CAMPAIGN SUMMARY AND NOTES ON HORSE ARTILLERY IN SINAI AND PALESTINE

BY LIEUTENANT E. L. SIBERT. F.A.

To GATHER such meager facts as I have included below, it has been necessary to comb through a mass of matter on the campaigns in Palestine and Sinai. To Lieutenant Colonel The Hon. R. M. Preston, I am indebted for nearly the only direct opinions on employment of horse artillery that I have been able to find. He is an artilleryman himself, which explains his having included a number of valuable remarks on this subject in his very interesting book, "The Desert Mounted Corps." Practically all the other writers saw in these campaigns only the remarkable use of cavalry in modern warfare.

Some of the most frank and detailed accounts of the mounted work are contained in Vol. VII of the "Official History of Australia in the World War," and Vol. III of "Official History, New Zealand's Effort in the Great War." The horse artillery supporting the Australian and New Zealand troops, however, were not of Anzac origin, but were English and Scotch territorial batteries. Though they are mentioned most cordially and their efficiency very favorably commented upon, there are no detailed accounts of their work.

The United States Cavalry School History of the Palestine Campaign, naturally deals solely with the cavalry. "Allenby of Armageddon" though more or less the biography of a cavalryman, gives little space to his handling cavalry in the Palestine campaign and none to artillery. The only histories of horse artillery units in this campaign were found to be of limited edition, out of print and unobtainable.

Lawrence's really remarkable book, "Revolt in the Desert," though full of interesting side lights, contributes little to our narrow subject.

In order to keep the reader oriented and to help him keep events in their proper chronological order, I will include first a short outline of the campaign.

We will then proceed to examine the campaign in detail for points of interest to the artilleryman, taking up those particular actions that furnish interesting examples of horse artillery support.

General Murray took command of Eastern Egypt in January,

1916. He believed that the defense of Egypt should be undertaken on the southern border of Palestine, instead of at the canal.

In preparation for an advance he caused to be started a railway to Katia, and British troops occupied or patrolled the area thirty miles east of the canal. In July, 1916, the Turks made an attack in force on Katia and were repulsed. Most of the rest of the year was devoted to raids, reconnaissance and pushing forward the work on the railroad.

In December, 1916, the British again advanced practically unopposed. The Turks made a stand at Magdhaba and Rafa, both of which places, including many prisoners, were taken by British mounted troops. The British lines were now stabilized until the railroad and pipe lines could be extended to Rafa.

The Turks meanwhile took up a strong defensive line from Gaza to Beersheba. Late in March, 1917, the British with all arms made their first attack on Gaza; which was unsuccessful and costly. On April 17-19th the second attempt to carry this place was made. The attack again failed with even more severe losses to the British. Stabilized warfare conditions now set in. Morale was low and interest and support from home showed a marked falling off.

Many military authorities in England believed, in accordance with the first principle of war—that England could best help win the war by using nothing but the defensive at any threatened subsidiary points such as the Suez or Mesopotamia, and using every other available man, gun and penny on the western front in France to take the offensive against the enemy main force. This viewpoint had been more firmly established by the costly and sad Gallipoli failure.

Lloyd George, however, considered the Turkish Army as actually the left wing of the Central Powers' front, and believed that a victory against it would be as fruitful as a victory against the powerful right wing in Flanders. Accordingly he looked for a strong successful leader to send to Palestine.

After a careful search his choice fell upon General E. H. H. Allenby, who had gone to France with the first regular troops in 1914. He had had an excellent record in the Boer War as a cavalry leader, and also had a guiding hand in cavalry training in the period just prior to the World War. In the first B.E.F. he commanded the cavalry division, and within a short time was given command of the newly formed cavalry corps. He later successfully commanded the Fifth Corps and soon thereafter the Third Army in Picardy. His leadership in the Somme Offensive in October, 1915, and again in the spring of 1917 earned him universal praise.

Lloyd George's selection of General Allenby to command in Palestine therefore naturally met with favor. The new commander's plan to reënforce the Palestine front, however, was only carried through after a considerable fight with the London military powers.

Allenby's arrival in Palestine marked the beginning of a decidedly new era. More troops, better equipment, airplanes, and heavy guns arrived. Morale went up and intensive training, reorganization and preparation set in.

The new general found the enemy holding an organized position from the sea northwest of Gaza to Beersheba, about thirty miles to the southeast, the country to the east of the latter place being extremely rough, trackless and waterless. To all intents and purposes, therefore, this thirty-mile line was considered to rest on two impassable obstacles, the sea on the west, and the rough arid highlands of central Syria on the southeast. Beersheba itself contained practically the only water within miles to the east, west or south, of that place.

The opposing British lines were extended for about twenty miles, from the sea at Gaza to Gamli, roughly parallel to the Turkish lines.

Allenby's plan was simple. With a demonstration at Gaza, his main blow was delivered at Beersheba, enveloping the enemy's left and rolling his line up toward Gaza.

The attack began on October 31, 1917. By dark the mounted troops had galloped into Beersheba and the Turkish left was in full retreat. The next move was another demonstration at Gaza to immobilize the reserves there and prevent any reënforcement of the central position at Sheria. This attack on Gaza was made on November 2d and not only prevented the withdrawal of reserves, but gained many strong points and actually attracted most of the available reserves from the rest of the line.

On November 6th the Sheria-Hareira position was stormed and taken and the entire Turkish line gave way. The pursuit was immediately taken up, during which many stiff rear guard actions developed.

The country fought over was practically waterless. Roads did not exist and the going was exceedingly hard.

From November 7th to November 11th the advance on the part of the British was made by the Desert Mounted Corps east of the Ramleh-Gaza railroad and by two infantry divisions in the country west of it to the sea. The other infantry divisions gave up their transportation to enable these two to go ahead.

On November 11th the enemy took position on the Nahr Sukereir, but were soon driven out by the capture of the Tel El

Murre and Burkah. The advance now inclined to the east. The Katrah-El Mughar line was overrun and the British forces pushed on towards Ramleh and Ludd. These two towns and Jaffa being soon taken, there ensued a pause to await the progress of railroad construction and reconstruction.

Hence on November 16th General Allenby's army held the line Jaffa-Ludd-Ramleh-Junction Station, with a division of mounted troops north of Beersheba on the Hebron Road. In seventeen days the army had advanced over sixty miles and had captured over 9000 prisoners, and large quantities of matériel and stores!

Allenby now stabilized his left in defensive positions and reached to the east. His plan was to cut the Nablus road north of Jerusalem and thereby isolate that city. At this stage the Turks began to recuperate from their first panic, and were in addition, strongly reënforced with some of the best Turkish troops from other fronts. The difficult terrain, mud and cold (the winter rains having set in), added to the coming of these reënforcements, caused the British many costly delays and rebuffs.

In addition to cutting Jerusalem off on the north, a British division was to come up on the Hebron road and get across the Jericho road east of the Holy City. These advances finally succeeded but not until the Turks had withdrawn from Jerusalem.

That city surrendered on December 9, 1917. The total of prisoners taken since October 31st was brought up to 12,000 and of captured guns, up to 100.

The British lines now ran from just north of Jaffa to just north of Jerusalem and then bent back to the south. These lines were consolidated, the troops resupplied, communications improved and everything in general tightened up for one more effort.

This came on December 20th when for three days a battle raged on the left which resulted in an advance of several miles, far enough to make Jaffa safe to use as a base for unloading ships.

Again on the 27th for five days, attack and counter-attack immediately north of Jerusalem again resulted in a gain of enough miles to make Jerusalem safe from immediate threat.

The next move came on February 19th when one infantry and one cavalry division struck to the east down through the well-known wilderness of Christ's temptation, to Jericho and the northern inlet of the Dead Sea (*i.e.*, where the Jordan runs into the Dead Sea).

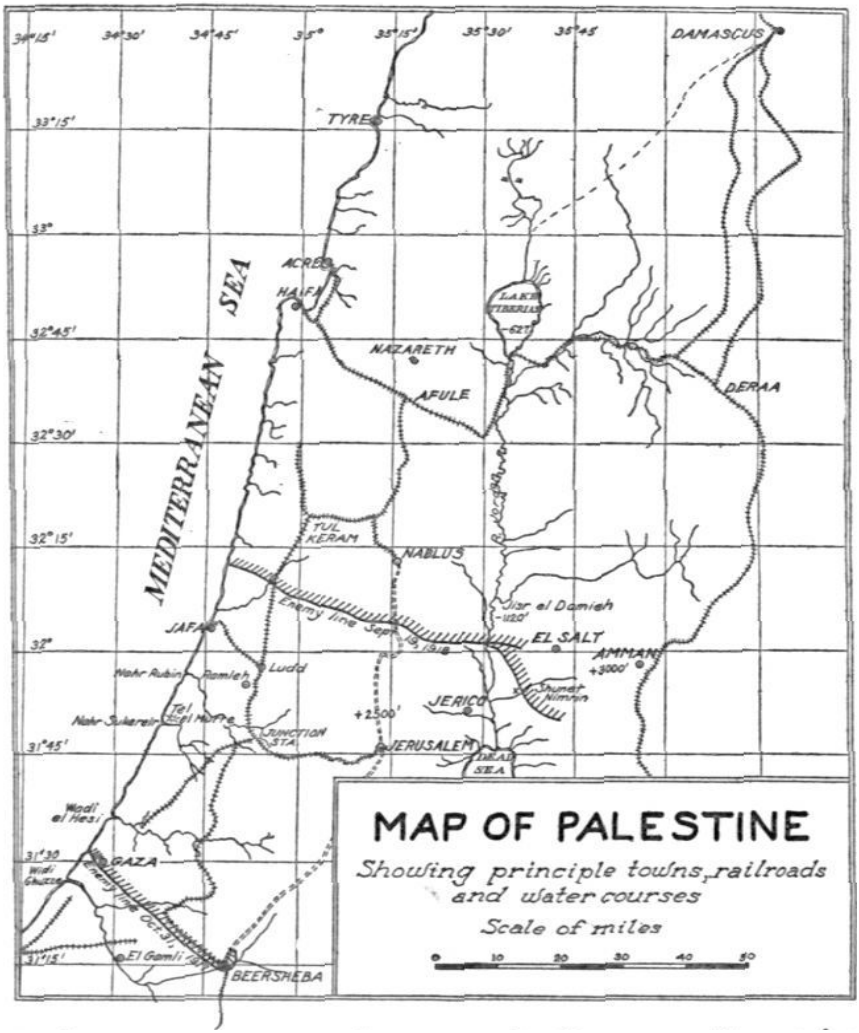
The country was the roughest yet met with and the weather most inclement. The 60th Division and the Anzac Mounted Division, however, fought their way through and captured Jericho on February 21st, and on the evening of the same day held the Jordan from the Dead Sea up to near the El Ghoraniyeh bridge.

Again early in March, the 60th Division pushed north along the

Jordan until the Turks evacuated their bridgehead covering the aforementioned bridge.

These operations thus securely established the British right.

It must be remembered at this point that the Arab tribes in Arabia had under Feisal, declared their independence, and inspired by Lawrence, were



carrying on a desultory guerrilla warfare against the Turks in the Hedjaz.

The Turkish communications to this front lay temptingly open, across the Jordan and up on the highlands of Moab, from the new British right.

At Amman, the Hedjaz railroad ran over a viaduct and through

a tunnel. Quite naturally a raid against this place was conceived and launched. Amman is thirty miles east of Jericho. The first five miles is flat, but in the next twelve the ground rises 3500 feet, and is extremely rough and crossed by only one real road.

The raiding force consisted of an infantry division and a cavalry division. Starting March 21st the forcing of the Jordan took nearly two days, thereby vitiating most of the surprise element. The raiders doggedly advanced into the mountains and fought their way toward Amman, against minor enemy resistance for three days and nights. All wheeled transportation had to be left behind and the command suffered severely from the rain and cold.

By March 29th the advance was at a standstill just east and south of Amman, though some demolition of the railway had been effected.

On the night of the 30th after a day of final effort, orders were given to withdraw. Turkish reënforcements had arrived both at Amman and north of the route back to the river crossing, near Es Salt. By evening of April 2nd after many delaying actions the command was back west of the Jordan.

The next operation of any importance was the Es Salt Raid, the plan being to work to the rear of the Turkish position at Shunet Nimrin and capture Es Salt, thus severing the communications of the Turkish forces immediately east of the Jordan. Two cavalry divisions and one infantry division reënforced with Indian brigades composed the raiding force.

The Shunet Nimrin position was attacked and masked according to schedule while the mounted troops, leaving the 4th Australian Light Horse Brigade and three horse batteries to keep its line of retreat clear, pushed on to Es Salt and captured it. Expected Arab coöperation failed to materialize.

The enemy, however, quickly reënforced this end of his line from the west and elsewhere and made the British withdrawal not only necessary but very difficult. The aforementioned 4th Australian Light Horse Brigade lost two of its batteries and nearly lost itself; while the retreat of the Australian Mounted Division from Es Salt was made under very stiff pressure.

May 4th saw the restoration of the original positions on both sides, after five days of fighting.

Nothing of any magnitude or importance occurred in the Jordan valley until the Turks attacked on July 14th and were counterattacked and ejected from the British lines near Musallabeh and Abu Tellul.

The next act came in September, 1918, when Allenby massed most of his cavalry under cover on the coast; left a small but active force in the Jordan valley, and attacked on the coast for a "break

through." The break through was achieved and according to plan, three divisions of cavalry trotted through the gap near the sea and drove on to the north.

By noon of the 19th of September, seven hours after the attack started, the cavalry was eighteen miles to the north, and were soon through the passes to the northeast into the Plain of Esdraelon. The 4th Cavalry Division reached Beisan the evening of the 20th, having covered eighty miles in thirty-four hours; the 19th Lancers securing the bridge over the Jordan at Jisr Mejamie, ten miles further north. On the 22nd the New Zealand Mounted Rifle Brigade seized the bridge at Jisr el Damieh.

Thus within less than four days all the routes of withdrawal for the Turkish armies east of the Jordan had been closed. By September 24th the last remnants of the VII and VIII Turkish armies had been rounded up, the infantry driving the panic-stricken Turks into the cavalry's arms.

In the interim, the cavalry had captured Acre and Haifa. The net result of the operation was the clearing of the whole of Palestine west of the Jordan and the capture of 40,000 prisoners.

On September 23rd Es Salt, east of the Jordan, was taken, and Amman on the 25th, the enemy Fourth Army retreating to the north along the Hedjaz railroad in a demoralized condition. The II Turkish Army at the same time started its retreat toward Amman from the Hedjaz pursued by the Arab Army. On the 28th, this army surrendered to the British without a fight.

The Desert Mounted Corps was now ordered to Damascus with all speed as some 40,000 Turks and Germans were either in it or retreating toward it. The race to this place was made against some opposition. The British troops were in two columns, the Australian Mounted Division and the 5th Cavalry Division in one, the 4th Cavalry Division in the other.

The first-named column had actions at Benat Yakup, Kuneitra, Sasa and Katana, before it reached and closed the north and northwest exits from Damascus on September 29th. The other column after fights at Irbid and Er Rempte and after joining the Arabs, entered Damascus the morning of October 1, 1918. However, about 17,000 Turks, the last remaining in Palestine, had succeeded in escaping northwards in a disorganized mob.

Thus ended Turkey's rôle as a combatant in the World War.

So much for the general narrative of the campaign. Now to examine particulars.

A British or Australian Mounted Division consisted at first of four brigades (about 2100 men each) plus a brigade of three horse artillery batteries of four guns each (13 pounders). Later the divisions were reduced to three cavalry brigades each. In addition

there was a Field Squadron (Engineers), Signal Squadron and Medical, Veterinary and Supply units and trains.

At the end of the campaign it was a matter of more or less general agreement that the British Cavalry Division was under-gunned, both as to weight of metal and numbers; and the cry went up for the light howitzer (*i.e.*, the 105-mm. or similar weight).

What was deemed ideal was a battalion (brigade) of light guns and a battery of light howitzers in each division. This plan, however, contemplated six guns per battery. This would leave our cavalry divisions, by comparison, woefully under-gunned.

The British had from the first until well on into the campaign, one battery of 13 pounders assigned to each brigade.

The disadvantages of such a scheme is only too evident, and was thoroughly condemned by the artillery and remedied later. Brigades in reserve often kept their batteries with them, and fire direction in support of the action viewed as a whole was, of course, unusual.

Seldom in accounts of the campaign could be found incidents where the horse artillery was so left behind by fast marches as not to be on hand for the fight. September 19th and 20th, 1918, the Notts Battery accompanied the 3d Australian Light Horse Brigade fifty-one miles in twenty-five hours and then ten more miles in seventy minutes. Many times they could not keep up or follow at all because of the lack of roads, as on the trans-Jordan raids, but no wheeled vehicle of any description could do the trick. Hence we may assume that the weight of their guns, the 13 pounders (about 2000 pounds), was not excessive. Even during the early part of the Sinai campaign when the batteries were armed with the 18 pounder, no failure to keep up was noted, and the 18 pounder is a heavier gun than the French 75 mm.

On the other hand, time and again we note that the 13 pounders could not do the requisite damage or were outranged, and heavier metal was prayed for by those most interested. Naturally the problem is one in which mobility is the limiting factor. It would seem, however, that our 75 mm. is probably as good a gun for the purpose as any now in use, falling, as it does, between the 13 pounder and the 18 pounder.

The 105-mm. howitzers need only be sent along when the nature of the mission would indicate that they could catch up in time to have an influence on the action. Horse-drawn 105-mm. howitzers have the mobility, certainly, of any division train, so we may assume that their inclusion would be normal and the cases when they could not be used, abnormal.

While on the subject of matériel it is worthy of note that the pack horses carrying light wire reels were used early in the Sinai

campaign and presumably throughout the later campaign. The arrangement was very similar to our modified pack artillery reel now in use at the Field Artillery School.

Another unusual feature was the use of so-called "ped-rails" on the wheeled matériel of the firing batteries. These were improvised wooden caterpillar treads kept in place much as chains on automobile tires are. Their use was restricted to the sandy desert. Pictures of batteries in action show sand bags used in place of trail logs when in position in sandy country. Carrying prepared trail logs was undoubtedly frowned upon because of the extra weight they would impose.

When it became necessary to move heavier guns through the sand, men preceded the guns and dug shallow tracks for each wheel to follow. These tracks were filled with brush cut nearby.

Again, for even the light guns moving through rough places where the going was particularly hard, the guns and caissons of the firing batteries were double teamed, it being necessary to immobilize the rest of the battery (and combat train) to make this possible.

Naturally under such conditions we hear of the batteries running out of ammunition, as at Rafa when the Inverness Battery supporting the New Zealand Mounted Rifles Brigade had to be sent to the rear. In this particular case, however, the small arms ammunition on the firing line gave out as well, so that the New Zealanders, forced to do something, charged home with the bayonet and took the enemy's Central Redoubt, thus turning the tide of battle at a most critical point.

By the very nature of cavalry and its use, we are taught not to expect sustained actions, so that the exhaustion of even the ammunition carried in each section may be regarded as unlikely. If the action lasts long enough to do this, surely the combat trains will have had an opportunity to close up.

Now to inquire into the use and care of animals.

One writer, Colonel Powles, states, in speaking of the Sinai campaign: "In this campaign our men became true horse masters; and it can be safely said, that in no campaign of which history has cognizance, has the horse been so well understood in all his needs, and so well fed and tended."

The hot dry climate apparently suited the horse, which is not strange considering the fact that practically all of their horses, as are ours, were of Oriental extraction. At first, the British, as do the French, erected shelters whenever possible to protect their horses from the sun. When this no longer was possible, practically no bad effect was noticed. Later in the Jordan valley under conditions which were almost unbearable for men, the horses maintained their condition wonderfully. There, the heat, dust and flies

were appalling. (It is to be remembered that the Dead Sea is 1200 feet below sea level.)

In between these two periods of heat, for periods as long as six weeks the troops encountered rain, mud and piercing cold (comparable to the average rainy "Norther" experienced in Oklahoma, Texas and Northern Mexico) and in the winter of 1918 the horses often found themselves standing in six inches of snow.

Colonel Preston states in his "Desert Mounted Corps" that the opening of the cavalry operations, presumably September, 1917, found the animals in an unsatisfactory state of health; that whatever their outward appearance may have been, their internal condition was by no means good. Two years of indifferent forage and the large quantities of sand consumed with their food had more or less permanently injured their digestive organs. Though sand colic had ceased to trouble the command, the effect was still present as proven by most of the postmortems.

He further states that about ninety per cent, of the draft horses had strained their hearts to some extent during the terrible work in the Sinai desert. This is somewhat offset by the statement of the Brigade Major of the New Zealand Mounted Rifles Brigade that their horses started the Beersheba operation in the very pink of condition.

Colonel Preston maintains that the experience of the campaign proved that horses cannot be too "big" in condition at the commencement of operations provided they are kept adequately exercised. "The really fat round horses finished both series of operations in better condition than those who looked harder and more muscular, but not so fat, at the beginning. This was especially the case in the first series, during which the shortage of water was so acute. This seems to be in keeping with the usual British theory of throwing all the grain possible into their hunters during the conditioning period. It would seem that the explanation of the fat horses finishing in better shape, is that they were the natural "good keepers" of the command. That is, they were fat when others were thin, under presumably identical conditions of feed and exercise even prior to the campaign.

Remarks on forage are of indifferent interest to us, particularly as regards to kinds of grain, as they were local varieties hardly likely to be encountered by our service. The daily grain ration consisted of ten pounds of whatever grain was available. Such things as barley or gram were the staple issue for long periods. For "long" feed they used ten pounds of chopped barley straw, when obtainable. Later during more active operations the ration was nine and one-half pounds of grain (barley or gram) and nothing else. This was only about two-thirds of the normal garrison

ration. Gram, or maize, caused the horses to scour badly, "thus increasing the weakness engendered by hard work and starvation." After the advance from the Gaza-Beersheba line, limited grazing was possible.

The subject of watering in these campaigns is particularly interesting.

It should be appropriate to include at this point, some official correspondence on this matter.

"G.O.C., DESERT MOUNTED CORPS:

I shall be glad if you will be so good as to let me have the following details as regards the animals of any of the units under your command during the period 1/11/17 to 31/12/17:

1. The longest period they were continuously without water.
2. The work performed during this period.
3. Whether they fed well when they were thirsty.
4. The average number of times they were watered daily during the period specified or during any intermediate period.
5. The smallest amount of grain and fodder they received at any time and for what period.
6. The average amount of grain and fodder they received during the whole or any intermediate period.
7. The maximum amount of grain and fodder they received at any time and for what period.
8. To what extent were units able to supplement their forage locally, by grazing or otherwise.
9. When was there any noticeable change in their condition and vigor as a result of work and privation.

(Signed) G. R. BUTLER, *Brig. General,*
Director of Veterinary Services, E.E.F."

G. H. Q.,
1st Echelon,
31/1/1918.

"HEADQUARTERS,
DESERT MOUNTED CORPS.

With reference to your . . . herewith report in detail as asked for:

1. (*a*) One cable wagon team from D.H.Q. was without water for a period of 84 hours.
   (*b*) Several regiments in the two Australian Brigades were without water for a period of 60 hours.
   (*c*) The N.Z.M.R. Brigade was without water for 72 hours.

2. By (*a*) above, almost continuous work, cable laying, which entailed heavy work partly over rough country.

By (*b*) above, fast travelling and reconnaissance, averaging about 20 miles each day.

By (*c*) above, first two days reconnaissance, averaging about 20 miles per day, remainder of period practically no movement.

3. Yes, up to 36 hours; after that, in most cases, they refused to eat.

4. During the period of advance, once per day, *i.e.*, to 15/11/17, after that twice daily.

5. Four lbs. grain and no bulk fodder for 24 hours.

6. An average of 9 lbs. grain with average 4 lbs. Tibbin requisitioned from inhabitants up to 17/12/17. From 17/12/17 to 31/12/17, 12 lbs. grain and average 4 lbs. haystuffs.

7. As shown in last period in paragraph 6.

8. An average of 4 lbs. haystuff per horse was obtained from the inhabitants throughout the whole period of operations. Grazing nil.

9. Decided falling off in condition and vigor after 36 hours without water. With good food and water horses picked up remarkably, though it is to be observed that all units report that issue of grain on five consecutive days caused serious trouble, the horses suffering from diarrhœa and laminitis and losing vigor. With reference to the cable wagon team which was without water for 84 hours, though much distressed at the end of that period, these horses quickly recovered. It is to be remembered that the horses of the Division commenced operations about 26/10/17, in excellent condition, which is largely responsible for the fact that evacuations on account of debility have been extremely small, both during operations and afterwards.

(Signed) E. W. C. CHAYTOR, *Major General.*
Commanding,
Australian and New Zealand Mounted Division."

12/2/18.

NOTE.—The horses of one Brigade had an indifferent watering only on morning of 6th, and watering next during the action on the 8th, no more water until during the night of 10-11th. They were greatly distressed on the 10th, but by the 13th were, with the good water and rest, fit for work again, though they lost considerably in condition.

Another report tells of one battery marching and fighting for nine consecutive days, watering only three times during this period.

The Royal Army Veterinary Corps, to get some interesting data, instituted a plan whereby a large number of horses of similar type and condition were divided into two groups, one to be watered twice a day and the other three times. "The result of these experiments was conclusively in favor of the two drinks a day. Not only did the horses on this régime improve in condition quicker than those which were watered three times, but it was proved by actual measurement that they drank more water in the day. By the time the force arrived at El Arish, watering twice a day was generally accepted as a standard." (Colonel Preston in "The Desert Mounted Corps.")

This is a startling contradiction of our teaching of "water as often as practicable."

Later when necessity forced the command to be watered in many cases only once a day, a certain loss of condition was noticeable, although this period (May to October, 1917) was a hard one in every way.

Colonel Preston goes even so far as to claim that if horses get water once a day and are given anything in the nature of bulky food (to supplement the grain ration, presumably) such as grazing, there is no reason why they should not be able to continue indefinitely.

During the Beersheba-Jerusalem operations the average watering per horse in the mounted troops was once in thirty-six hours.

In remarks on types of horses Colonel Preston urges that all horses in a horse battery (except officers' mounts) be of draft type, and that the draft type be light and well bred rather than heavy and coarse. This of course brings us to the inevitable impasse concerning the "ideal artillery horse." He states that nothing in the nature of a cart horse can live with cavalry in a march of forty miles.

The horses of the Mounted Corps had an excellent health record as regards disease, due of course to the excellence and efficiency of the British Veterinary Corps. Practically every account of the campaigns includes praise for the veterinary officer.

Leather muzzles are recommended by Colonel Preston to prevent hungry horses from eating picket ropes, wooden wheels or anything else they come in contact with. Steel wire picket lines and halter shanks are also recommended as they last forever, do not burn a horse that gets his foot over one of them, nor do they weigh more.

In the Australian Light Horse regiments neither manes nor tails were ever cut or pulled. The advantage and benefit of this in hot

sunny fly-infested climates is evident. Such a practice, under such conditions, is strongly recommended.

TACTICAL EMPLOYMENT

The so-called normal cavalry offensive action is a quick affair. A development and holding of the enemy in a dismounted fire fight by the pivot of maneuver. Meanwhile the mass of maneuver rides to a "take off" position from which the main attack is launched, wholly mounted or partially so.

One writer describes one as follows: "The day's action brought into play the full attacking powers of the mounted arm against an enemy in position. There was the mounted advance to the first fire position by one regiment, and then its systematic capture of enemy trenches on foot as infantry with rifle and bayonet and Hotchkiss and machine guns, and its rapid reënforcing on horseback of the successive positions when captured.

With the other regiment there was the advance mounted under cover of artillery fire to successive fire positions; the rapid seizing of small tactical features at the gallop; the outflanking of the enemy position by aid of the mounted man's mobility; and finally there was the magnificent mounted charge by which the red knoll was captured."

This was the fight at Ayun Kara, November 14, 1917.

An interesting example of horse artillery in support of such an action is the attack on Tel el Saba (part of the Beersheba defenses).

"At eleven o'clock the Somerset Battery moved up and ranged on the hill (enemy entrenchments) at 1300 yards. Enemy machine guns were giving much trouble and were not located until the afternoon when Lieutenant Hatrick, Signal Officer of the Auckland Regiment, from a concealed position in the front line observed for the battery and directed fire by flag signal. A section of this battery was then moved around to the east of the hill to deal with machine guns in position on the high ground, etc."

Time and again we read of similar incidents. Direct laying was by no means unusual and it is remarkable what light losses such boldness entailed.

Again we find in the withdrawal from Sheikh Muaunis that "the evacuation was skillfully carried out with the help of the Somerset Battery firing from a position 1400 yards south of the village on the south side of the river. This battery remained in action until after the village was occupied by the enemy and the Commanding Officer of the Battery (Major Clowes), who was in the village observing, had to swim the river."

Another incident of artillery boldly used in a withdrawal, which terminated somewhat disastrously, was the fight of the 4th Australian

Light Horse Brigade to protect the line of communications with Es Salt. Here three batteries supporting one brigade were left in the foothills to guard the two routes leading from Es Salt to the Jordan, while the rest of the command raided Es Salt. A force of Turks estimated at about 5000, with some artillery and cavalry, crossed the Jordan higher up, and instead of going after the raiders, attacked the guard left on the line of communications.

To quote: "The brigade was now, however, in a very difficult position. Our troops had been forced back till they were facing due west, with their backs to the tangled maze of rocky hills, impassable for cavalry and guns. Some of the Turks were across their line of retreat to the south, though only in small numbers as yet. Others were working round the right flank of the brigade. All along the line our troops were hotly engaged at close quarters. To withdraw to a flank under such conditions was a very hazardous operation, but it appeared to offer the only chance of extricating the brigade from its desperate situation.

"Two regiments of the New Zealand Mounted Brigade, which had been coöperating in the attacks on the Shunet Nimrin positions from the south, had been dispatched to the assistance of the 4th Brigade, but they had fifteen miles of bad ground to cover, and could not possibly arrive in time to save the position. The most they could hope to do was to form a rallying point for the 4th Brigade to fall back upon.

"The 4th A.L.H. Regiment, on the right flank, held on till the enemy closed to within 200 yards, in a desperate effort to cover the retirement of our guns. 'A' Battery H.A.C. was in this sector of the line, the Notts Battery R.H.A. near the center, and 'B' Battery H.A.C. at the south end. The position of the two northernmost batteries was quite hopeless. Driven back to the verge of the impassable hills, they were in action in the open in the front line, and the only way of retreat feasible for wheeled vehicles was to the south, down the line of our troops, and in full view of the enemy at a few hundred yards distance.

"Nevertheless the two batteries fought steadily on, attempting the impossible task of retiring by sections to the left flank. Each time a Turkish attack broke and melted away before their fire, the enemy dead lay a little closer to our guns. Each time a short retirement was made, the heavy pressure of the enemy pushed the guns farther into the hills; and each time there were fewer men and horses to move them. At last they were forced into a position from which there was no way out, and here they made a final stand, fighting till all their ammunition was exhausted, and the Turks were within two or three hundred yards on three sides of them. Even then a last effort was made to find a way out, but the teams were

mown down by machine-gun fire, and the guns had to be abandoned. The remaining men and horses scrambled up the hills to the east, and succeeded in reaching the Wadi el Retem. The Australian troopers accompanied them, fighting grimly and silently, as an old dog fox, run into by the hounds, turns on his pursuers, slashing right and left, and dies with his teeth locked in a hound.

"'B' Battery H.A.C., having a shorter distance to go, succeeded in retiring to the south, through the enemy, and came into action again near the Umm el Shert track, to cover the withdrawal of the rest of our troops. During its retirement a gun was overturned in the bottom of a deep wadi, and had to be abandoned. A party of men, under an officer, descended into the ravine, and made a fine effort to right the gun and get it away; but the Turks appeared on the banks above, and opened fire on them with machine guns, killing nearly all the horses, and the attempt had to be abandoned.

"The losses of the entire command were remarkably light (1 officer and 1 man killed, 7 officers and 44 men wounded, 48 men captured). Happily all the officers and men of the batteries escaped capture; they were at once supplied with new guns and were in action again in less than two days."

With three batteries in a division, Colonel Preston recommends putting one or even two with the advanced guard. Assuming that the advance guard provides the necessary security, it is hard to see why two batteries should not accompany it. Colonel Preston further recommends that the artillery battalion commander ride with the advance guard commander. This is of doubtful advisability in the opinion of the writer, as it has always been our policy to have the artillery commander with the division commander. This point, however, is one of interest. Certainly the battalion executive could ride with the advance guard commander and be empowered to make such decisions as the battalion commander himself would.

On the subject of escorts we find that the true rôle of artillery escorts is to provide information, not close protection, and that consequently patrols should search the country in all directions to give timely warning of an attack.

At Huj, the Turks had two battalions of infantry and several machine guns disposed about one field battery, one howitzer battery and one mountain battery. Taking advantage of a slight rise in the ground to one flank, ten troops (about 200 men) of British cavalry got within 800 yards before they were seen. "As the cavalry appeared, the Turks sprang to their guns and swung them around, firing point blank into the charging horsemen. The infantry . . . blazed away with their rifles till they were cut down . . .

Many saddles were emptied in that few yards, but the charge was irresistible. In a few minutes the enemy guns were silenced, their crews killed and the whole position in our hands." Most of the Turkish infantry escaped as the cavalry was too scattered and cut up to pursue. Poor security work on the part of the Turks.

The outstanding general conclusion that can be deduced from reading of these campaigns is the success of bold use of artillery. Defiladed routes or positions were acceptable when handy, but when conditions demanded, and it often did so, batteries galloped over the open and went into action just as they did in our Civil War. And strange to say most of them survived to fight another day. The charging forces that the guns are supporting, are the ones that get the attention of the enemy's artillery and small arms.

Some of the smaller actions recall vividly Kipling's "The Captain's Jacket," or General Forrest's remark at Brice Crossroads when he routed Sturgis who had double his strength. The fight was in the woods with only one road toward the enemy. His main force was driving ahead dismounted and his reserve had started to gallop down the road toward the Federal lines. He turned to the Commanding Officer of his only battery, and told him to gallop his battery in the charge, with the remark that "artillery was made to be captured." When the charge succeeded, this battery came into action and did great damage to the retreating enemy.

Give the artillery with cavalry an early warning of moves, a position well up in the marching column, and when the action is joined and the attack starts use it boldly. There is nothing halfhearted or reserved about a cavalry mounted charge, and if necessity demands, there should be the same spirit in its supporting artillery.