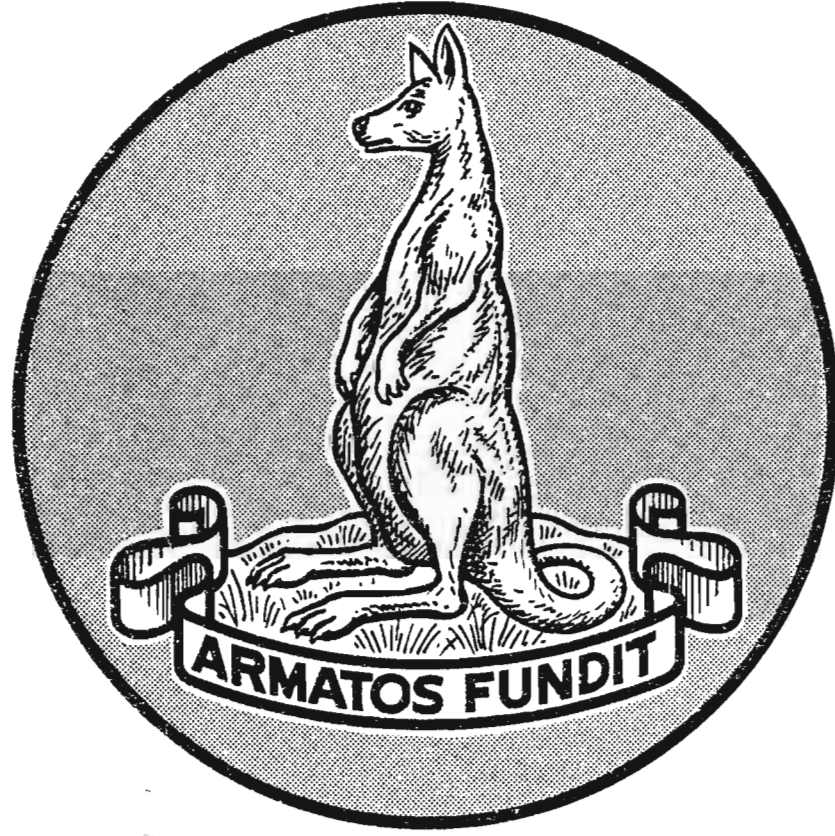


ROUVRE ● FALAISE GAP ● LE HAVRE ● BOULOGNE ● CALAIS ● PIERREVAL ● ROUEN ● NORMANDY ● AMIENS ● HESDIN ● ST. OMER ● CASSEL ● YPRES ● MENIN ● COURT RAI ● OUDENARDE ● ALOST ● MILL ● VENLO ● ROERMOND ● ANTWERP ● SCHILBURG ● KAATSCHUVELD ● HERTOGENBOSCH ● PUTT
 ESTEL ● BOXTEL ● EESCH ● MOERGESTE ● TILBURG ● WASPICK ● WASPICK ● BOVEN ● RAAMSDONK ● LAAN ● RUMPST ● GHENT ● WANSSUM ● WOOD ●

The
HISTORY
of the
KANGAROOS



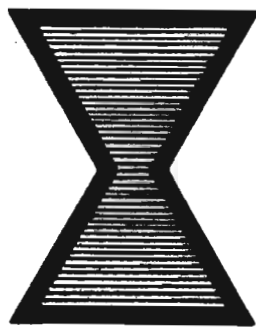
**1st CANADIAN ARMoured
 CARRIER REGIMENT**

D
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 A4
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BAAKENHOVEN ● DIETERER ● OUDROOSTEREN ● ECHT ● SCHILBERG ● KONINGSBOSCH ● WALDEFUCHT ●

164

ARMD CARRIER REGT
CANADA



In Memoriam

Killed in Action

	<i>Lieut.</i>	<i>Kirby, F.F.</i>	<i>18 January 1945</i>
<i>B 137361</i>	<i>Tpr.</i>	<i>Grieve, K.A.</i>	<i>17 September 1944</i>
<i>M 8053</i>	<i>Tpr.</i>	<i>Johnston, H.G.</i>	<i>17 January 1945</i>
<i>F 8108</i>	<i>Tpr.</i>	<i>Ruggles, I.W.</i>	<i>18 January 1945</i>
<i>A 107104</i>	<i>Tpr.</i>	<i>Gerry, R.F.</i>	<i>9 February 1945</i>
<i>D 15800</i>	<i>Tpr.</i>	<i>DeLisle, A.</i>	<i>9 February 1945</i>
<i>L 107801</i>	<i>Tpr.</i>	<i>Park, J.W.</i>	<i>9 February 1945</i>
<i>C 98569</i>	<i>Tpr.</i>	<i>McFadden, C.G.</i>	<i>13 February 1945</i>
<i>C 437</i>	<i>Cpl.</i>	<i>Darling, S.A.</i>	<i>23 February 1945</i>
<i>A 624</i>	<i>Sgt.</i>	<i>Sullivan, E.M.</i>	<i>8 March 1945</i>
<i>B 116456</i>	<i>Tpr.</i>	<i>Percival, E.W.</i>	<i>27 March 1945</i>
<i>B 148774</i>	<i>Tpr.</i>	<i>Swain, J.T.</i>	<i>9 April 1945</i>
<i>A 86624</i>	<i>Sgt.</i>	<i>Gibbons, H.C.</i>	<i>12 April 1945</i>

Died of Wounds

<i>D 13602</i>	<i>Gnr.</i>	<i>Hutchins, G.A.</i>	<i>Wounded 29 August 1944</i>
<i>A 87231</i>	<i>Tpr.</i>	<i>Dick, A.H.</i>	<i>Wounded 3 October 1944</i>
<i>B 15055</i>	<i>Tpr.</i>	<i>Biecerman, L.A.</i>	<i>Wounded 16 February 1945</i>
<i>B 149140</i>	<i>Tpr.</i>	<i>Fisher, D.</i>	<i>Wounded 27 March 1945</i>

LEST WE FORGET

This booklet presents a brief outline of the Kangaroo Regiment. The story put forth here is but a small part of the whole. Space, time and difficulty in obtaining material have been the limiting factors. The writers have tried to give an accurate account of the accomplishments of the Kangaroos. Apologies are offered for any mistakes detected. Members of the Regiment on reading the story may, if they see fit, enlarge on any instances set down, or fill in any omissions.

After several weeks of bitter fighting following the landings on "D" Day, the decision was reached by the High Command that an Armoured Fighting Vehicle, preferably tracked, should be employed for carrying Infantry into battle. The Tanks, spearhead of the attack, were unable to destroy all the machine-gun and other small-arms posts, nor could they neutralize all the mortars or guns whose crippling and death-dealing shrapnel and blast created such heavy casualties among the Infantry, who were often thus prevented from coming forward onto their objectives. This left the tanks unsupported, or with meagre support on the ground, and counter-attacks from the enemy often resulted in the loss of the hard-won objectives. The need for protection of the Infantry from the start line to the enemy's position was great. The operations were being slowed down because of this lack. The answer to the problem was to be found in the Kangaroo, a vehicle capable of going wherever the Tanks could go and of giving adequate protection to the Infantry right up to the objective.



A number of M7s or 'Priests' (American 105mm SP guns) were acquired, the guns removed and additional armour welded into place. This major job, estimated to take several weeks, was completed in as many days by an all-out effort on the part of various Workshops. Drivers for the converted Priests were gathered up from Artillery units and Reinforcement groups, rushed to their vehicles and despatched into action with no time for organizing or training. These vehicles were used in the vicinity of Rouvre on the road to Falaise. The experiment proved a great success and some of the credit for the smashing the Germans took in the historic 'Falaise Gap' is due to these vehicles and their crews. They had the armour, the mobility and the carrying capacity.

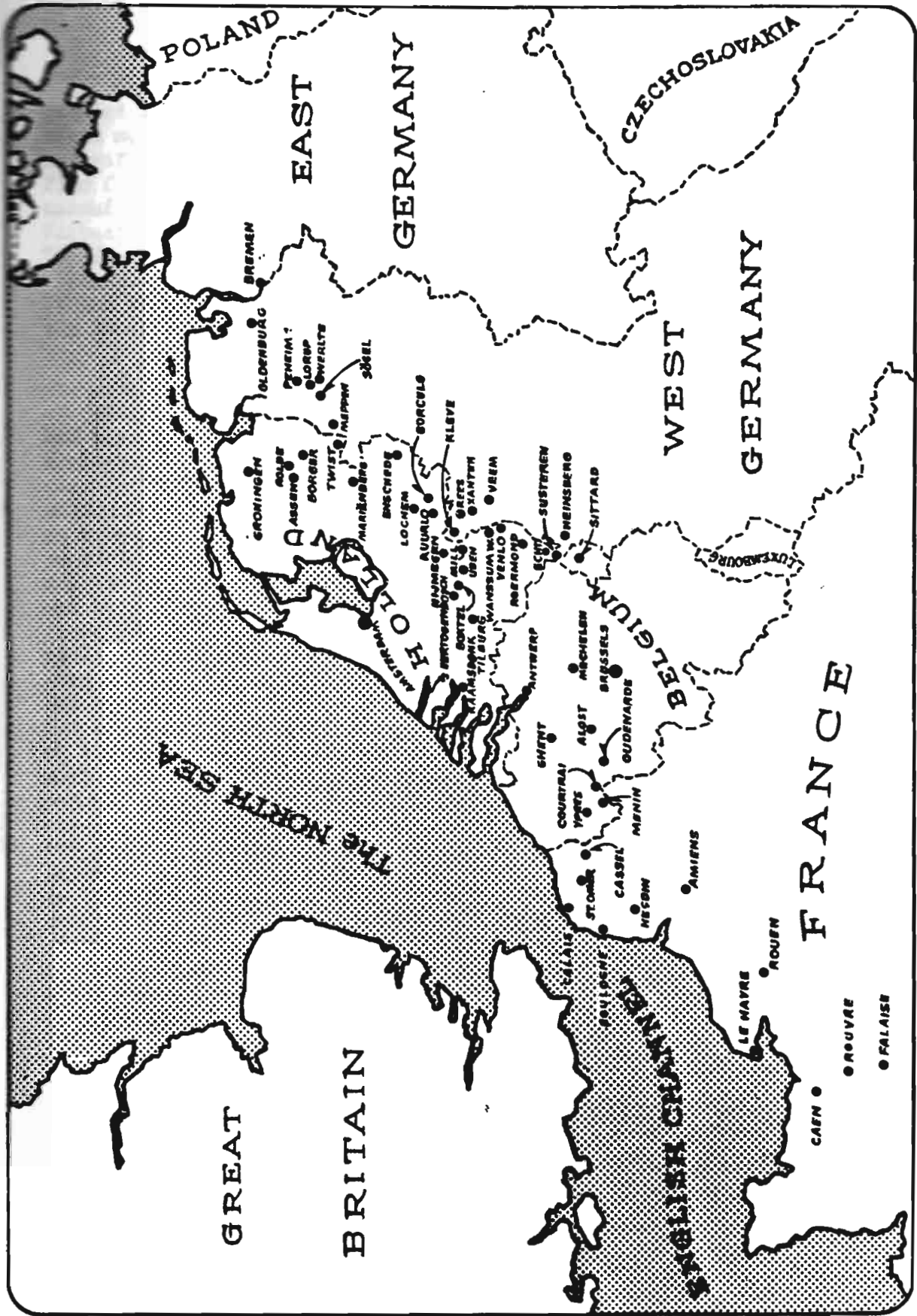
On 28th August '44, a squadron of carriers was organized, with four troops of 25 carriers each, 100 drivers, 4 troop officers and an O.C. Squadron. The actual number of vehicles available was about 55 which were left from the Falaise Gap action. These were

armed with .5 Browning machine-guns and about 60 percent were equipped with wireless. There was no co-driver to operate the set or fire the gun. The 'crew' consisted of a driver with, in some cases, as an added member, an officer or N.C.O. This came to be known as the "Kangaroo" Squadron, the name being suggested no doubt by the protection of the carried, or 'empouched' Infantry, as a kangaroo protects its young, and also because of the fact that considerable moving or 'jumping' around was done. The Squadron was attached to the 25th Cdn Armd Regt for administrative purposes only; for operations it came under command of various Infantry Brigades in turn.



The Squadron, with their M7s or 'KANGAROOS', was employed immediately. The first organized action was performed against Le Havre, working with the famous 51st Highland Division, then part of the First Canadian Army. This action proved highly successful; the Infantry suffered but a single casualty, and gained all their objectives, coming on them "fighting-fresh". This action was followed quickly by the assaults on Boulogne and Calais. During the Boulogne action the Kangaroos came under considerable small-arms fire and heavy shelling. The casualties suffered whilst the Infantry were in the Kangaroos was nil. This proved beyond a doubt the worth of the Kangaroo. The combined results of these first three actions made the name Kangaroo a by-word among the Infantry who had worked with them. Great success had resulted in the dual purpose of gaining objectives and saving lives of Infantrymen.

The M7s were returned to Ordnance. A new vehicle, the Canadian Ram Tank with the turret removed and the hull cleaned out, was drawn at Pierreval near Rouen, France. These Rams had been driven all the way from the Normandy beaches. This is the Kangaroo that most Infantrymen came to know, with its two .30 Brownings augmenting their own fire-power. The strength of the Squadron was now increased to approximately 16 Kangaroos to each of its 4 troops. The Squadron, newly equipped and refitted, continued on the long journey from Pierreval to Amiens, Hesdin, St. Omer, Cassel, Ypres, Menin, Courtrai, Oudenarde and Alost, and thence by transporter to Mill in Holland. Here the Squadron came under command of the Second British Army which was then engaged in clearing the enemy from the territory west of Venlo and Roermond. Rehearsals were carried out with various units and many lessons were learned in the co-operation of all arms. However, the plan was changed before the squadron became involved.



The clearing of the Port of Antwerp was considered to be of greater strategical value at this time and so the Kangaroos were moved west to play a part in that operation. The first action was against the heavily defended Dutch city of S'Hertogenbosch on the 23rd October '44. Following this, the Squadron was used continuously, assaulting Schilburg, St. Michielsgestel, Boxel, Eesch, Moergestel, Tilburg, Kaatscheuvel, Waspick, Waspick-Boven, Raamsdonk and Laan. The Squadron was then released from action and regrouped at Tilburg, Holland. This was the last of the Kangaroo Squadron, known as such. It had to its credit some thirty 'lifts', a creditable performance in the short two months of its life.

While the Squadron was thus busily engaged during the last week of October, some far-reaching changes were taking place. So important had been the work of the Kangaroos at the Falaise Gap and at Le Havre, Boulogne and Calais, and so clearly had it been shown that this was the best method of reducing Infantry casualties and of seizing objectives with speed, that 21st Army Group decided to form a Regiment of Kangaroos with each of the two armies under command. Consequently, on 24th October 1944, First Canadian Army authorized the formation of the 1st Canadian Armoured Carrier Regiment. Regimental Headquarters was established in Antwerp and the work of forming a Regiment of two Squadrons and a headquarters was started. R.H.Q. offices were set up in an apartment in Antwerp and headquarters personnel and vehicles were assembled in nearby Rumpst. Scarcely had this been done when the Regiment was placed under command of the Second British Army as of 1st November with instructions to be ready for action as a Regiment by 8th November. Fortunately the proposed operation did not materialize and the Regiment was given some much-needed time for organization. Tilburg in Holland was selected as the point for concentration. To this town came the Squadron, fresh from action and RHQ and reinforcements from Antwerp and Ghent. November and December were spent in organizing and the Regiment was brought up to strength in personnel and vehicles. The original Squadron was divided in half in order to provide a nucleus of experienced men in the new Squadrons. Each of the two new Squadrons had 53 Kangaroos of the converted Ram type, each with a crew of at least two. Four troops were formed per Squadron each capable of lifting a company of Infantry. A Squadron could thus carry a Battalion.

Personnel of the Kangaroo Regiment were drawn from all units of the Canadian Armoured Corps and some from Artillery formations. Every province and every Military District had its quota of representatives. These diverse elements with their scattered loyalties were moulded by the mud and blood and toil and danger of a difficult winter campaign into a united Regiment of high morale.

While the Regiment was forming, the decision was reached to include it in the 79th British Armoured Division. This transfer took place in December and the Kangaroos earned the distinction of being the only Canadian formation in this famous assault Division.

Early in January a half-squadron of the Regiment was employed successfully in a relatively small but difficult operation at Worsum Wood in a blinding snowstorm. Two days later the Regiment as a whole moved to the area of Winterslag, Belgium, in preparation for operation "Blackcock". From here an offensive was launched between the Maas and the Roer well into Germany itself with the intention of relieving pressure on the Ardennes sector. Assaults were made from Sittard against Susteren, Baakenhoven, Dieterer, Oudroosteren, Echt and Schilberg; thence eastwards to Koningsbosch and Waldefucht and then to Schierwaldenwrath, Putt, Waldenwrath, Steaten and Erpen, with a final lunge to Uetterath, Dremmen and Heinsberg. This operation was carried out under the most difficult conditions. Icy roads slowed down progress sometimes to one mile per hour. Snow and sleet, ice and wintry cold; fog and darkness, long hours of waiting and driving; mined and cratered roads, rain and mud and sodden fields; movement or action every day and night - all these things made the January campaign memorable. Endurance was tested to the limit. Hazards abounded: S.P. guns, shell-fire, mortars and innumerable mines exacted a toll in men and vehicles. More than sixty of the hundred-and-six Ram carriers required attention from the recovery crews and the L.A.D. Twenty-two Kangaroos had struck mines, nine had been knocked out by shell-fire. However, the Kangaroos proved one of the decisive factors in the operation and demonstrated their value even under the most difficult conditions. The Germans were driven back across the Roer.



February '45 once again saw the Kangaroo Regiment in action, after an all-too-brief period for refitting. This time it was the big thing: Operation "Veritable", the clearing of the Germans between the Maas and the Rhine. The cracking of the Wehrmacht. The breaching of the Siegfried line. Operation Veritable began on 8th February '45. The Regiment moved off from Nijmegen, crossing the line at Frasselt and continued through for twenty-nine days of incessant fighting. Here the Kangaroos took part in attacks on Kranenburg, Frasselt, Schottiede, Hingsberg feature, Bresserber, Cleve, Moyland, Hasselt, The Pimple, The Molk, and the high ground south of Calcan, Hockwald Forest and the road to Veen, and finally Xanten. This operation, like the rest, has many and varied stories. Our space is too limited even to attempt one, let alone the whole. The job was done again despite

amplifying conditions and despite the desperate opposition of the German Paratroop divisions, the cream of the enemy's army. Again casualties were suffered, again recovery of damaged and bogged-down vehicles called for ceaseless effort. Another sixty Kangaroos, as in January, had to be pulled out of the mud or repaired after attack or bazooka-fire.



The Regiment was once more withdrawn for refitting. The next job was to be the most spectacular and the last. Operation "Plunder," the crossing of the mighty Rhine and final mopping-up of the German Army. The Regiment crossed the famous water barrier on the twenty-seventh of March. It was the first Canadian Armoured formation to cross. Here the fighting was tough at first with some casualties being suffered. The Regiment took part in many and varied operations during this, the final, phase of the war. Attacks went in on Millingen, Megchelen, Landorft, Ruurlo, Borculo, Barchem, Lochem, Harele, Marienburg, Marehead, Hijsen, Groenberg, Assen, Hooghalen, Rolde, Balu, Loon, Groningen, and an advance made from Anholt through Varsveld and Twist to the Noorde soude Kanal, Meppen, Sogel, Lorup, Borger, Vrees, Werelte and Oldenburg. The last 'lift' was done on the morning of the fifth of May, 1945, at 0700 hours. The war officially ended in the Canadian sector one hour later. The advance made that morning was one of some seven miles north and east of Oldenburg, Germany. It ended with the complete surrender of an entire Austrian Infantry Battalion. Not a shot was fired. This was the end of the Wehrmacht's organized resistance.

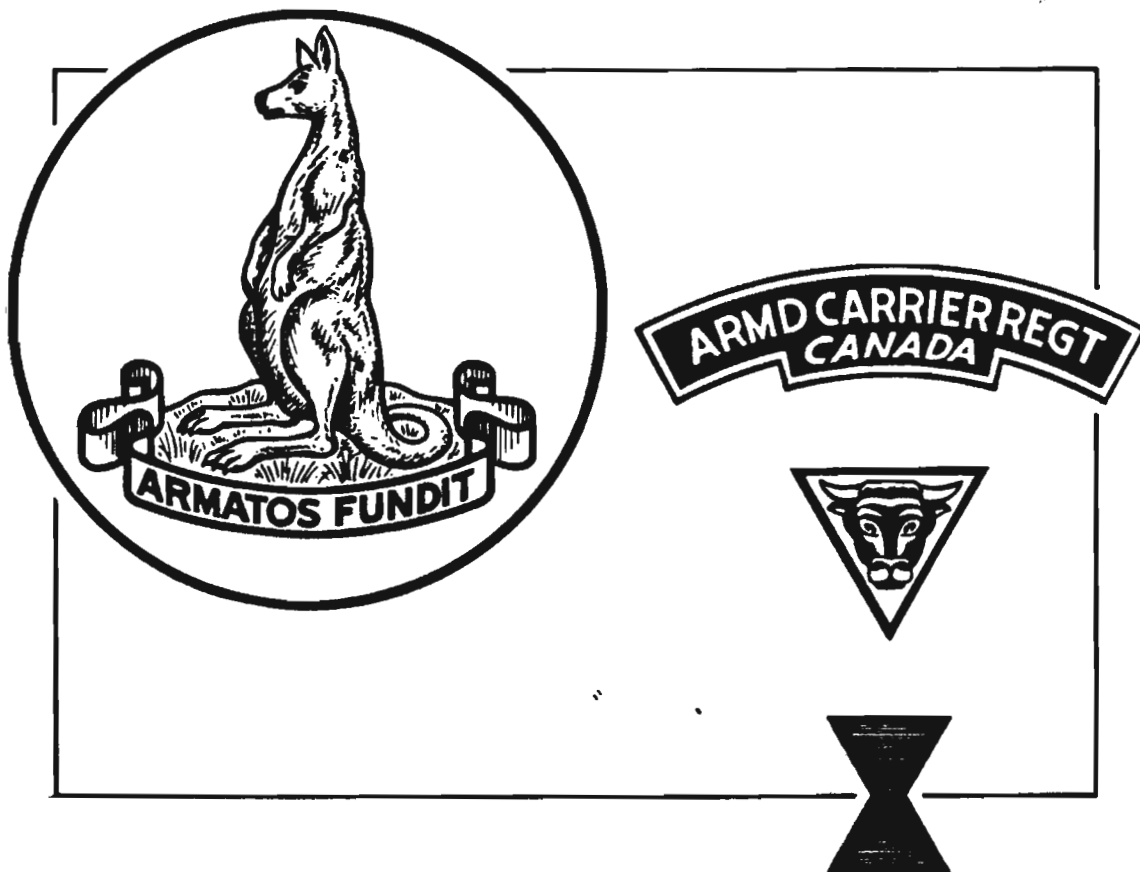


In the next few days the Regiment gathered in a concentration area at Peheim, Germany. The suddenness of the war's end was difficult to grasp. On the 11th May the last full parade of the unit was held. The Commanding Officer addressed the Regiment. Here are some excerpts from his speech. Of achievement, "... history of the Kangaroos is brief, extending only from the latter part of August to May ... but it is packed full of actions from Normandy to Germany." Of sacrifice, "... a casualty list of 17 killed and seventy-one wounded... the price of success. We honour today our comrades who made the supreme sacrifice." Of distinction, "... the only Regiment to be formed in Holland ... Hence the orange color we have adopted for our shoulder flash; the only Canadian Kangaroo Regiment and the pioneers in the British Army of that form of Service; the only Canadian

Regiment in the 79th British Armoured Division. ... Further, by good fortune, we have achieved some "Firsts" which no one can take from us... First Canadian Regiment to be entirely within Germany" (January '45)
"... First Canadian Regiment across the Siegfried Line" (February '45)
"... First Armoured Regiment of the Canadian Army to cross the Rhine" (27th March '45).

And in conclusion - "Peace has now come to Europe. The long course of the war has been brought to a successful conclusion. We stand here, conquerors on German soil, destroyers of the curse of Nazism...".

Thus did the Kangaroo Regiment fight and work in the great struggle. The problem of moving the Infantry from Start Line to Objective at speed and with a minimum of casualties had been solved. The tactical handling of Infantry in battle had been revolutionized - by the Kangaroos!



UNITS OF 21ST ARMY GROUP CARRIED INTO BATTLE

BY THE KANGAROOS

SECOND BRITISH ARMY

3rd (Inf) Division

1st Bn Suffolk Regiment

7th (Armd) Division

1st/5th Bn Queens Regiment
2nd Bn Devonshire Regiment
9th Bn Durham Light Infantry

11th (Armd) Division

4th Bn Kings Scottish Light
Infantry

15th (Inf) Division

8th Bn Royal Scots
6th Bn Royal Scots Fusiliers
6th Bn Kings Own Scots Borderers
9th Bn Cameronians
7th Bn Seaforth Highlanders
2nd Bn Glasgow Highlanders
10th Bn Highland Light Infantry
2nd Bn Gordon Highlanders
2nd Bn Argyll and Sutherland
Highlanders

43rd (Inf) Division

4th Bn Somerset Light Infantry
4th Bn Wiltshire Regiment
5th Bn Wiltshire Regiment
7th Bn Hampshire Regiment

4th Bn Dorset Regiment
5th Bn Dorset Regiment
7th Bn Somerset Light Infantry
5th Bn Duke of Cornwall Light
Infantry

49th (Inf) Division

2nd Bn Essex Regiment
2nd Bn Gloucestershire Regiment
Hallamshire Bn

51st (Inf) Division

2nd Bn Seaforth Highlanders
5th Bn Cameronians
5th Bn Black Watch
1st Bn Gordon Highlanders
5th/7th Bn Gordon Highlanders
1st Bn Black Watch
7th Bn Black Watch
7th Bn Argyll and Sutherland
Highlanders

52nd (Inf) Division

7th/9th Bn Royal Scots
4th Bn Kings Own Scots Borderers
5th Bn Kings Own Scots Borderers

53rd (Inf) Division

6th Bn Royal Welsh Fusiliers
4th Bn Welsh Regiment

(Cont'd)

UNITS OF 21ST ARMY GROUP CARRIED INTO BATTLE
BY THE KANGAROOS
(Concluded)

FIRST CANADIAN ARMY

2nd Cdn (Inf) Division

Royal Regiment of Canada
Royal Hamilton Light Infantry
Essex Scottish Regiment
Regiment de Maisonneuve
Calgary Highlanders
South Saskatchewan Regiment
Queen's Own Cameron Highlanders
of Canada

3rd Cdn (Inf) Division

Royal Winnipeg Rifles
Regina Rifles
1st Bn Canadian Scottish Regiment
Highland Light Infantry of Canada
Stormont, Dundas and Glengarry
Highlanders
North Nova Scotia Highlanders

4th Cdn (Armd) Division

Lake Superior Regiment
Lincoln and Welland Regiment
Argyll and Sutherland Highlanders
of Canada

AND IN ADDITION

Elements of Royal Artillery and
Royal Canadian Artillery, i.e.
Forward Observation Officer
Artillery Representative
Elements of Royal (Assault) Engineers

WINTERSLAG ● ARDENNES ● SITTARD ● SCHIERW

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The history of the Kangaroos

TEATEN ● ERPEN ● UETTERATH ● DREMMEN



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MILLINGEN ● MEGCHELEN ● LANDDRIFT ● RUURLO ● BORCULO ● BARCHEM ● LOCHEM ● HAARLE ● THE PIMPLE ● THE MOLK ● CALCAN ● HOCHWALD FOREST ●
MARIENBURG ● MAREHEAD ● VEEN ● XANTEN ● GROENBERG ● ROLDE ● HOOGHALEN ● BALU ● LOON ● GRONINGEN ● ANH ●
THE RHEIN ● MEPPEN ● TWIST ● NOORDE SOUDE KANAL ● SOGEL ● HIJSEN ● ASSEN ● HINGSBERG ● LORUP ● BORGER ● VRES ● WERELTE ● OLDENBURG ● PEHEIM ● FRANCE ● BELGIUM ● HOLLAND ● GERMANY ● THE MAAS ● THE ROUEN ● THE ROER ● THE RINE ●
FRASSETT ● KRANENBURG ● SCHOTTIEDE ● VARSVELD ● HINGSBERG FEATURE ● BRESSENER ● KLEVE ● MOYLAND ● HASSETT ● L ●



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AFV

Property of
Fred Saffer

13

AM AND SEXTON

FIVE SHILLINGS

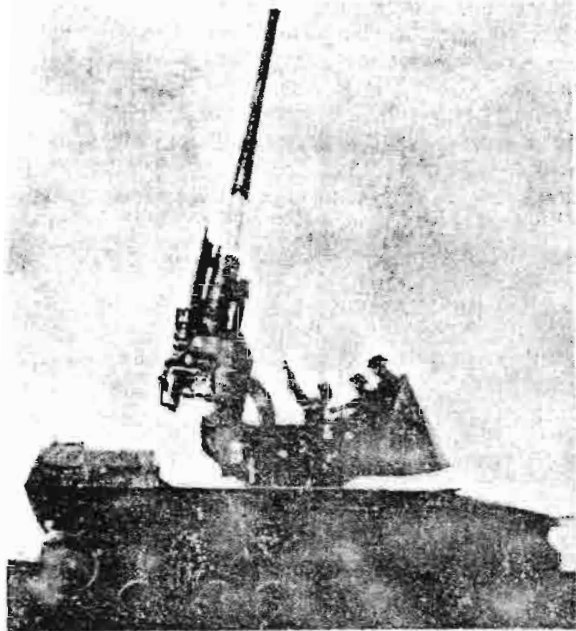




Above and below. The Ram converted experimentally as a SP AA mount for the 3.7-in gun. This project was abandoned at an early stage, 1943. (Canadian Official)

basket and the siting of an observation position (with stereoscopic telescope) in the turret front. Vision slots were cut in the front plate. The hydraulic traverse gear was removed and the turret was limited in hand traverse to 45° each side. The commander's hatch was calibrated and marked so that the hatch periscope could be used as a direction finder and sight. Two No. 19 and one No. 58 wireless sets were carried, and field telephone cable reels were mounted behind the turret.

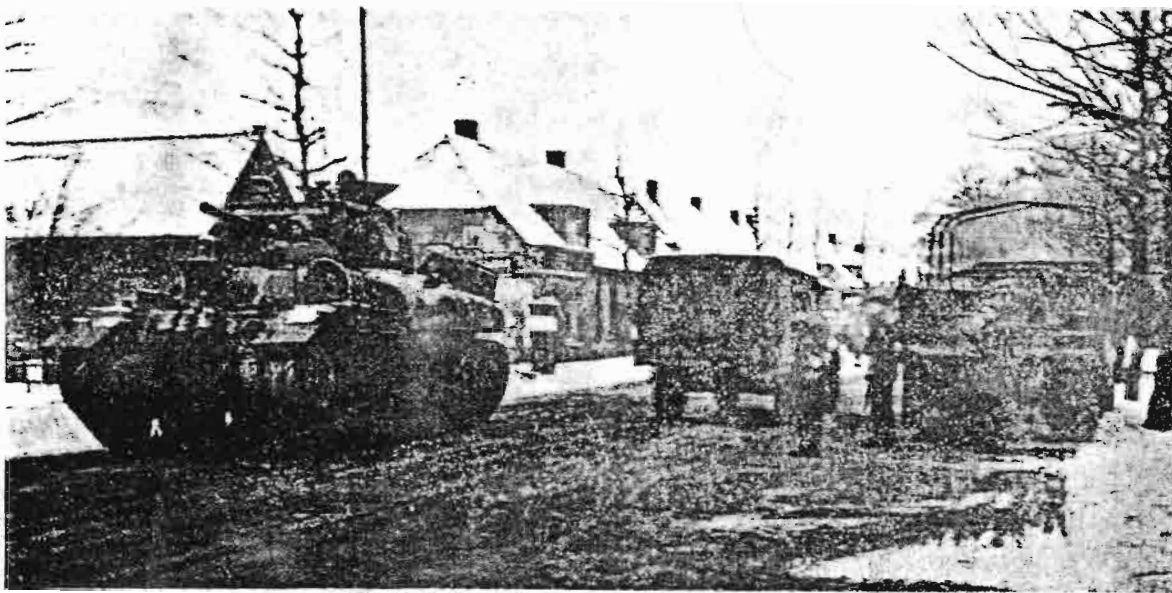
The detail design for this conversion was carried out by the Canadian Army Engineering Design Branch to meet Royal Artillery requirements. Subsequently a number of standard Ram II tanks were converted as OP vehicles to the same standards and these Ram OPs were widely used by the field regiments equipped with Sextons in the N.W. Europe campaign.



Kangaroo

The other important rôle for which the Ram is best remembered is the Kangaroo troop carrier. This was a significant development as far as the British Army was concerned for it demonstrated, in 1944, the value of the tracked armoured troop carrier for the infantry battalions of armoured brigades; this type of vehicle, latterly in a specially developed form, has been used by the British ever since. Appropriately enough, the Kangaroo as developed in 1944 was a Canadian idea, though at first it did not involve the Ram at all. Lieut.-General Guy Simonds, the young 41-year-old commander of 2nd Canadian Corps, first thought of carrying up troops in tracked armoured vehicles during "Operation Totalise", the offensive against Falaise in early August 1944. Here infantry had to be transported over the big expanse of open ground in the Orne valley to support a tank attack and occupy villages beyond the German defence lines. While a limited number of half-tracks was available, this was nothing like sufficient, for it was necessary to carry up six infantry battalions for this major assault. However, at that time the Priest had just been replaced in British and Canadian SP field regiments by the Sexton, and Simonds arranged for R.F.M.E. workshops to remove the 105-mm. howitzers from as many displaced Priests as were available. Known popularly as "Unfrocked Priests", and later as Priest Kangaroos, these vehicles had the gun embrasure plated in and carried 12 infantrymen. Though the overall operation was not entirely successful, the idea of using the makeshift armoured personnel carriers proved highly satisfactory. Strictly speaking, the Kangaroo idea at this time was simply a revival of what had been done in the first world war, and what the Germans had been doing in the second; but immediately prior to 1944 the British had not used APCs save for a limited number of half-tracks in armoured divisions.

The Kangaroo idea was later taken up by 79th Armoured Division which was responsible for 21 Army



Ram OP tank of a Sexton-equipped SP field regiment passing through a village street in Holland in January 1945.

(Imperial War Museum)

Group's specialized fighting vehicles. By September 1944 the Canadians had formed a special Kangaroo unit, 1st Canadian Armoured Carrier Regiment, this time using converted Ram tanks of which plenty were available. The turret was removed and the No. 19 wireless set was moved into the left sponson. Rungs and footsteps were welded to the hull sides to provide a means of getting aboard, and bench seats were fitted in the turret space to hold eight to eleven infantrymen. Crew of the vehicle was two, driver and commander/wireless operator. The Ram Kangaroos were used by the Canadians in the taking of Boulogne

and were so successful that it was decided to equip a British regiment for the specialized APC rôle. One armoured brigade workshop converted 120 Ram tanks for British use as Kangaroos within a month, and the 49th RTR was redesignated as 49th APC Regt. to operate them. From the end of 1944 until the cessation of hostilities in Europe the two APC regiments operated under 79th Armoured Division control and gave valuable service, despite the limited numbers available and the improvised nature of the adaptation a major failing of which was the lack of an armoured top. In Italy, meanwhile, 8th Army took

Below and top facing page: Two views of the Ram ARV Mk. I shows the simple nature of this conversion.

(Imperial War Museum)





up the Kangaroo idea using Priests once more, plus some "war weary" Shermans which were converted in similar style to the Rams. Ram Kangaroos remained in British Army service for some years in small numbers post-war until specialized APCs like the Saracen became available. Rams were also used as tractors for 17-pdr. anti-tank guns and as ammunition carriers for Sexton-equipped SP field gun regiments; in this latter form they were known as Wallabies. The Canadians also fitted some Ram/Kangaroos with Wasp II flame-throwing equipment, the flame projector replacing the hull machine-gun. These vehicles were called Badgers and post-war some Canadian Shermans were similarly altered. Badgers were first in service in February 1945 and were used to great effect by the Lake Superior Regt. (4th Canadian Armoured Brigade) during "Operation Veritable". They were also used by 5th Canadian Armoured Brigade in Holland in March 1945, but in this case standard Rams were used, retaining their turrets, perhaps the

nearest the Ram came to action in its original tank configuration.

Ram ARV

Other special-purpose variants of the Ram were produced in smaller numbers. The Ram ARV Mk. I was a recovery vehicle which featured tool boxes on its rear hull decking and a winch fitted to the hull front. This was a towing vehicle only and the few vehicles so altered were mostly Ram Mk. Is. The Ram ARV Mk. II was a more sophisticated conversion, produced in Canada to the same design as the British Sherman ARV Mk. II. This vehicle had all the same fittings as all British "Mk. II" standard ARVs of the time, including dummy fixed turret and dummy gun, rear jib, earth spade at rear, and electric winch (with 25-ton pull) installed in the former turret space. The Ram ARV II was more widely used than the ARV I but no precise figure for the number of vehicles so converted appears to have been recorded.

Experimentals

Minor versions of the Ram included a few test vehicles or prototypes. After Dieppe, when a special engineer assault tank was proposed, the Ram was considered as a possibility for the rôle. Two test vehicles were converted for trials in 1943, but in the event the Churchill proved a more suitable vehicle for what was later known as the AVRE. One project tried in Canada in 1942-43 was a SP AA version of the Ram which featured a cut down hull and a 3-in. gun, later replaced by a 3.7-in. weapon, in place of the turret. In its final form, a shield was incorporated for the gun, but the project was abandoned, possibly because it was unstable. The strangest rôle of all for the Ram, however, was as a searchlight carrier for the C.D.L. functions, some of which were also used to illuminate forward airstrips. The outfit simply consisted of a complete 40-in. searchlight mounting carried in a Ram Kangaroo. So far as is known, only very few vehicles were so fitted in the winter of 1944-45.

Picture shows Ram Kangaroo, a troop carrier made by removal of the turret from the standard Ram tank, in Holland in October 1944. (Imperial War Museum)



PROFILE

AFV

WEAPONS



US: \$2.00

70P

Armoured Personnel Carriers – A Survey

by Major-General N. W. Duncan



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(64)



Two "unfrocked" ie "degunned" Priests on a 51st (Highland) Division route in Normandy, 1944. The pulpit, mounting a .50 cal machine-gun, from which the vehicle got its name was retained in its APC role. (IWM)



A "degunned" Priest in Italy. The 2nd London Irish Rifles on their way to cross the River Reno at the Argenta Gap, April 1945. (IWM)

while the idea was admirable, execution left much to be desired with a vehicle too small for its task in terms of carrying capacity, too lightly armoured and with inadequate cross-country performance to enable it to do what was required of it.

THE BIRTH OF THE KANGAROO

Prospects for real cooperation on the battlefield appeared very remote until one action in Normandy in 1944 transformed the scene, and produced practical proof that tank-infantry cooperation could be a reality and could be obtained at more than walking pace.

The initiative came from 2nd Canadian Corps under General Symonds in operations across the River Laison south of Caen in August 1944. Priests, which were SP artillery with a 105mm gun mounted on an M3 chassis, were "defrocked", or more accurately "degunned", and the tracked armoured hull converted into a troop carrier with resounding success. The advance, over open ground in face of strong opposition, was covered by tanks and the Priest troop carriers in minimum time. As hostile positions were overcome by the tanks, the infantry, fresh and unfatigued by a long approach, were immediately at hand to take them over and ensure that they gave no further trouble. A difficult task had been carried out at a cost of minimal casualties by really close cooperation between tanks and infantry. The APC was

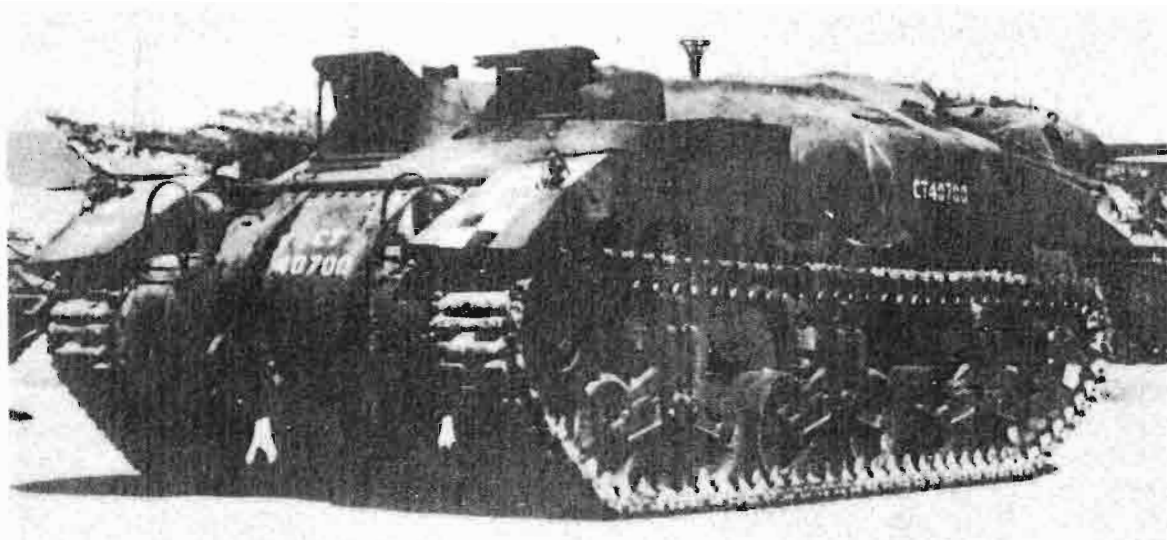
in business and was clearly going to play a part of ever increasing importance during the rest of the campaign.

THE APC REGIMENTS

Priests were in short supply and eventually the Ram, the Canadian version of the M4 which could not be upgunned because the turret ring was too small, was selected for use as the APC of 21 Army Group. Guns and turrets were removed and the vehicle under the code name of Kangaroo was used to equip the 49th Royal Tank Regiment who were selected for conversion to the carrier role. To conserve mileage and ensure adequate maintenance in view of all the calls likely to be made on it, the regiment was transferred to 79th Armoured Division where it was handled like the other specialist units in that formation.

49 RTR reformed on an establishment of two squadrons each of 53 Kangaroos and each able to lift an infantry battalion of BHQ and four infantry companies. A lot of vehicles were involved so that movement control before and during operations was of prime importance. Tactical handling on the battlefield was easy because the Sherman tank and the Kangaroo had the same armour; where one could go the other could follow subject only to the limitation that the passengers in the Kangaroo had no head cover. A Canadian Armoured Carrier Regiment was formed at the same time as 49

Ram Kangaroo.



RTR were converted and this also came under command of 79th Armoured Division.

The technique of handling Kangaroos in action developed from actual experience on the battlefield and underwent many alterations and changes. Nothing was stereotyped and everything was based on the closest possible liaison between tanks and APCs. Since the latter often had to move on a different line of advance from that of the tanks, the need for some means of self-defence was recognised from an early date. The Ram had a bow gun and to supplement this another MG was mounted on the turret ring. 49 RTR throughout their existence in the Kangaroo role were great believers in the value of prophylactic fire and fixed every gun on which they could lay their hands to their vehicles: their expenditure of small arms ammunition ran to astronomical figures but their casualties were extremely light. The infantry commander and his opposite APC commander travelled side by side in adjacent Kangaroos, control when mounted being vested in the APC commander, subject always to the overriding right of the infantryman to say at any time, "Stop; this is where I get out". However, provided ground conditions were not completely impossible (as they turned out to be at several places, notably s'Hertogenbosch in Holland), the APC regiments regarded it as a grave slur on their efficiency if the infantry had any distance to advance on their feet after disembarking—or, perhaps more appropriately, de-pouching!

By the end of the war both APC regiments had been continually in action and there was a wealth of experience, both for mobile operations and also for set piece attacks, on which to draw. Short though the time had been since the Kangaroo first made its appearance, it was long enough to allow drills to be laid down for deployment and employment on the battlefield.

Trouble with a big T always resulted from failure to follow established practice. 79th Armoured Division representatives continually encountered proposals from commanders in whose support they were working, to alter the drill, or the establishment, or the organisation of the specialist unit, with entire disregard for the thought, research, and patient experiment which had produced accepted drills and procedures. This irrational unnecessary and irritating work wasted time and involved the expenditure of much energy and trouble to put right. The Kangaroos were assault vehicles handled by specialist troops: they were always in demand and in short supply. It was sometimes very difficult to obtain their release or to convince formation commanders that long moves out of action could be carried out more quickly and with less fatigue in unarmoured troop carriers rather than in Kangaroos which needed as much maintenance as a tank if they were to be kept in action. There was however a growing demand for the inclusion of APCs in the post-war British Army and the situation is best summed up in the words of the Commander of 79th Armoured Division who wrote—

"Although with the present type of vehicle it is necessary to man the Kangaroo with RAC [Royal Armoured Corps] personnel, it is considered that a special type of vehicle should be designed for the infantry. When this vehicle has been produced it should form an integral part of the infantry organisation and be manned and commanded entirely by infantry personnel."

APCs SINCE 1945

The design of the post-war APC depended on the answers to several questions which had become apparent after an analysis of war-time operations where APCs had been used. Among them were—

i. What was to be the future role of the APC?

Were they to be carriers to the edge of the battlefield, dropping their passengers there and leaving them to fight their way forward at foot pace? This concept was little removed from the old unarmoured troop carrying lorry which had proved so vulnerable to enemy fire and so ineffective in getting the infantry effort to the scene of action at the right time. Alternatively was the APC to carry its passengers to the actual battle, covered both by their own fire and by that of the accompanying tanks? Were they, in other words, to be sufficiently armed and armoured to allow them to fight their own way forward against light opposition even if armoured support was not immediately available?

ii. What was to be the size of the APC in terms of carrying capacity?

To ease the problem of control on the ground after disembarkation the vehicle should hold a tactical sub-unit—a section, a half platoon, or a platoon. The larger the vehicle the fewer would be needed and the less would be the congestion on available routes. On the other hand the larger vehicle inevitably accentuates the problems arising from weight, size, concealment, and also the availability of suitable routes.

iii. What weapons should the APC carry?

The value of prophylactic fire had been amply proved during the war. Was anything of larger calibre than the MG needed? Would APCs ever have to tackle lightly held enemy positions on their own without accompanying tank fire—if so was there a case for the larger calibres, 20mm or bigger? What part would the passengers play when in the vehicle: could their fire ever influence the battle on the move or when halted? Should ports for fire or observation while in transit be provided?

iv. Could tanks be used as APCs on the lines of the war-time Kangaroo?

While offering obvious advantages for spares and maintenance, this suggestion involved the acceptance of little or no head cover for embussed troops and the need for them to go into action over the sides—unless the tank was radically redesigned. Obviously a rear exit was needed and this should both be as large as possible and unencumbered so that the vehicle could be used as a load carrier at need. All this added up to the fact that a special vehicle was needed.

v. What thickness of armour was required?

War-time operations had pointed out the advantages when tanks and Kangaroos carried the same measure of static immunity, but this inevitably meant weight. In turn this prejudiced the chances of another very desirable characteristic—built-in flotation: the ability to cross rivers, lakes and streams without the need for prolonged preparation. In fact if no preparation was needed, operational handling of APCs would be made that much easier.

vi. Would it be possible to achieve any measure of standardisation with other tracked vehicles used by the Army?

Any saving that could be effected in this fashion would be of the greatest benefit in view of the inevitable post-war financial stringency. It is worth noting that the



Ram Kangaroos of 49th Royal Tank Regiment carrying men of the 15th (Scottish) Division into the attack on Blerick, opposite Venlo, the Netherlands, December 1944. The Kangaroos carried the infantry right into the town. Two Churchills covering the advance can be seen on the left. (IWM)

Kangaroos in Germany, 1945. The infantry passengers have dismounted for action in the town. The APC regiments regarded it as a slur on their efficiency if the infantry had any distance to advance on their feet after dismounting.

Men of 3rd British Infantry Division mounting a Ram Kangaroo preparatory to the attack on Kervenheim in the Battle of the Rhineland, March 1, 1945. This picture shows the difficulty of using a tank chassis as an armoured personnel carrier. (IWM)

The M44 Armoured Utility Vehicle was developed in 1945. Like the M39 it was based on the chassis of the M18 Gun Motor Carriage, the Hellcat. Only a few of these large, cumbersome APCs were built. The M44 could carry 27 men. (bottom right).

Restricted routes and bad weather lead to traffic jams. Kangaroos, with infantry aboard, waiting to advance.

