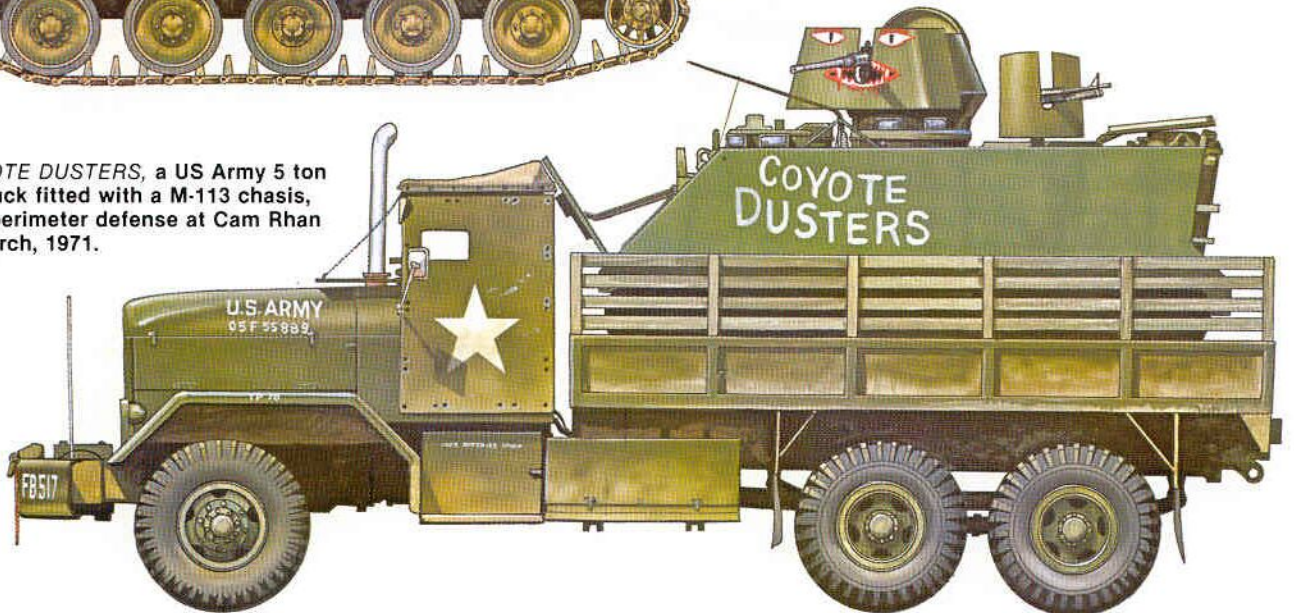


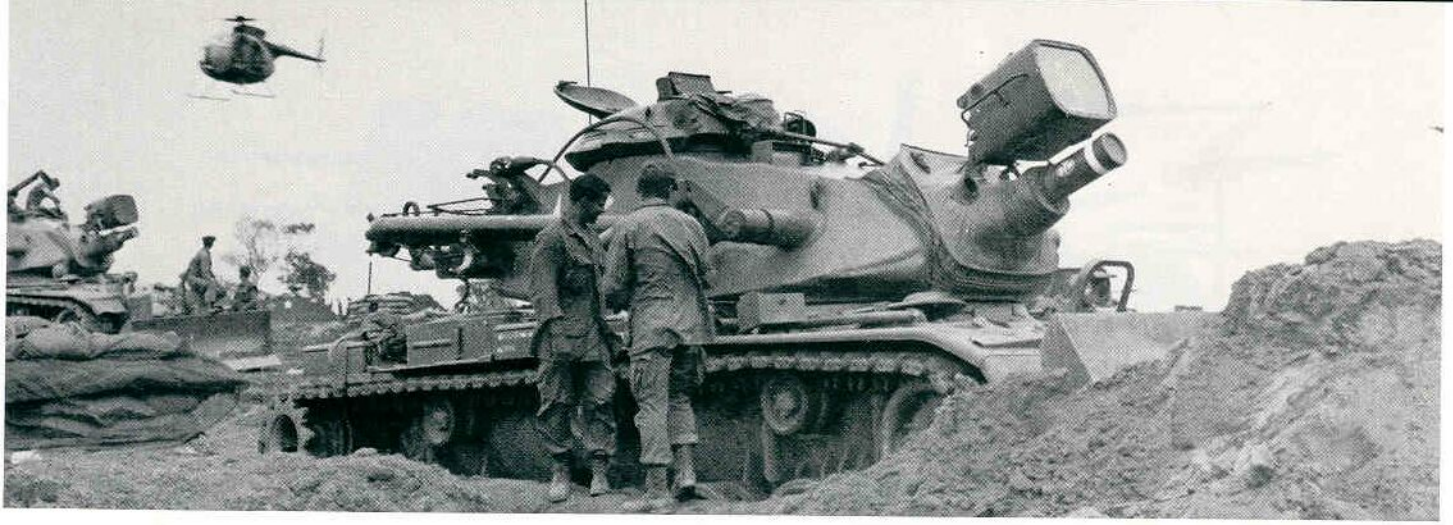
ARVN M-24, 3rd Reconnaissance Squadron, Tan Son Hnut, 1971.



RED BARON, a U.S. Army M-113, originally with C Company, 716 M.P. Battalion, but when that unit withdrew, the vehicle was reassigned to the MACV Provisional Defense Force in 1972.

The COYOTE DUSTERS, a US Army 5 ton flatbed truck fitted with a M-113 chasis, used for perimeter defense at Cam Rhan Bay in March, 1971.





An M-728 Combat Engineer Vehicle (CEV) dug in at Landing Zone (LZ) "Red Devil", with troops of the 5th Infantry Division (Mechanized). Based on the M-60 the CEV is armed with a 165mm demolition gun. (US Army)

During Tet, the V.C. captured this M-113 and used it against allied forces until it was destroyed by an M-48. Unusual is the mounting of .50 caliber machine guns in the rear. (US Army)

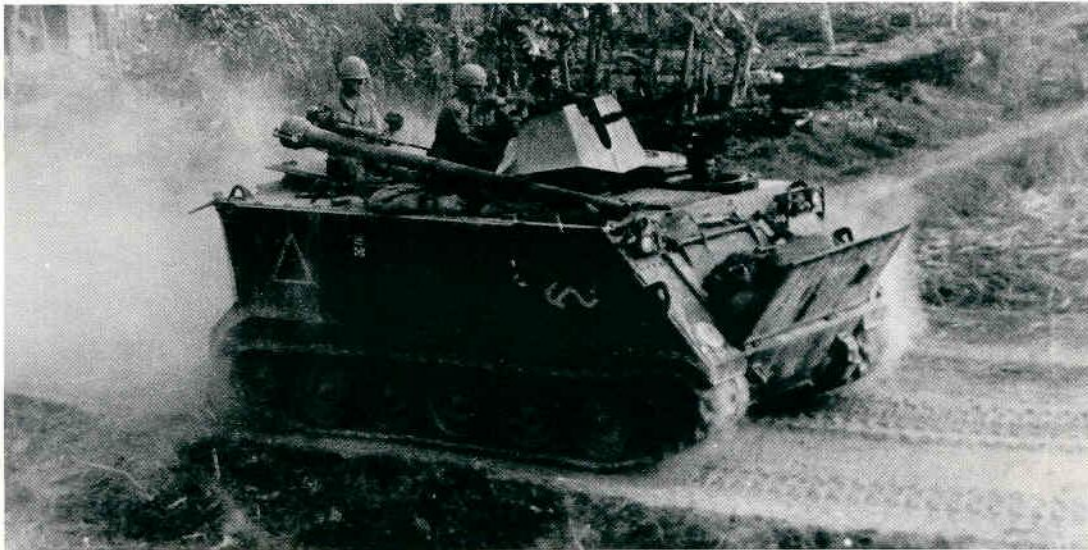


The Pink Pussy Cat, fitted with a recoilless rifle, near the Y bridge in Saigon during Tet. Vehicle is from the Headquarters unit of the 47th Infantry. (US Army)





M-48 of the 10th Cavalry, 4th Infantry Division at rest in a jungle clearing in the central highlands. Pennant painted on turret is Red and White, while lettering and numbers are White. (US Army)



Unusually modified M-113 with a 106mm recoilless mounted in the rear and a non-standard shield on the commander's machine gun mount. These vehicles were used to replace jeep-mounted 106s because of their mobility and protection. (US Army)

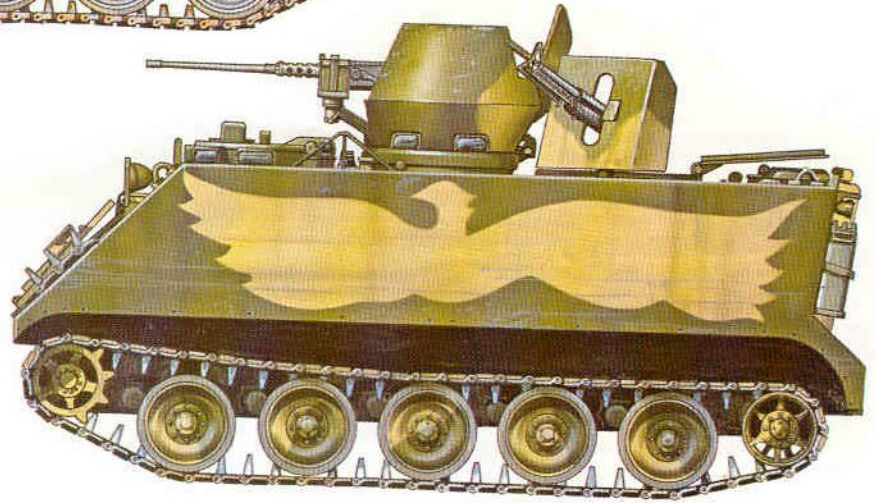


An M-551 Sheridan from the 4th Cavalry on patrol with elements of the 25th Infantry Division. Wire screen is fitted to keep vegetation out of the drivers way. (US Army)

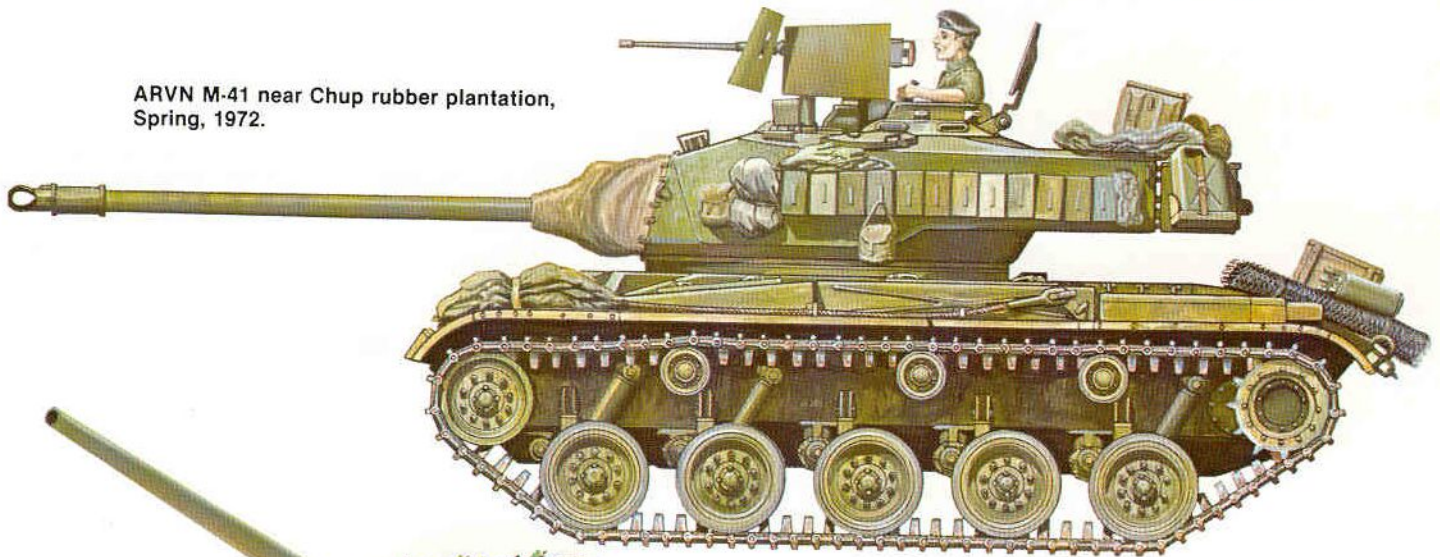


ARVN M-24 of the 3rd Reconnaissance Squadron, Tan Son Nhut, Spring 1972.

South Vietnamese Air Force M-113 based at Tan Son Nhut Air Base. Believed to be part of the VNAF security unit, Fall, 1971.



ARVN M-41 near Chup rubber plantation, Spring, 1972.



NVA T-34/85 during the Spring of 1972.



M-132 Zippos using their flamethrowers from night defensive positions against attacking Viet Cong. They belong to the 4th Battalion, 23rd Mech. Infantry, of the 25th Infantry Div. (US Army)



M-163 Vulcan being water tested near Dong Tan, prior to being issued to field units. Camouflage pattern is Tan, Olive Drab and Black. Seats in rear appear to be standard jeep type. Raised screen under cannon keeps water out of the engine grill. (US Army)

This M-48, from the 5th Infantry Division (Mechanized) awaits orders to move out during OPERATION UTAH MESA in the Khe Sanh area. Often the cupola machine gun was mounted outside for easier handling and a better field of fire. (US Army)





A dug-in M-48 being used to provide static road security. Employing tanks in this role limited their tactical mobility and often played into the hands of the elusive enemy. Crew has rigged a tarp for protection against the blazing sun. (US Army)



This Sheridan turret carries the larger ammo boxes used to feed the commander's machine gun, as well as standard ones strapped to the hull. (US Army)

Two M-163s and a M-113 stop in the village of Tan An, near Bien Hoa while on patrol. Note how the camouflage patterns on the sides of the Vulcans have been muted by the dust. (US Army)





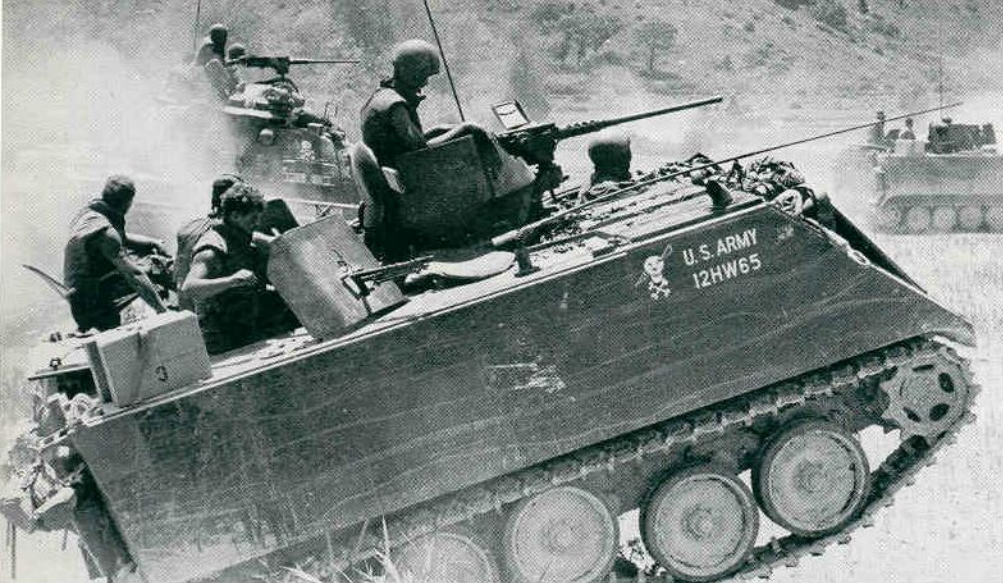
Sheridan and M-113 move through a sea of mud at LZ Hampton, a typical situation during the monsoon season. (US Army)



Rear view of Sheridan shows additional rack on hull rear for fuel or ammo cans. Wire screen was put around vehicle at night to stop or detonate RPG rounds. This particular vehicle has the old type storage rack on turret. (US Army)

A.P.C. crews from the 10th Cavalry take a break during a search and destroy mission. Wood bundles on front of hull were useful for traction if the vehicle became bogged down. (US Army)





M-113 ACAVs and a M-48 move out on a reconnaissance by fire near Duc Pho in support of 1st Cavalry Division. Skull insignia is on nearest APC and tank, possibly an unofficial unit marking. (US Army)



Vulcan fires into the brush along Route 13 to flush out possible enemy troops laying in ambush. The M-163, originally designed for air defense, mounted a six barrel, 20mm gatling gun, which threw out a considerable weight of fire and was excellent for use in the dense jungles of Vietnam. (US Army)



M-48 of the 9th Infantry Division crosses a stream during OPERATION BASTOGNE. Name on turret is *Austrophobia*, the upper half is in Red and the lower is in White. Note water cooler on turret side for ice to cool water or beer. (US Army)

Another M-551 at LZ Hampton. Notice wire screen cage for driver and modified turret storage rack. Commander's m.g. mount has been partially fitted with armored shield. A Red band is on barrel between *Sudden* and *Death*. (US Army)



M-577 pulls a trailer through mud along Route 9 in the Khe Sanh area, the same route used for Lom San 719 by the ARVN in 1971. (US Army)



Specially designed minesweeper attached to an M-48 of the 5th Cavalry near the DMZ. Made of M-48 roadwheels, these devices achieved limited success, but numerous problems kept them from being used on a widespread basis. Normally turret was traversed toward rear in case a mine was detonated. (US Army)



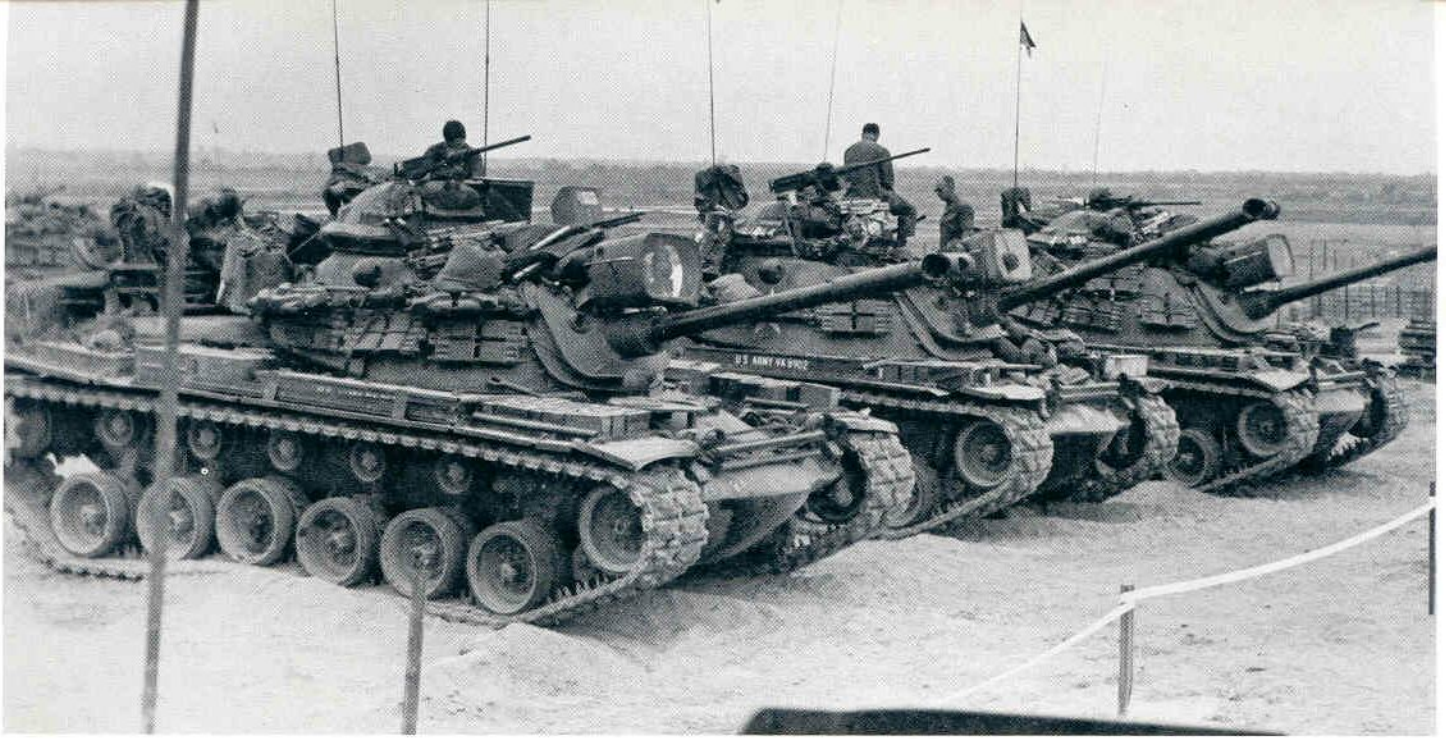


Bridgelayer M-113 picks up its span before moving on to another bridging operation. These vehicles provided a cheap, easy conversion and proved extremely valuable in helping span gullies and road cuts of under 30 feet. (US Army)

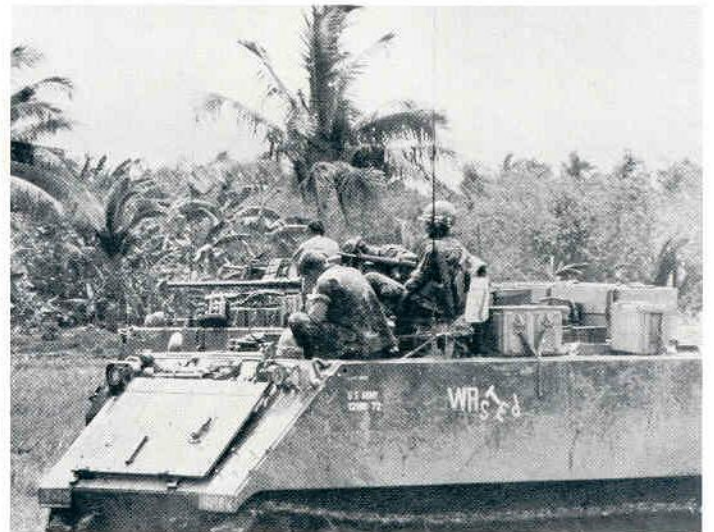
(Right Top) Three M-48s of the 34th Armored Regiment await orders to move out on patrol. Nearest one has an M-60 mounted in front of loaders hatch, a common modification. US Army)

Beneath pine trees, *The Rebel*, a Sheridan from the 1st Cavalry Regiment of the Americal Division awaits orders to move out. A full shield has been attached to the commander's cupola and a string of smoke grenades are situated for handy use on the side shield. (US Army)





(Above) *Roadrunner* an M-113 from the 10th Cavalry, near the Cambodian border. Commander's shield is an early design which was later replaced by the ACAV kit. Barely visible on the second A.P.C. is "Snoopy" in his "Red Baron" outfit. Schultz's comic strip characters were common decorations on many armored vehicles during the conflict. (US Army)



Wasted covers a tree line in case of enemy fire. The carrying of large quantities of extra gear was standard procedure for armored vehicles. Camouflaged uniform on nearest crew members is rather unusual for a mechanized unit. (US Army)

Sheridan and M-113 await their turn at a fuel truck near Chui Lai. Both are from the 17th Cavalry of the Americal Division. The Sheridan carries the name *Stone Free* on the side and the APC carries the inscription *Rock & Roll Music* on the gun shield. (US Army)





(Above) An M-48 being resupplied by an M-548 cargo carrier near the Black Virgin Mountains, a notorious V.C./N.V.A. stronghold. The M-548 was derived from the M-113 and provided good cross-country supply capabilities to field units. (US Army)

Crew members wash down their "tracks" at Long Binh prior to turning them in before going home. Markings, except U.S. Army and serial numbers, appear to be in Yellow. (US Army)



U.S. ARMORED VEHICLES

A variety of armored vehicles were employed in Vietnam by the U.S. Army. The main battle tank was the M-48 A 3 Patton, a 50 ton vehicle armed with a 90MM cannon. Reliable and well-armored, this tank proved very capable against enemy mines and anti-tank weapons. Only once did it encounter NVA armor. This was at the Ben Het Special Forces camp in March 1969, where two PT-76 light tanks were destroyed.

The only other tank employed was the M-551 Sheridan. This was not really a tank but an airborne armored reconnaissance vehicle. It carried a 152MM gun which fired combustible cased ammunition. Its armor was extremely thin and made mostly of aluminum. The combustible cases and thin armor created a serious problem for the crew. Often a shell or landmine would penetrate the thin armor and ignite the ammunition which destroyed the entire vehicle. Despite this the Sheridan was substituted for M-48s or M113s in a number of units. It was not really suited for either role and never gained the confidence of its crews.

The work horse of the mechanized unit was the M-113 or M-113A1 personnel carrier (APC). The main difference between them was that the A1 model was diesel powered. Early in the war it was often used as a light tank and initial combat losses led to a number of modifications making it more suitable for this role. A combination gun-shield-cupola was fitted over the commanders hatch to give him some protection when firing the 50 caliber machine gun. In the rear by the cargo hatch, mounts and shields were provided for two M-60 machine guns. With these modifications the vehicle received the designation armored cavalry assault vehicle (ACAV), becoming the backbone of the mechanized units. Its variations included a flamethrower (M-132), a command version (M-577), a mortar carrier (M-106), a cargo hauler (M-548), and an air defense weapon (M-163). Though lightly armored and very easily damaged or destroyed by mines, the vehicle was well-liked for its speed, reliability, and easy handling characteristics.

There were a number of types of self-propelled weapons used throughout the war. The M-107 and M110 were open-topped gun mounts based on the same chassis. The M-107 mounted a 175MM cannon while the M-110 had an 8 inch howitzer. The guns were inter-changeable and this was often done depending on the firing mission. Since the vehicles were open-topped the crews were susceptible to enemy fire from rockets or mortars. To reduce this hazard the guns were usually bunkered-in to protect the men from enemy fire. The other main self-propelled guns were the M-108 and M-109. The M-108 was armed with a 105MM howitzer while the M-109 mounted a 155MM howitzer. Both guns were mounted in an enclosed turret which offered the crews a degree of protection from enemy fire and the elements. When these were emplaced in a bunkered position they were nearly invulnerable to anything except a direct hit. The M-108 never saw as widespread use as the M-109 which became the standard S.P. during later stages of the conflict.

There were two other self-propelled guns which saw use in the war. When airborne forces initially deployed to Vietnam in the early stages of the war they brought with them the M-56 Scorpion. This was a lightweight 90MM gun carriage which had been designed as an anti-tank weapon. After only a short trial period, where it was employed primarily for road clearing operations, the M-56 was withdrawn because it was extremely susceptible to enemy fire and provided little protection for the crew. The other vehicle was the M-42 Duster which saw extensive service throughout the war. This was an anti-aircraft vehicle which mounted twin 40MM cannons. It was based on the M-41 light tank chassis and the 40MM guns provided a fast-firing, accurate weapon which was extremely useful in perimeter defense and security patrols. Its high rate of fire and projectile weight were extremely effective against enemy troops in dense undergrowth and in dug-in positions. Because the vehicle was open-topped the crew had little protection from small arms fire or shrapnel. This was a serious drawback since the Dusters were often employed in areas of heavy enemy fire.

Perhaps one of the most unusual types of vehicles used in Vietnam was the armored or *hardened* gun truck which were used as convoy escorts. Early in the war it was found that resupply convoys presented the enemy with very lucrative targets. In an effort to improve security and augment their M.P. escorts, transportation units fitted a variety of trucks with armor and automatic weapons. These were then interspersed in the convoy to provide fire support in case of an enemy ambush. Almost every type of cargo vehicle was used in these conversions, and a variety of weapons from grenade launchers to quad 50 caliber machine gun mounts were fitted to them. Though these trucks could never eliminate the threat of ambush they proved very helpful in defending convoys and were a useful supplement to escorting armor.

The V-100 was a four-wheeled armored car produced by Cadillac Gage. It was used extensively by M.P. units for convoy security and patrols along roads or base perimeters. Its angular body provided good crew protection and its high ground clearance offered a degree of protection from mines. Though it was plagued by mechanical problems such as rear axle failure, the V-100 did a creditable job and helped free armored units for uses more in line with their mission. Its turret could carry a number of different weapon configurations which allowed units to pick the one best suited for their mission. This was the only armored car the army used in Vietnam.

An armored jeep from the 560th M.P. Company, with the 18th M.P. Brigade, on convoy security along Route 19. Name on the side is *California Dreamer*. The front armor shield is hinged on the hood. (US Army)



The trucks on this page are a variety of armored trucks from the 444th Transportation Company 27 Transportation Battalion, 8th Motor Transport Group.



Five ton M-54 truck with 2 M-60s and a .50 caliber mount behind the cab. Though extremely helpful in convoy security each modified truck took away a needed cargo carrier and men from the overworked transport groups. (US Army)



Nancy, a M-35 2½ ton truck equipped with a quad fifty and partial armor for the cab. M-60 mount in cab provided close-in security for quad crew. (US Army)



The Gamblers, another M35 is outfitted with full armor and a variety of machine guns. Even when modified as this, the crews were still exposed since the weapons needed an adequate field of fire. (US Army)



M-37 3/4 ton truck fitted with armor around cab and cargo deck, with mount for an M-60. (US Army)



Two V100s from the 4th Infantry Division take a break enroute from Pleiku to An Khe, in the Central Highlands. Note gun truck behind them and the armed 3/4 ton truck to their left. (US Army)



V100 of the 18th M.P. Brigade on security detail, operating out of Long Binh. This unit consisted of six battalions, of which this vehicle is from the 93rd. (US Army)



Daredevil and an unnamed partner, rest following a convoy mission near Phu Tai. Name on bow in Red, lettering is White, and bridge marker is Yellow. (US Army)

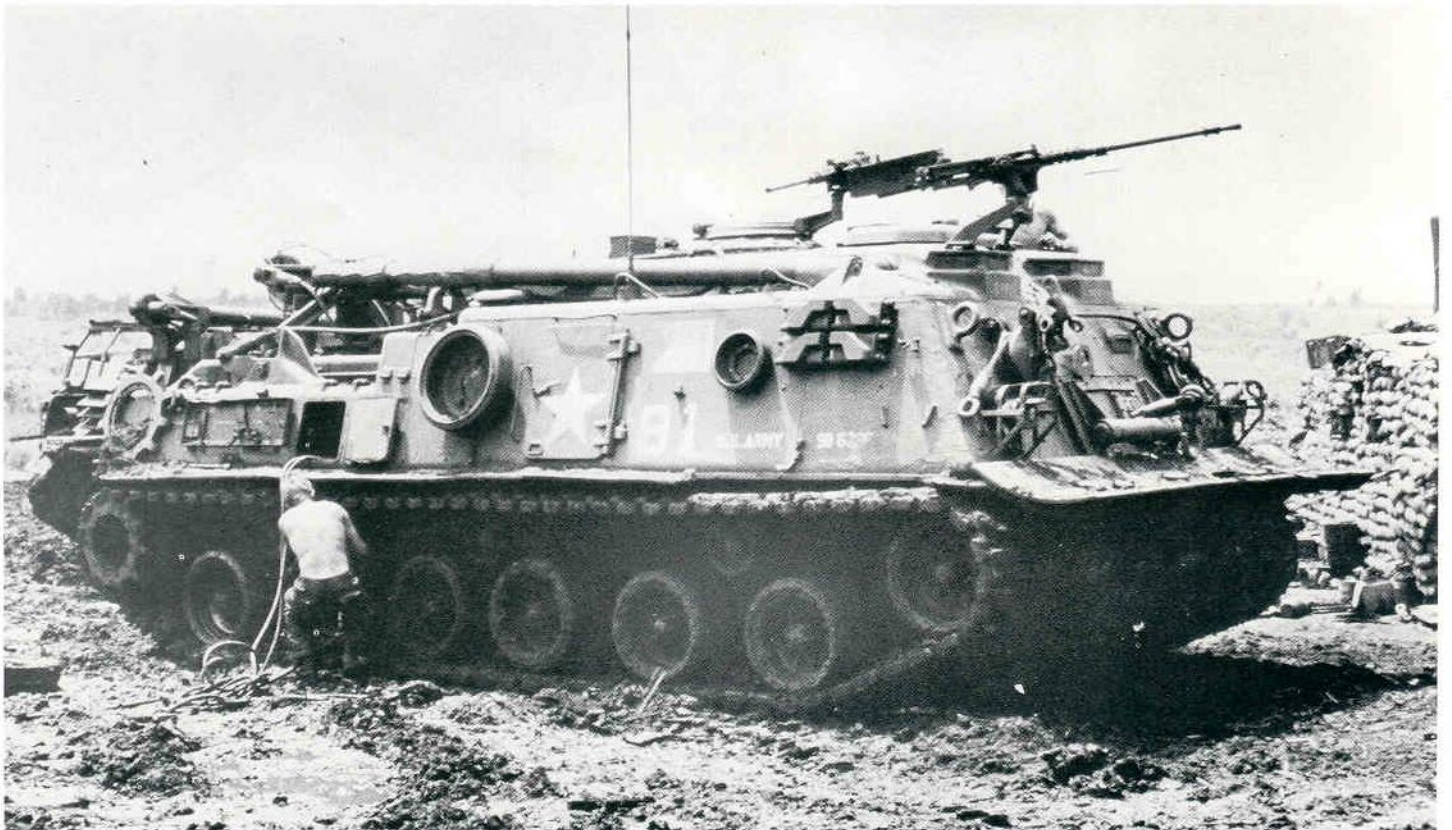


Blind Faith, from the 16th MP Group, leads a convoy along Route 19. Driver is wearing a chopper helmet, used whenever they could be obtained since they were less bulky than the regular helmet, goggles, and headphones. (US Army)



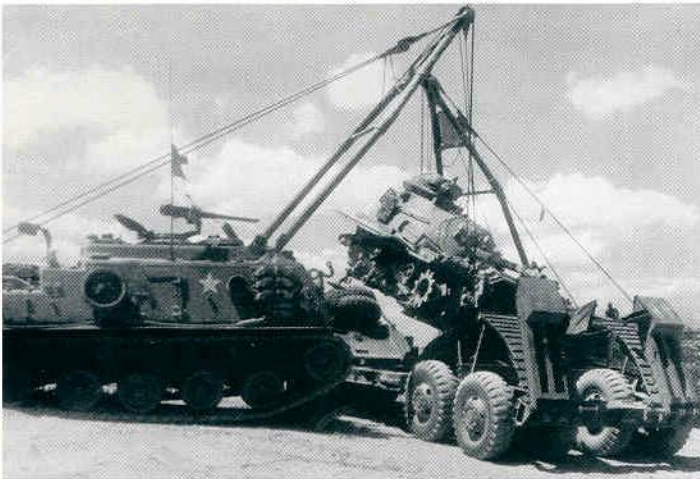
(Above) A light recovery vehicle, the M 578, carries barbed wire to its base at Xuam Loc. Gunner is alert for any trace of a V.C. ambush. Constant vigilance was a necessity on even the most mundane assignments. (US Army)

M-88 Recovery Vehicle of Troop B, 10th Cavalry has a track repaired at a base camp. Flag on side is Red and White while other markings are in White. (US Army)





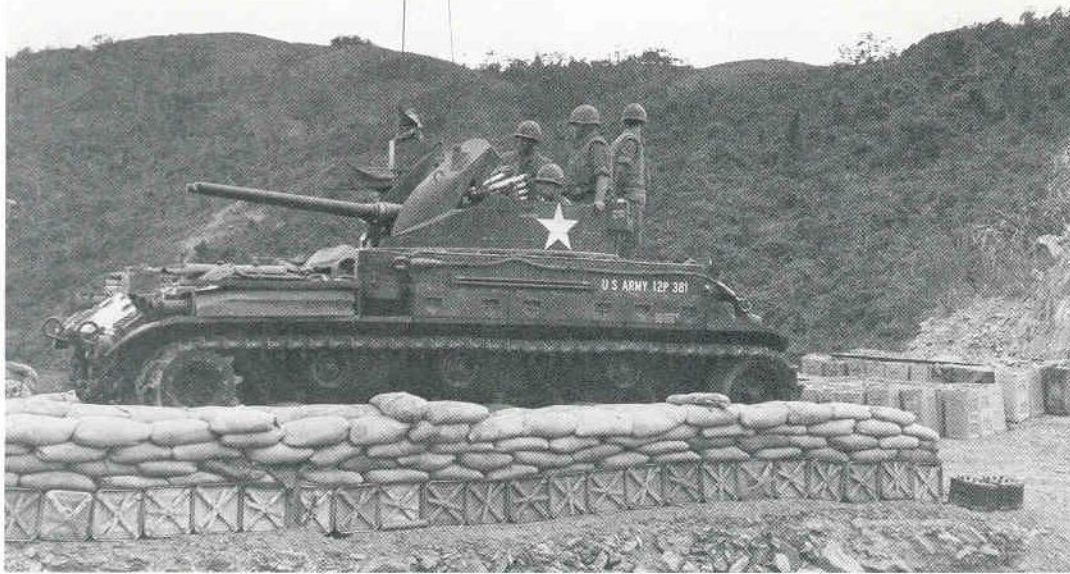
AVLB bridge layer on an M 60 chassis en route to a new base camp during OPERATION UTAH in the Khe Sanh Area. Both M48 and M60 AVLBs were used in Vietnam. (US Army)



The remains of a M48A3 is lifted onto a M-15A tank transporter by two M-88s. Note how spade is lowered to give the M-88 stability. Unusual is the twin .50 mount on the cupola. All three M-88s pictured have different machine gun arrangements. (US Army)

(Below) M-88 moves out from base camp with an armored unit. These vehicles were in constant demand to help keep tanks and APCs in running order and often accompanied units on missions in the field. (Papson)





An M42A1 Duster, attached to the 3rd Marine Division, in position to cover a bridge over the Khe Gio River near Dong Ha. The Duster is from C Battery, 1st Battalion, 44th Artillery. (US Army)

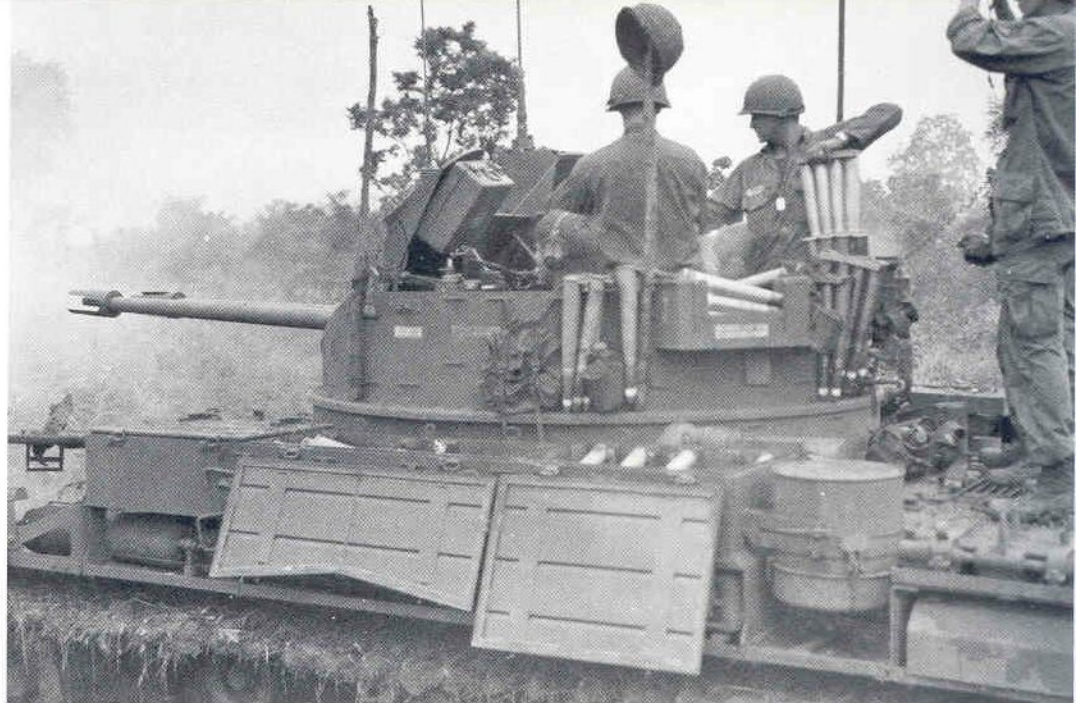


This M56 is from D Company, 173rd Airborne Brigade on a training mission near Bien Hoa. This company was the only one to use the M56 in Vietnam. (US Army)



A Scorpion fires on a V.C. force during an attack on a convoy. A serious drawback of the M56 was the exposed conditions of the crew. (US Army)

A Duster from B Battery, 60th Artillery engage a V.C. position near the Cambodian border during OPERATION FRANCIS MARION in August 1967. Extra rounds are carried in storage containers on hull. Poles are used to support tarps for protection from sun or rain. (US Army)



(Above) M56 and an M113 fire into a suspected enemy position during a search and destroy mission in Long Khanh Province. Often a special cannister shell was used by the crews to get a wide killing zone in the dense jungle. (US Army)

M 108 S.P., from the 52nd Artillery Group, 6th Artillery, in a bunkered position. Note kill tally on side of turret. The vehicle mounted a 105mm howitzer. (US Army)





Wheels of Death, an M42A1 Duster assigned to II Field Forces, prepares to move out to a new position. One crewman wears a flak jacket in case of enemy fire into his exposed position. Clips of 40mm ammunition are positioned on turret for easy access. (US Army)



Emplaced M109 S.P. on Hill 88, at maximum elevation. It belongs to Battery C, 2nd Battalion, 138th Artillery. Such positions were often ramshackled in appearance, but very functional for the crews. (US Army)

An M110 moves toward a new position with crew alert for any sign of danger. Sandbags offered additional protection and cushion to crew when moving. S.P. is from 8th Artillery and was part of OPERATION TOAN THANG. (US Army)



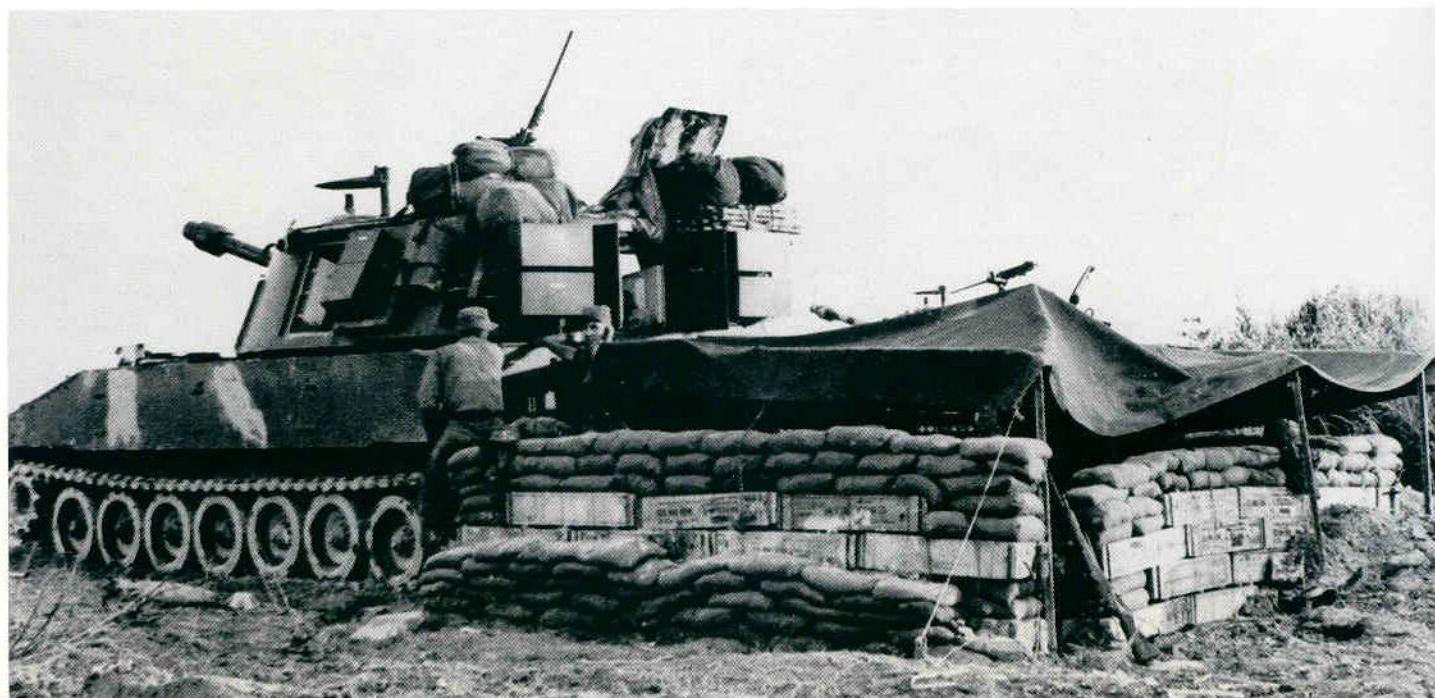


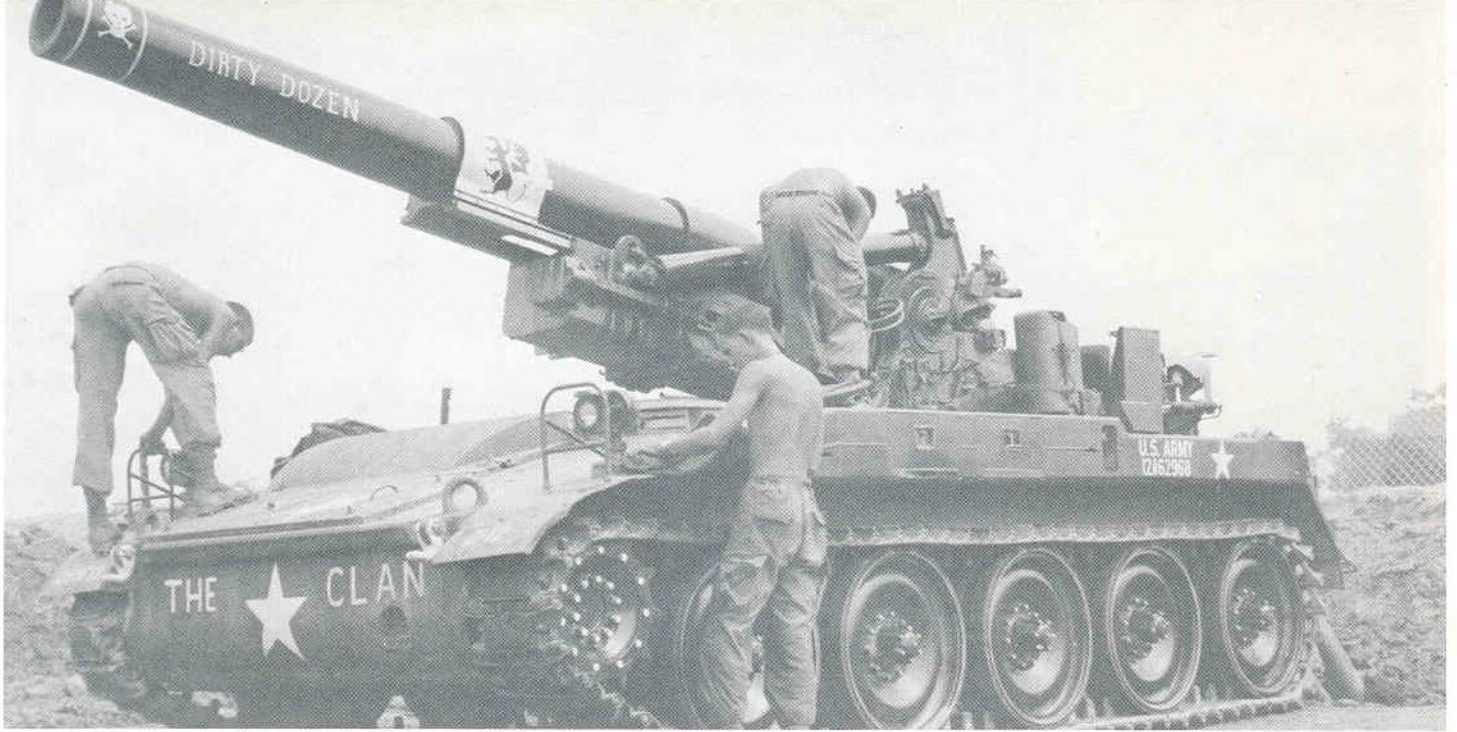
Crew members perform maintenance on an M109 assigned to support the Australian Task Force near Nui Dat. Markings indicate it is from 35th Artillery of II Field Force. (US Army)



(Above) II Field Force M107 S.P. from 2nd Battalion, 32nd Artillery. Name on barrel, *Cherry Boys IX*, and lighter bands on barrel toward rear are Yellow. (US Army)

This bunkered-in M108, from the 3rd Squadron of the 11th Armored Cavalry, was one of the first S.P. units to move "in-country". Note M14 leaning against rear wall. This weapon was used only for a short period before being replaced by the M16. (US Army)



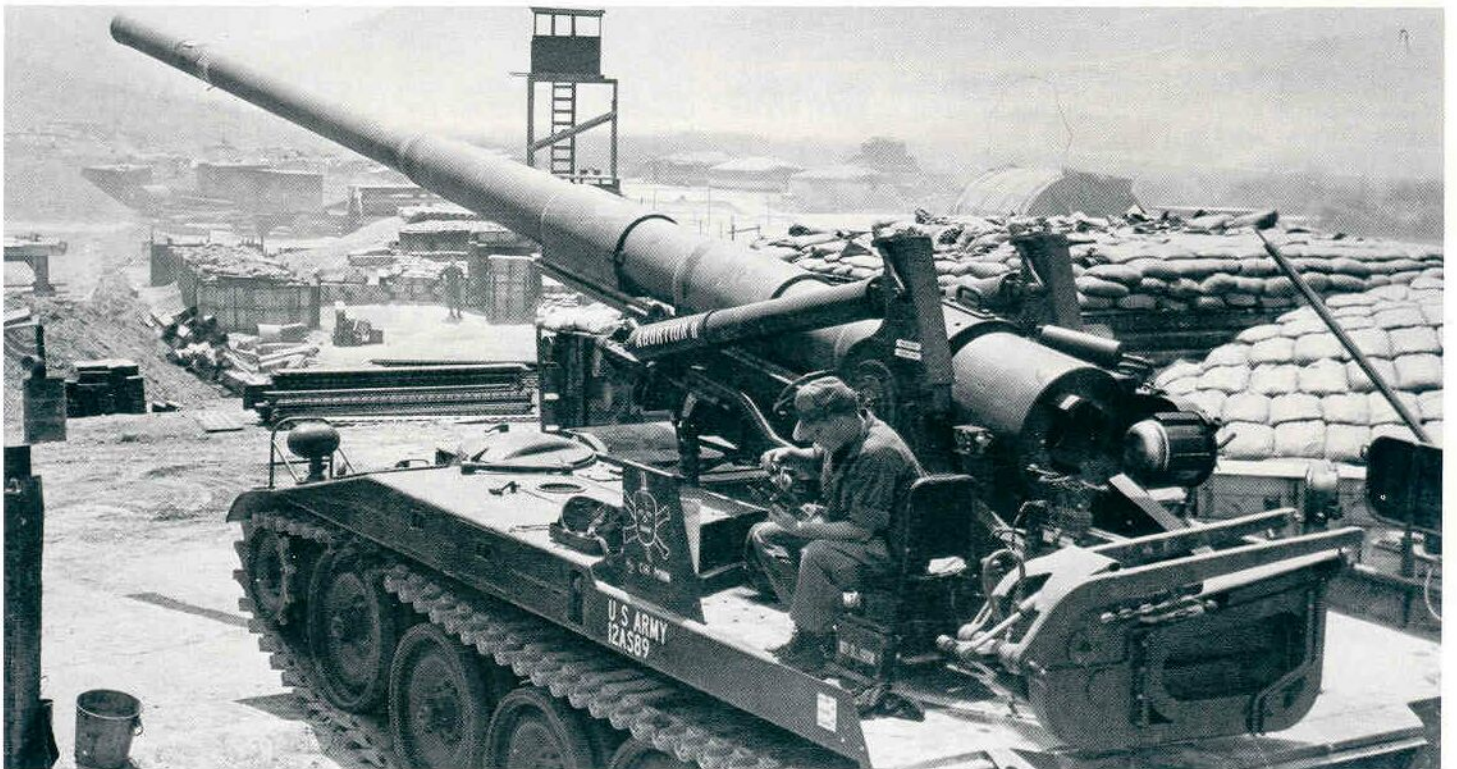


A rather immaculate M110 at Fire Base Stuart, northwest of Saigon. Wire fence around gun (background) helps protect against B 40 rockets. (US Army)

A camouflaged M-109, purportedly from the 5th Battalion, 4th Artillery of the 5th Infantry Division (Mechanized) during OPERATION DEWEY CANYON II, in February 1971. Colors appear to be Tan, Olive Drab and Black. (US Army)



Quiet moment at Landing Zone Elliot for *Abortion II*, an M107 from the 4th Artillery of the 108th Artillery Group. (US Army)



U.S.A.F.

Because of the constant threat to its air bases and installations, the air force deployed security teams in early 1965 to improve the inadequate defenses around these vital installations. At first no vehicles were available, but as the need arose, standard utility trucks were modified for the security role. Experience soon proved that these vehicles were nowhere near sufficient and in September 1965, M-151 jeeps were provided to the security forces. These were armed with a post-mounted M-60 machine gun in the rear and later, some were modified to carry an additional M-60 on the passenger's side of the front. Also, the standard air force 1 1/2 ton flatbed truck was modified as a *reaction* vehicle.

The massive enemy onslaught during Tet forced the air force to re-evaluate their armed vehicle situation. The jeeps and trucks proved totally inadequate for protecting their troops from hostile fire or for use as reaction vehicles. Since there was no time to develop a new vehicle to meet their requirements, the air force decided to use the M-113 A.P.C. and the V-100 (XM-706) Commando Armored Car. These were received by mid-year, and though no procedure existed for their use, air force personnel gradually were able to integrate them into the base defense policy. Though not ideal weapons for the situation they were far better than the previous vehicles. Used in perimeter patrol, as reaction vehicles, or from dug-in positions, they gave the security forces much needed mobility and firepower. Fortunately, there was never a need for them to repel another attack such as Tet, and though there were often fire flights along the perimeters with small forces of Viet Cong infiltrators, the vehicles proved sufficient. These were the very last armored vehicles used by American forces in Vietnam and when the final troop pull-out came, the few remaining vehicles were turned over to the Vietnamese.

Ole' a USAF M-113 on trial run near Phu Cat air base OPERATION SAFESIDE. Vehicle belongs to the 104th AP Security Squadron and is a stock army A.P.C. (USAF)



M-151 jeep on security patrol around Bien Hoa air base located northeast of Saigon. Exposed position of crew is evident. Air Policeman (AP) riding shotgun carries an M-3 greasegun. (USAF)





(Above) V-100 fires on enemy infiltrators on the perimeter of Phan Rang air base. A jeep-mounted searchlight provides illumination. Note kill markings on fender. Camouflage is Tan, Olive Drab and Black. (USAF)

An all Red M-113 used as a firefighting vehicle burns away brush around the Long Binh army base. These were used to clear wreckage and lay foam around burning aircraft or helicopters. (USAF)



ALLIED ARMOR

A number of U.S. allies provided military support during the Vietnam war. With one exception none of them used any large amount of armor, though each did at times employ A.P.C.s in a variety of roles. Both the Koreans and Thais had M-113s for use in field operations and received support from ARVN M-41s when needed. The Philippine security detachment used their A.P.C.s for patrol, but never employed them in field operations.

However, the Australians used armor quite extensively. They deployed a number of squadrons of M-113s and modified Mark 5 Centurions to support the 1st Australian Task Force and attached New Zealand troops from 1967 until the fall of 1971. Some of the Aussie M-113s were modified with a Cadillac Gage twin .30 caliber machine gun turret, or a 76mm Saladin armored car turret. The Centurions were fitted with searchlights and modified to take a bolt-on 100 gallon auxiliary fuel tank in the rear. These forces operated southeast of Saigon near the coast and participated in numerous search-and-destroy operations. Their employment was similar to that of American armored units although they were not parcelled out in such small numbers as their U.S. counterparts. The Centurions, despite some maintenance problems, provided invaluable service. They were especially effective when using canister rounds. These were similar to the U.S. beehive, except that pellets were used instead of flechettes (steel darts). It was soon found that the side-mounted bazooka plates became clogged with mud and vegetation and were quickly discarded. Throughout the Australian's stay in Vietnam their Centurions and M-113s helped deny the V.C. free movement and reduced numerous enemy positions in search-and-destroy missions. This armored firepower helped inflict substantial losses on Charlie while keeping Aussie casualties low.

Often the A.P.C.s would act as a blocking force while the tanks drove the enemy against them in *hammer and anvil* operations. In these operations the M-113s and infantry would block off the likely escape route of an enemy force which was being attacked by the Centurions. The enemy would then be driven into the blocking forces fire and annihilated. The Viet Cong found that it was extremely difficult to knock out a Centurion. Often times they fired their R.P.G.s into the foliage above the tank in the hope that the shrapnel would kill or wound the crews in the open hatches. This tactic did cause casualties but generally failed to stop the tanks.

By 1971 the enemy in the Australians' zone had been fairly well eliminated. As reduction in troop strength began, the armor units were among the first to leave. The final units left Vietnam in September of 1971.



M113s of the Korean Tiger Division move through the brush near Qui Nhon. APCs are camouflaged with a Sand-Tan over Olive Drab while tiger is Orange, Black and White on a Red shield. Note unusual shape to shields in rear. (US Army)

Centurions and M113 take a tea break at Nui Dat in Bien Hoa province. Most Centurions carried a .30 caliber machine gun for use by the commander. (Australian War Memorial)



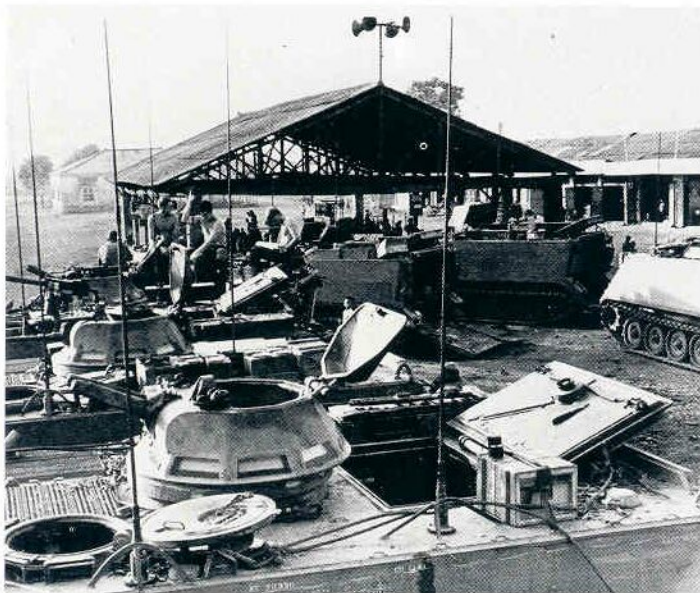


(Top) This Centurion crew has rigged a shade to protect themselves from the blazing tropical sun while they patrol a camp perimeter. On the fume extractor is chalked the name *Lolita*. (Australian War Memorial)

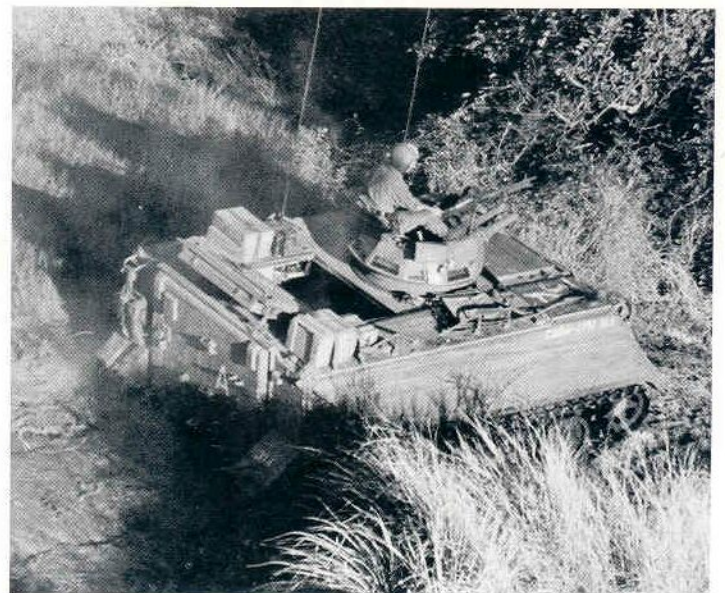


(Right) Australian M113s, with twin .30 caliber turrets, carry South Vietnamese regional troops during OPERATION CUNG CHUNG. APCs are from B Squadron, 3rd Cavalry Regiment. (Australian War Memorial)

(Below) M113s in the market square of Xuyen Moc after a patrol. Though most are equipped with turrets, note the unusual shield on the one in the back. (Australian War Memorial)



(Bottom Right) *Cara-Lyn* equipped with the Cadillac Gage turret. This M113 was part of Matilda Force, one of the largest Australian armored operations of the war. (Australian War Memorial)



ARVN RESTRUCTURE

With the build-up of U.S. forces in late 1965 ARVN units began receiving additional supplies, support, and training. By now the M-113 had proved its worth and as more of the APCs arrived new units from squadron level up were created. The old M-24 was soon replaced by the M-41 and the number of tank units was expanded. With the build-up of U.S. forces additional advisors became available which helped to train ARVN personnel, provide liaison with U.S. air and artillery support and procure needed supplies.

However, the period from 1965 to 1968 was characterized by American units stepping in and taking over the bulk of the fighting. Though Vietnamese units were sometimes engaged in joint operations with American forces, most ARVN units were assigned to pacification or security duties. Both the U.S. and Saigon governments felt that ARVN troops were more suited for these roles than U.S. units since they would be working with their own people. Because of their mobility ARVN mechanized and armor units saw somewhat more employment in search and destroy missions than ARVN infantry units did, but overall this period saw a curtailment in large scale field operations by the Vietnamese.

TET 1968

The sudden enemy attack during the Tet holidays of January 1968, occurred around major population centers. Because of their proximity, ARVN armored units were the first allied forces to react to the enemy attacks. In deadly street fighting in Saigon, Hue, and Bien Hoa these armored units fought side by side with their U.S. counterparts and helped stem the V.C. assaults. At Tan Son Nhut airbase Vietnamese air force personnel manned M-24s and helped stop a number of serious V.C. probes into the sprawling base. In Saigon, ARVN M-41s and M-113s provided cover and support as troops cleared the enemy in vicious house-to-house fighting, particularly in the Cholon sector. At Hue, in I Corps there occurred some of the most bitter fighting and the longest battle of Tet. V.C. and N.V.A. troops dug in throughout the ancient city could only be rooted out by close in fighting. Little air or artillery support was possible because of the closeness of fighting. Armor was constantly in action during the month long battle. M-41s closed to point-blank range to blast enemy positions. M-113s provided suppression

fire so ARVN infantry and U.S. Marines could get close enough to dig out the entrenched Cong. Throughout the vicious hand-to-hand fighting ARVN units showed themselves capable of holding their own against the well-entrenched enemy.



Vietnamese built armored car, similar in design to the V-100, which was built in the mid-1960s. Adequate supplies of V-100s made its production unnecessary. (US Army)

ARVN M41 with Vietnamese Marines move down Route 1 to attack rebel troops in the village of Than Hoa An. M-41s began replacing the older M24s in mid-1964. (USMC)





Vietnamese M24 light tank and US Air Force security personnel search for Viet Cong guerrillas on the perimeter of Tan Son Nhut air base during Tet, 1968. (USAF)

Following the Tet offensive ARVN units began assuming more of the burden in the war. As U.S. troops were pulled out, ARVN took up an increasing share of the load in the field. By early 1970 Vietnamese armored and mechanized battalions were ready to carry out an operation even U.S. units had not yet done — the invasion of enemy sanctuaries in Cambodia. In mid-April three armored task forces moved into Cambodia. No U.S. troops accompanied them though army units did provide support from inside Vietnam. The V.C. and N.V.A. were caught off guard by the attack. They put up fierce resistance but were beaten down by ARVN troops. Following their initial success the ARVN troops expanded the operation. When the U.S. moved into the sanctuaries in May the two operations merged as one. Though the U.S. troops pulled out by the end of June, the Vietnamese units continued to operate in Cambodia until the end of July. Over the next eighteen months there were numerous thrusts back into Cambodia as the need arose, but none of these were as large or as successful as the first operation. Most were successful though on occasion inept leadership resulted in serious setbacks. These operations did much to improve the confidence and morale of ARVN troops. But even though they had fought well the troops had the benefit of overwhelming numbers, massive support, and U.S. firepower. Many ARVN commanders did not make a realistic appraisal of their troops' performance and became dangerously over-confident.

LAM SON 719

Encouraged by their Cambodia experience the South Vietnamese decided to move into Laos near the DMZ to sever the Ho Chi Minh trail and cut enemy supply lines. The operation was code named *Lam Son 719*. The plan called for two army and one marine division to stage a combined air and ground assault into Laos. The main objects were the towns of Aloui and

Tchepone which served as supply terminals for the Ho Chi Minh trail. The main ground assault was to be along old Colonial Route 9 and was to be supported by a series of firebases secured by airborne assault. Unfortunately two major factors turned the attack into chaos. First the ground thrust was severely restricted by the terrain. The road was in a very dilapidated state, and the surrounding terrain was very hilly which made it unfavorable for large scale movement. This restricted the ARVN forces to a very narrow axis of attack. Secondly, through intelligence leaks the North Vietnamese had been forewarned of the operation. They had positioned large numbers of troops, artillery, tanks, and anti-aircraft guns around the line of attack. These preparations went unnoticed by ARVN intelligence.

The 1st Armor Brigade began the ground attack on 8 February 1971. Supported by airmobile assaults on the surrounding hills the brigade captured Aloui on 10 February. But the attack bogged down as the N.V.A. swiftly reacted to the attack. North of Aloui enemy attacks on ARVN landing zones (LZs) forced the 1st Armor to divert elements to support these positions. At LZ Ranger North and South* the pressure was so great that the rangers were forced to withdraw. The N.V.A. then launched a series of tank-infantry attacks against LZ 31. M-41s from Aloui were sent to reinforce the position and on 19 February ARVN and N.V.A. armor clashed for the first time. In the battle for the landing zone six T-54s and sixteen PT-76s were destroyed by ARVN tankers who did not lose any M-41s. But the North Vietnamese continued to doggedly attack. The attacks were so fierce that eventually the landing zone was lost and the ARVN troops retreated toward Aloui. During the retreat the N.V.A. kept up constant pressure but with the aid of air and artillery support the ARVN units destroyed an additional thirty tanks. No M-41s were lost but nine M-113s were destroyed or abandoned in the withdrawal. The tanks and A.P.C.s eventually reached Aloui and dug in

* see map on page 76.

ARVN Rangers, supported by an M41, move into a section of Saigon held by guerrillas. Note how extra ammo cans are carried on front hull, a very common practice among M41 crews. (US Army)





around the town. But the fierce fighting north of Aloui had cost ARVN forces so many casualties that the ground thrust could push no further. In an effort to break the deadlock a helicopter assault seized Tchepone on 6 March. Yet even this failed to ease the pressure on Aloui and no ground troops were able to link up with troops at Tchepone. The ARVN command decided that the best course of action was to withdraw since the N.V.A. were building up their strength to cut off the entire attack force. The only way out for the column at Aloui was back along narrow Route 9. In the hills along Route 9 the North Vietnamese patiently waited. As the column retreated the N.V.A. staged continuous attacks. Panic set in among the troops; tanks, APCs, and artillery were abandoned. The retreat quickly turned into a rout. By the first week in April what remained of the ARVN force was finally able to cross back into Vietnam. The losses in men and material were staggering. The operation had been a disaster. Heavy enemy attacks, command indecision, poor planning, and a lack of coordination had contributed to the ARVN defeat. The confidence which had been built up in Cambodia had been dealt a staggering blow by this bloody defeat in Laos.

THE EASTER INVASION - 1972

Following the Laotian fiasco ARVN units spent most of their time rebuilding and digging out the V.C. still operating in Vietnam. There were occasional forays into Cambodia but none resulted in any significant action. The enemy realized that the longer the situation stayed relatively quiet, the only beneficiary would be the South Vietnamese. The N.V.A. began stockpiling supplies for a massive conventional assault to break the stalemate. Large numbers of tanks, troops, artillery and mobile anti-aircraft guns were readied for this assault. Special emphasis was placed on tank and artillery units. During this build-up neither U.S. nor ARVN intelligence detected it.

On 29 March 1972 the North Vietnamese Army unleashed a massive bombardment against ARVN fire bases along the Demilitarized Zone (DMZ) and

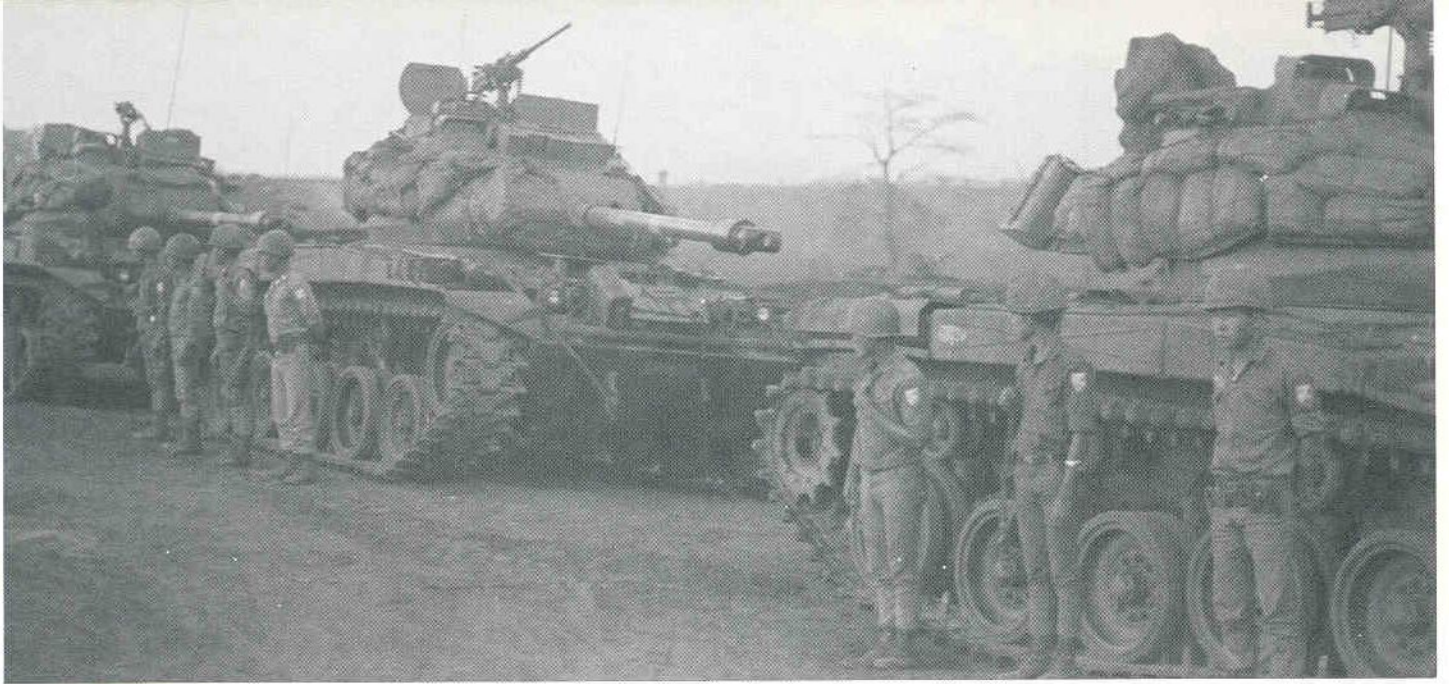
Bogged down M113 from the 2nd Cavalry Squadron is hitched up to another. Notice locally made shields on commander's cupola and old .30 caliber machine guns in rear. (US Army)

followed with tank-supported ground attacks. The main weight of the attack fell on the new 3rd ARVN division. This unit was made up of draft dodgers, malcontents, and low quality recruits. Most of its units quickly broke under the massive artillery bombardment and T-54 led ground assaults. These ARVN troops abandoned large quantities of weapons, ammunition and vehicles. Little air support was available because of horrible weather conditions. As the 3rd division disintegrated the N.V.A. attack gained momentum and pushed on toward Qiang Tri City. ARVN command rushed marine and ranger reinforcements north to block the enemy and a new M-48 tank regiment, the 20th, moved up to support infantry units near Dong Ha on the banks of the Mieu Grang River. On 2 April, Easter Sunday, a squadron from the 20th engaged an N.V.A. armored column west of Don Ha destroying two T-54s and nine PT-76s without loss. On 9 April, the 20th engaged several enemy columns and destroyed sixteen more T-54s without losing any M-48s. More ARVN reinforcements were committed and by mid-April the front stabilized around Dong Ho. In an effort to break the deadlock the N.V.A. brought up additional men and material. For the first time in the war they employed wire-guided anti-tank missiles which destroyed a number of M-48s and M-113s in position along the river.

On 27 April the enemy opened up a new offensive in an effort to break through the ARVN line at Dong Ho. The line was hit by a number of head on and flanking attacks. Outnumbered, the ARVN defenders were forced back

ARVN M24 fires on V.C. positions in the old French cemetery outside the main gate of Tan Son Nhut. Tank is camouflaged in Reddish Brown, Olive Drab and dull Black. Name on turret is probably due to the fact that the old "Combat" TV series starring Vic Morrow was shown on the U.S./Vietnamese television station in Saigon. (US Army)





ARVN 3rd Cavalry Squadron crews stand inspection prior to moving out in support of elements of the Korean Tiger Division near Pleiku. (US Army)

toward Quang Tri. The N.V.A. succeeded in getting troops and tanks behind ARVN's defensive line and threatened to encircle all ARVN forces north of the city. ARVN had no choice but to retreat as rapidly as possible. This withdrawal was carried out far more ably than the earlier one by the 3rd division. There was little panic but a lack of supplies and spare parts caused some M-48s and M-113s to be abandoned. Conflicting orders led to the destruction of a number of bridges which stranded more armored vehicles. The ARVN column continued its retreat under constant attack by the N.V.A. After five days the remnants of this force reached positions south of Quang Tri and dug in. The city was abandoned as it was impossible to hold with the units available. Reinforcements arrived and helped repulse a number of North Vietnamese assaults. The month long battle had drained both sides and the front again stabilized. In the retreat every M-48 of the 20th Armor was lost but none were destroyed by enemy tanks. Some were lost to rockets or artillery but the majority either broke down, ran out of fuel, or were stranded when bridges were destroyed. In return the 20th had destroyed over ninety T-54s and PT-76s. In every action ARVN tanks had performed far better than their opposite number. After the front stabilized the seasoned remnants of the 20th personnel formed the nucleus as the regiment was reformed.

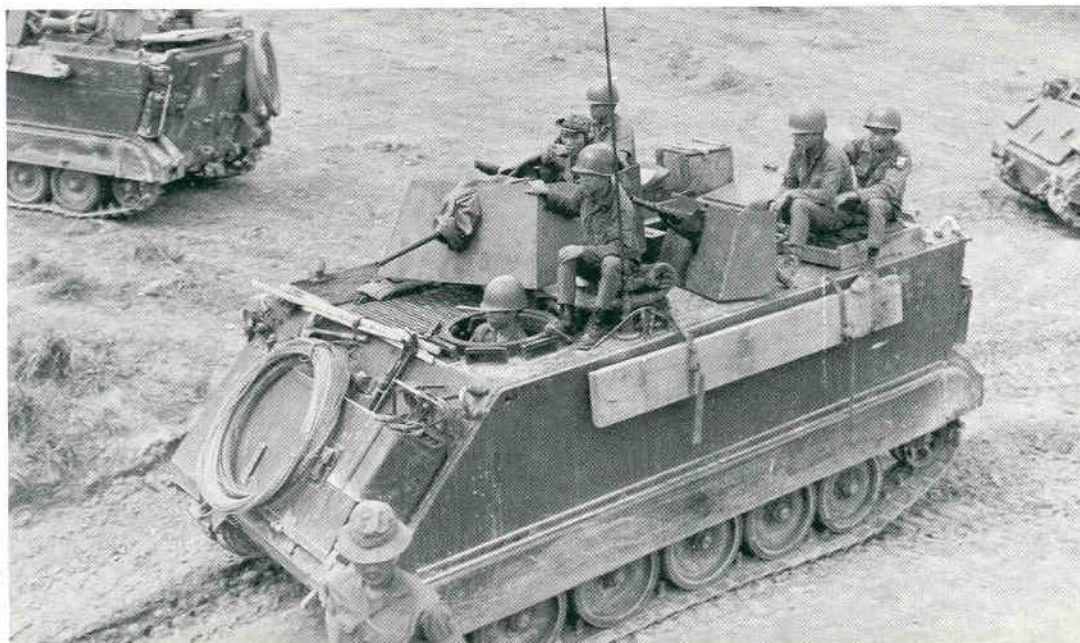
At the same time as the invasion across the DMZ two other N.V.A. armored attacks were launched near Pleki-Kontum and north of Saigon. Near Kontum T-54s and Sagger anti-tank missiles routed ARVN M-41s and placed the city in danger. Here no large amount of armor was used to defeat the T-54s and PT-76s, as air support and M-72 L.A.W.s (hand-held anti-tank weapons) were used when the N.V.A. armor attacked dug in ARVN troops. Eventually a mechanized relief column broke through and helped turn the

N.V.A. away from the city.

Near Saigon the story was much the same, N.V.A. force took Loc Ninh and forced ARVN back on the provincial capital of An Loc. During this retreat numerous tanks, APCs, and artillery pieces were abandoned. At An Loc the ARVN troops dug in. N.V.A. forces surrounded the town and subjected the defenders to a murderous bombardment. As the bombardment lifted startled ARVN defenders saw T-54s advancing into the town without infantry support. When the tanks were at point-blank range ARVN troops open fired with L.A.W.s. The entire N.V.A. column was destroyed without loss to ARVN. Subsequent attacks were beaten off with the help of air support and U.S. anti-tank missiles which were airlifted into the besieged town and proved very effective against the T-54s. As the fighting went on, a mechanized relief column fought its way up Route 13 to relieve the town. After fierce fighting it broke through in late summer and forced the N.V.A. back toward Cambodia.

As the N.V.A. drive lost steam ARVN commanders mounted counter-attacks. The largest and most important of these was the recapture of Quang Tri. The high command committed its elite marine, ranger, and paratrooper units to the assault on the city. The reconstituted 20th Armor Regiment, along with three cavalry regiments, supported the drive. The North Vietnamese gave ground slowly and forced ARVN to fight for every inch of terrain. Quang Tri was finally captured after bitter house-to-house fighting and the losses on both sides were substantial.

These severe losses had strained the resources of both combatants. Unable to totally dislodge the N.V.A. The ARVN commanders decided to conserve their strength until a more opportune time. But political powers dictated otherwise. After much haggling at the peace table and a massive bombing campaign the U.S. forced the North Vietnamese into a peace agreement. A cease-fire was signed in January 1973 which supposedly ended the war.



M113s pull into night lager after a sweep near the DMZ. The A.P.C.s from the 7th Cavalry Regiment were attached to the 1st ARVN Division. Planks on side were used for traction in mud and helped provide additional side protection. (US Army)



THE FINAL DEFEAT

The two years which followed the cease fire were anything but peaceful; constant fighting occurred between the sides. The North Vietnamese leaders decided to launch a limited offensive in 1975 and force a final showdown in 1976. A limited attack near Song Be in early 1975 made good progress. But most importantly it resulted in no U.S. response. This American inactivity convinced the North that no substantial U.S. aid would be forthcoming to the Thieu government in case of large scale attacks in the future.

In March the N.V.A. launched a massive tank-infantry attack on Ban Me Thout, a city south of Pleiku. It caught the ARVN units off-guard and overwhelmed them. A muddled counterattack did little to improve the situation. President Thieu called a hasty conference at Pleiku where he decided to evacuate the highlands area to conserve ARVN strength against further assaults. The entire retreat turned into a disaster. It was so poorly organized that units had no idea when they were to withdraw or what their plan of action was. Civilians mingled with the ARVN columns and caused additional confusion and disorder. When the N.V.A. staged their attacks, the retreat turned into a massive rout. By the time the column reached the coast it had lost over 300 tanks and large numbers of M-113s. Few of the ARVN elements

which survived intact were cohesive fighting units. The vast majority of the troops were a disorganized mob which spread panic and fear into the other ARVN units encountered.

Dug in M41s along the Dong Ha River during the North Vietnamese attack in the spring of 1972. A number of T55s/T59s fell to the 76mm guns of the M41s around Dong Ha until the NVA turned the ARVN flank. (US Army)

106mm recoilless rifle receives a cleaning by its crew at Quang Nai. 106 equipped M113s acted as a support platoon for ARVN A.P.C. Squadrons. (USMC)

Vietnamese Air Force M-24 outside main gate at Tan Son Nhut air base. Camouflage scheme is Tan over Olive Drab. (Mesko)

An M-35 truck with a single 20mm cannon mounted in back guards the western perimeter of Tan Son Nhut. Stylized eagle on the side was an insignia of the Vietnamese Air Force. (Mesko)



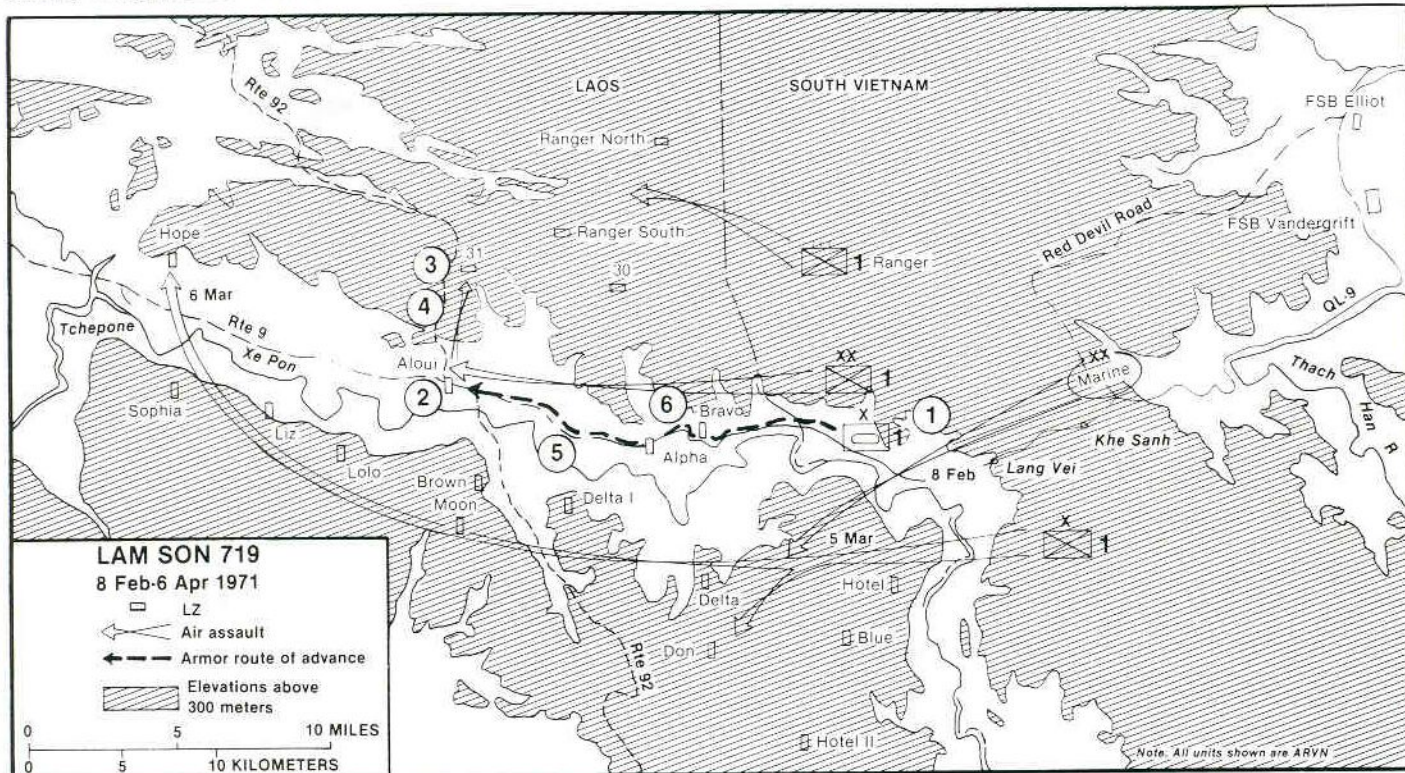


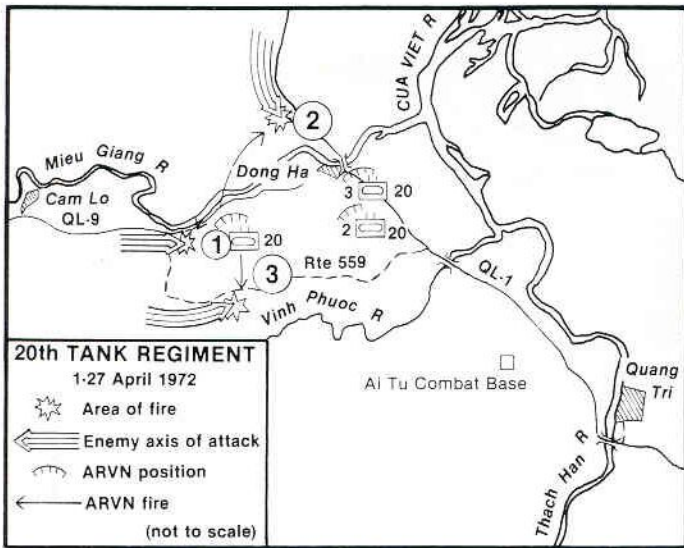
M48A3 from the 20th Tank Regiment moves into position near Dong Ha to guard Route 9. Tank belongs to the 1st Squadron of the regiment. (US Army)

M42 covers western approach along Rt. 9 to Dong Ha. For nearly a month ARVN troops and armor held the N.V.A. offensive near the town until forced back by overwhelming numbers of men and tanks. (US Army)

- 1 1st Armored Brigade, 11th and 17th Cavalry Regiments, advance on Route 9 into Laos on 8 February 1971.
- 2 Aloui taken on 10 February.
- 3 At LZ 32 six T-54s and 16 PT-76s are destroyed by the tanks of the 11th and 17th Cavalry on 19 February. NVA forces finally take LZ six days later.
- 4 NVA forces lose 30 tanks in advance on Aloui against ARVN losses of 9 ACAVs.
- 5 ARVN forces in retreat are ambushed at river crossing and lose or abandon 21 M41s, ACAVs, and other vehicles.
- 6 ARVN forces are again ambushed and hit by accidental airstrike. In fear of further ambushes, a force leaves Route 9 and pushes cross-country to regain South Vietnam.

Confidently the N.V.A. launched a second attack with T-54s against Quang Tri. The marine units defending the city had no armor support and were forced to retreat. Eventually the N.V.A. isolated Hue and Do Nang with a series of tank assaults. ARVN forces with some armor support prepared to defend the two cities. At the last minute President Thieu ordered Hue abandoned, and the troops moved back toward Da Nang. As the troops retreated they received orders to go back to Hue. These conflicting orders resulted in confusion and units began disintegrating. Soon it became every man for himself. Equipment was abandoned and little resistance was given to the N.V.A. Both towns fell without a fight, and the N.V.A. pressed southward with T-54s in the lead. The little ARVN armor that was left was abandoned in the face of enemy attacks along the coastal road. By mid-April the attackers were nearly in Saigon. With its armor gone the South Vietnamese army could not withstand the attacking N.V.A. tanks. At Xuan Loc the remaining ARVN units put up a spirited fight. However, it was too little too late. The defenders held for a few days but were crushed by a massive tank-infantry assault on 15 April. The N.V.A. stood poised for the final assault on Saigon, only thirty miles to the west. The final push began during the last week of April. There was little resistance from the few remaining ARVN units. These were quickly brushed aside as the enemy moved into the capital. On the last day of April 1975, a Russian-made T-54, number 843, broke through the gates of the Presidential Palace of South Vietnam and took-up position in front of the massive white structure. In the streets around the Palace were other T-54s, along with captured ARVN M-48s and M-41s. The long war was over.





- 1 ARVN 20th Tank Regiment stops NVA thrust from Cam Lo area on 1 April 1972.
- 2 Nine PT-76s and two T-54s destroyed by the 20th north of Dong Ha on 2 April.
- 3 1st Squadron of the 20th destroys or captures eight T-54s.



M41 moves through a village near Dong Ha to counter an N.V.A. thrust at the ARVN flank. Serial number on lower hull is in Black on a Yellow background. Often a tiny Vietnamese flag was also carried to the left of the numbers. (USAF)

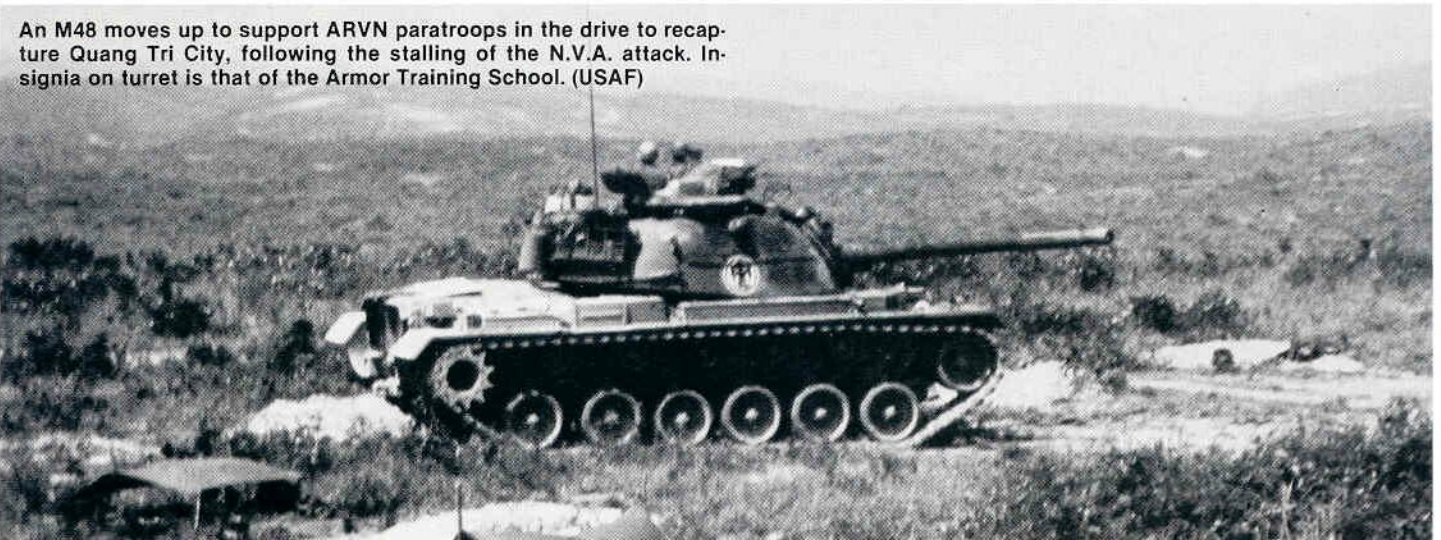


ARVN tank crews rest after an engagement with North Vietnamese tanks at the Dong Ha River. Eventually all these tanks would be lost in the month long battle and ensuing retreat from Dong Ha. (US Army)



M113 with reinforcements aboard move up to the Dong Ha River. Extensive use of camouflage was quite common during the battle to conceal armor from the North Vietnamese. (US Army)

An M48 moves up to support ARVN paratroops in the drive to recapture Quang Tri City, following the stalling of the N.V.A. attack. Insignia on turret is that of the Armor Training School. (USAF)



N.V.A. ARMOR

Following their victory over the French the Viet Minh refurbished some captured M-24s but aside from training and propoganda use these were never employed. The Viet Minh had now become the North Vietnamese Army (N.V.A.) and in the 1960s began to build up an armored force. From Russia came T-34 medium tanks and PT-76 light tanks while China sent T-60 light tanks.

The N.V.A. first used armor in combat when PT-76s attacked the Lang Vei Special Forces camp in May 1967. These caught the camp defenders by surprise and the tanks were initially able to penetrate the outer defenses. The green beret advisors in the camp rallied their South Vietnamese irregulars and together they forced the PT-76s to withdraw. A second armor attack was made in February 1968, during the siege of Khe Sanh. The N.V.A. chose to attack the Lang Vei camp again with 10 PT-76s. This time they were able to break in and the defenders, despite support fire from Khe Sanh, were unable to throw them back. The camp eventually fell but not before 7 of the PT-76s were destroyed by M-72 L.A.W.s.

The next encounter occurred at the Ben Het Special Forces Camp. In response to intelligence reports that N.V.A. armor was in the area a platoon of M-48s from the 69th Armored Cavalry was sent to the camp. On the night of 3 March 1969, the N.V.A. 202nd Armored Regiment's 16th Company attacked with eight PT-76s and a number of personnel carriers. One of the tanks blundered into a mine field and alerted the defenders. In the ensuing battle the N.V.A. damaged one M-48 but lost two PT-76s and a personnel carrier. This took the fight out of the remainder and they beat a hasty retreat. This was the only time N.V.A. armor fought U.S. tanks during the war.

It was not until LAM SON 719 that N.V.A. tanks appeared on the battlefield again. By this time T-54/T-59 medium tanks had been received. These and the light tanks were used to attack isolated ARVN positions along the line of advance. P-76s and T-54s figured prominently in the fight at LZ 31, where over 25 were lost but the N.V.A. still captured the ARVN position. Their shock effect on ARVN troops was substantial and they were instrumental in capturing a number of fire support bases and upsetting the attack into Laos. Air strikes destroyed over 100 Communist light and medium tanks. But their use bloodied the South Vietnamese and caused a severe drop in ARVN morale.

In the 1972 Spring Offensive, T-54s spearheaded the major attacks of the campaign. In the north over a dozen bases fell to the N.V.A. until they were confronted by ARVN M-48s at Dong Ha where they were stopped cold with heavy losses. Eventually sheer weight of numbers prevailed but in tank versus tank battles N.V.A. armor was not able to match the ARVN tankers. In their other attacks there was little tank action, but rather air power and anti-tank weapons played the dominant role. At both An Loch and Kontum enemy tankers often attacked without infantry support and were easy prey for tank killer teams. In this first use of armor in a large scale offensive, the N.V.A. achieved some success but this was mainly through surprise and shock. Once ARVN units had time to dig in and bring up reinforcements they were able, with air support, to halt the enemy drives. The N.V.A. tankers suffered severe losses because of a lack of coordination with infantry and artillery. This lesson was not lost to the N.V.A. as they prepared for the future.

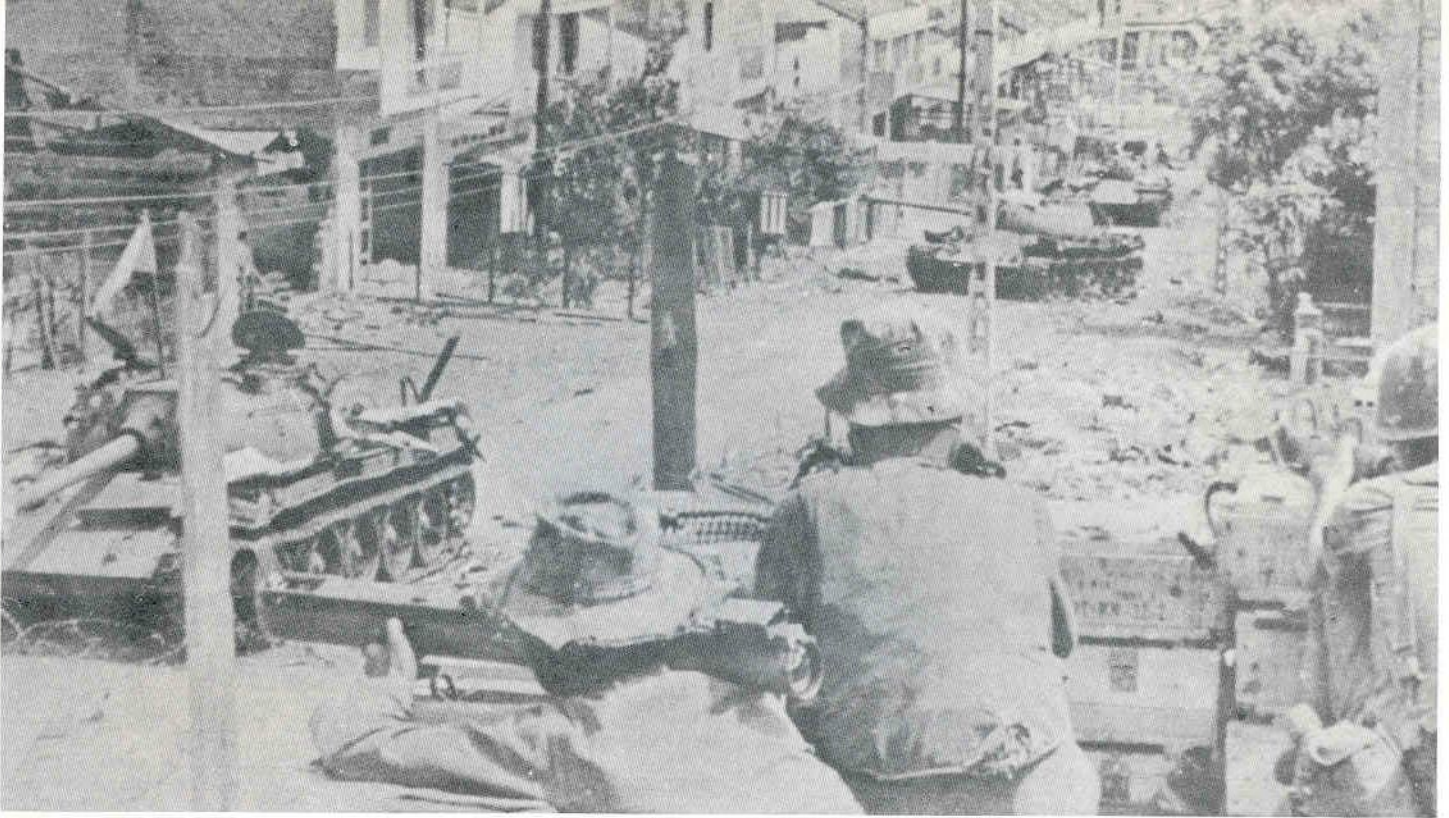
The N.V.A. offensive in 1975 was again spearheaded by armor. But this attack was more of a rout than a sustained drive against ARVN. The N.V.A. was confident that the U.S. would not provide air support against their attack in the Pleiku region. This battle was such a success that the resulting ARVN retreat to the coast became a panic stricken rout. ARVN units simply disintegrated with the retreating column turning into a disorganized rabble. Nearly all their armor was abandoned to the North Vietnamese. The same thing occurred at Hue and Da Nang where command indecision so paralyzed ARVN that the N.V.A. armor suffered only a temporary set back at the My Chanh river before it encircled the two cities. Panic set in among the ARVN units and the cities fell without a fight. From that point on the T-54s mixed with captured ARVN armor rolled south toward Saigon against little opposition. Near Saigon, at Xuan Loc, a spirited defense held for a time, but was soon crushed and the road to Saigon lay open. Throughout their drive the N.V.A. had been only slightly hampered by the Vietnamese Air Force (VNAF). Part of this was because as the N.V.A. armor advanced, mobile anti-aircraft artillery and missiles provided cover against VNAF strikes. The VNAF also failed to coordinate or control air strikes. It missed several opportunities to deliver strikes which might have stopped or slowed down the advancing columns and given ARVN time to regroup. All this, panic, low morale, and poor leadership combined to bring enemy tanks to Saigon at the end of April 1975. Thirty years of bloodshed ended, ironically, to the sound of clanking tank tracks rather than the swish of rubber clad guerrilla feet in the jungle.



A PT-76 destroyed during the attack at Ben Het by US Army M48s. Vehicle is from the 16th Company, 4th Battalion of the 202nd Armored Regiment. (US Army via Balin)



An N.V.A. T-55 captured during the reconquest of Quang Tri in the late summer of 1972. Letters on turret deal with the ARVN unit that captured it. (USAF)



Line of T-55s destroyed in the fighting at An Loc, north of Saigon. Tanks rolled into town without infantry support and were knocked out by ARVN infantry tank killing teams armed with M-72 L.A.W.s. (ARVN via Mesko)



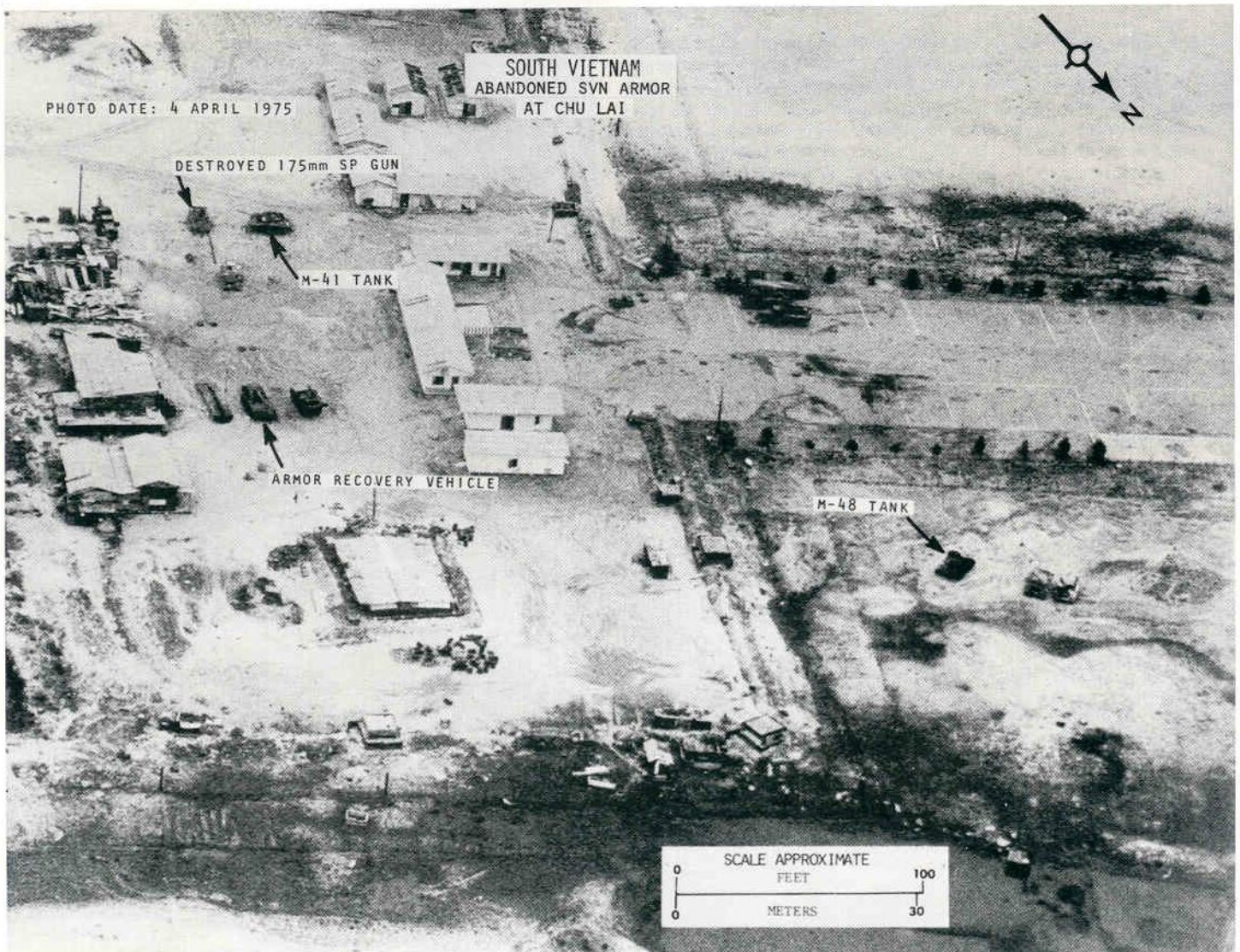
M-1967 A.P.C. captured near Quang Tri by ARVN rangers. Main armament is a 12.7mm machine gun for the commander. (USAF)

Captured T-59 at Firebase Pedro, southwest of Quang Tri. Number 385 is in White. T-59 was a Chinese copy of the T-55. (F.C. Brown)



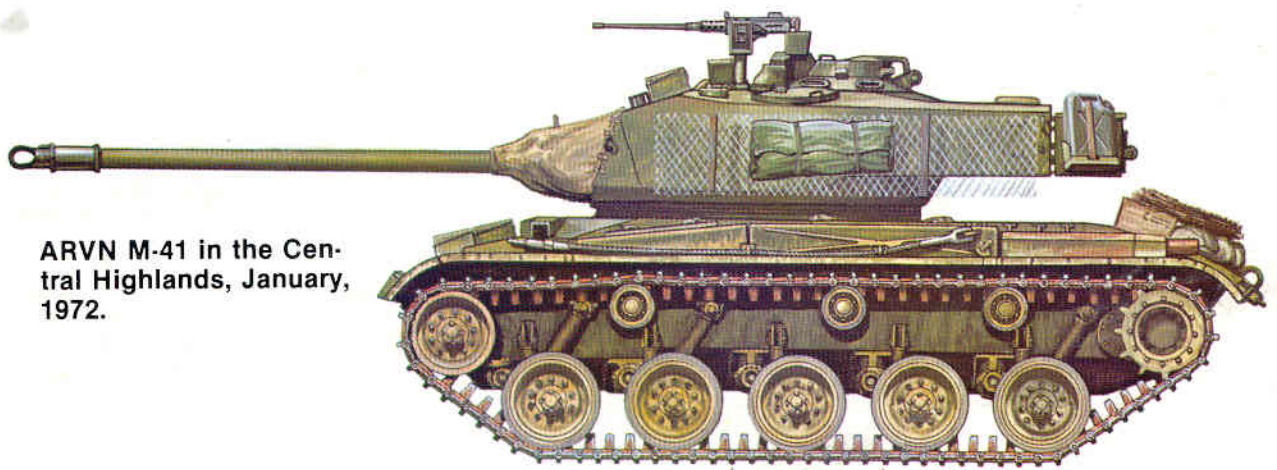


Another T-54, also captured near Pedro by Vietnamese Marines. Quang Trung is in White while 729 is Red with White outline. (F.C. Brown)

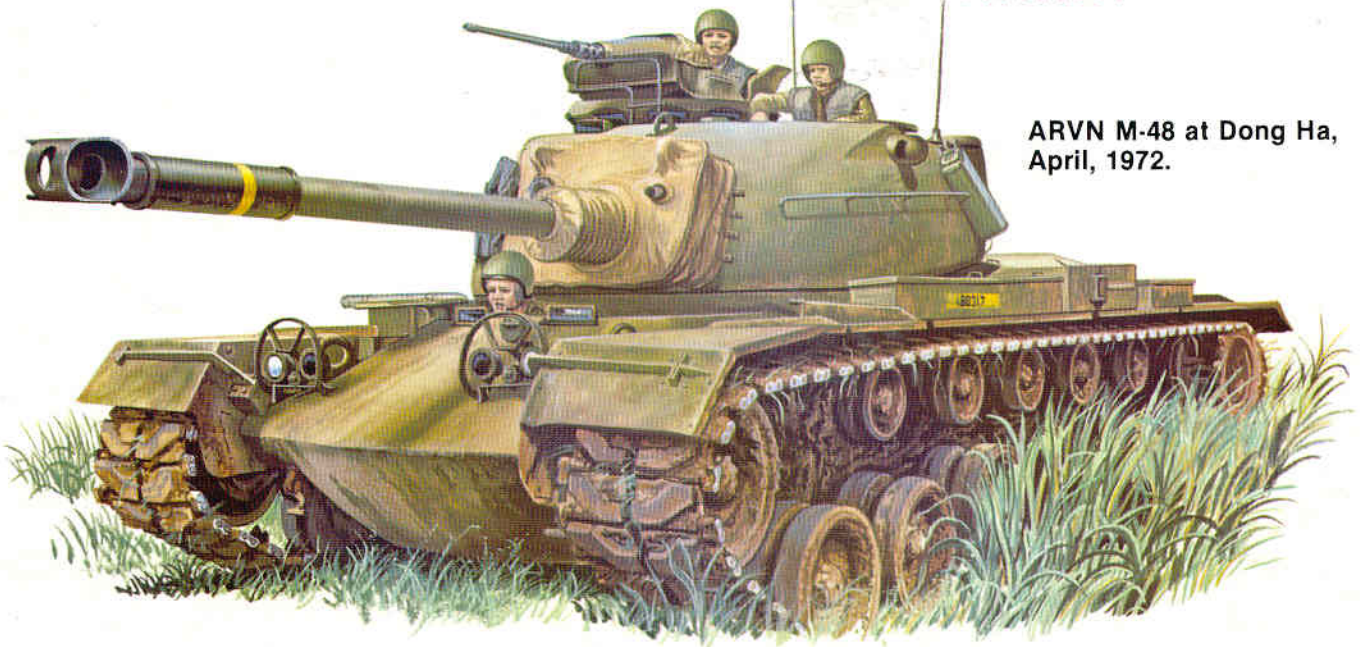


THE END - abandoned South Vietnamese armor in the wake of the 1975 North Vietnamese offensive. (USAF)

ARVN M-41 in the Central Highlands, January, 1972.



ARVN M-48 at Dong Ha, April, 1972.



NVA BTR 50P with A.A. gun turret on rear deck, captured at My Chanh in May, 1973.



NVA T-54 during the 1972 Spring invasion, near Dong Ha.

