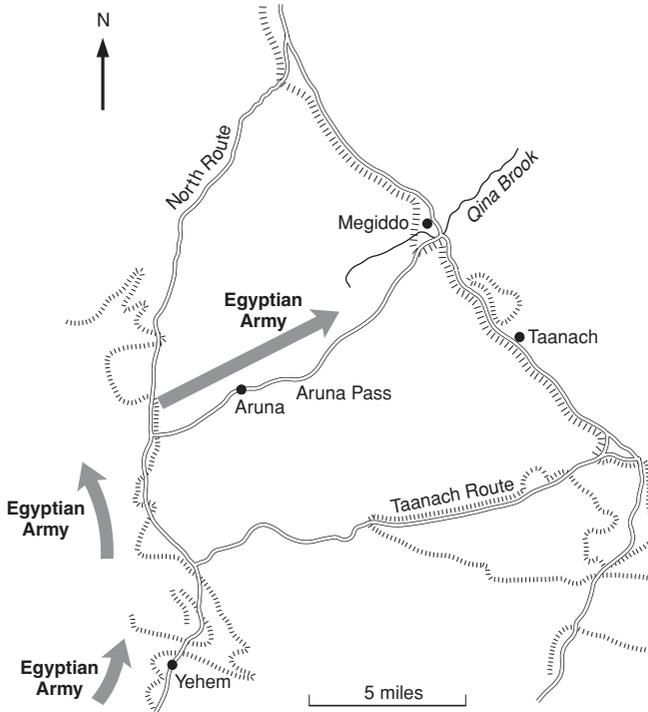

THE BATTLE OF MEGIDDO AND ITS RESULT

The Megiddo campaign of Thutmose III was so crucial to the reconsolidation of the Egyptian Empire that modern scholars still continue to fight with one another regarding its importance. To us moderns as well as to the king himself the significance of Thutmose's victory paved the way to a more permanent occupation of Palestine. At Karnak, the Pharaoh ordered a lengthy account to be drawn up, one that, to no small degree, depended upon the official war diary of the army.¹ As a result, the narrative presents a sober and straightforward tenor, in which specific days and even the hour on one occasion are marked. By using these ephemerides the author stressed certain events, which owing to their significance formed the skeleton of the account. This was the monarch's first war in Asia after he had become the sole Pharaoh of Egypt, his stepmother Hatshepsut having died around six months before the departure from Egypt. Indeed, the campaign is officially listed as Thutmose's first, thereby indicating that he had begun to rule as an independent Pharaoh.

The backdrop to the narrative is presented in a very short introduction.² The rationale was a simple one and we can restore the key opening phrases that indicate an expansion of the boundaries of Egypt. In this preamble the anarchistic state of Asia is presented. Mentioned is the garrison town of Sharuhen, and the political situation is called a rebellion, specifically from Yurza (the border river site leading into southern Palestine) to the extreme north. In a nutshell, the *cassus belli* was that of a revolt against Egyptian domination. But the attempt of the Asiatics was more complex than this introduction supposes, and from additional data presented further on in the inscription it is clear that with the support of the key Syrian city of Kadesh, whose prince was at Megiddo, the local city-states in Palestine had broken away from Egypt.

Behind this campaign, therefore, lay some time in which the revolt gained strength. Although this is obliquely alluded to in the official Egyptian record, it is nonetheless clear that many months of preparation had taken place. Megiddo lay in the Esdraelon Plain and was the most important centrally located city in Palestine.³ It controlled the trade routes to the east

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Map 4 The battle of Megiddo

to Trans-Jordan as well as to the north, in fact directly to Kadesh. The King's Highway, the major arterial route running north-south, passed by this locality; Egyptian control of Megiddo was necessary for that of Palestine, and city could only be reached through this interior route. Otherwise, it was necessary to traverse the hill region located immediately to the west, and the passes there were narrow. The other major northern artery, the Via Maris or Sea Road, was located near the coast and separate from the inland King's Highway. Practically speaking, both routes were independent of each other. We are not totally certain if Mitanni was behind the revolt, but if we keep in mind that Kadesh was allied to that inland Syrian power, then some indirect support was probably behind the rebellion.⁴

Tactically the march of Thutmose would have been organized for some time. Indeed, there is little doubt that the protagonists knew beforehand that an Egyptian campaign to Megiddo was necessary. The preparations for war were first set in place by the withdrawal of Megiddo from Egyptian control concomitant upon military aid shown to it by the king of Kadesh who resided in Syria. Likewise, all of the locals in Palestine were aware of the oncoming conflict. Those that remained loyal to Egypt, such as the key

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city of Gaza and the small one of Yehem, may have remained pro-Egyptian owing to the presence of an Egyptian military garrison. Other kinglets, and I would add those in southern Syria as well, were far enough away from the center of resistance not to be immediately affected by any Egyptian counter-attack. Hence, they undoubtedly supported the rebellion, whereas those situated near to Megiddo or Kadesh attempted to free themselves from Egyptian domination.

From the account it is certain that the king amassed a large army. He went north in person as his grandfather Thutmose I did earlier, and it would have taken some time to assemble the troops and material and reinforce the local cities that remained faithful to the Pharaoh. Solely from the account of Thutmose, the need to subdue the rebellion was considered to be of prime importance. With outside help, most of central Palestine had broken with Egypt. Both sides knew this and both maneuvered themselves into two hostile parties. Nothing was secret.

The latter point is worth stressing if only because of the contemporary awareness of the inevitability of war. The goals of the two antagonists were as blatant and public as was their military consolidation. Everyone had recognized that the Egyptians would act, and that they would employ much strength in attempting to subdue the rebels. Then too, the direction of the king's march would have been self-evident to the Asiatics. Thutmose had to leave Egypt from Sile in the Eastern Delta to reach Megiddo. Gaza, already in his hands, was the first place he would pass through.⁵ All must have understood that the focus of the king's march would be this city. Thutmose's aim was no surprise. His method of warfare – the tactics that he would employ – was also clear. Hence, the Pharaoh would have to be opposed on a battlefield, not by simple town or city defenses.

The date for departure was at the beginning of the month of April, a time when the harvest of the crops had already begun and was proceeding apace.⁶ Wheat is presently first harvested in Egypt at the beginning of April, one month later than barley. Roughly between AD 1000 and AD 1800 the agricultural schedule for wheat began at the beginning of October and ran up to the end of March; land on which barley was grown lay fallow after the beginning of February. Even so, these two crops and their agricultural cycle were different in Pharaonic times, owing to the rudimentary system of basin agriculture coupled with only the shaduf or water basket. I feel that Thutmose's date of departure was set when the main grain crops had ceased their annual cycle and the foot soldiers could be mustered.

Such a war may appear ludicrous to us moderns.⁷ After all, when is the goal so well defined and known to friend and foe alike? Today, the plan of attack is rarely perceived in so exact a manner. The enemy recognized the direction and staging points of Thutmose as well as his bases for supplies and reinforcements. Therefore, we must view this war with an attitude far different from modern ones. Granted that, tactically, Thutmose caught the

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enemy outside of the city of Megiddo, but this was not a strategic event. By experience as well, peoples of the Late Bronze Age knew that a marching soldier cannot carry his own supplies for more than 10 or 11 days. How much of his food was imperishable is hard to say, but we can be assured that the Thutmose's army needed regular provisioning.

We do not know the size of the Egyptian forces. It could not have been greater than 10,000.⁸ Indeed, I feel that this number is an exaggeration. But did he leave Sile with all of his soldiers?⁹ Support troops could have been added to his army at Gaza even though the narrative leaves our suppositions in the cold. But the ease in which the royal army halted and set up tents for the night coupled with the relative simplicity of departure tends to indicate a rather well-coordinated military force with a good leader at its head. It also implies that the number of troops, horses, chariots, and supply wagons were not that numerous. Proceeding at an average daily march of 20 km/day, the Egyptian army reached Yehem, a small city located just before a chain of hills west of Megiddo. This took place about the eleventh day of the first month of the harvest season (*shemu*).¹⁰

The Egyptian army on this campaign still retained a large number of Palestinian allies. The enemy controlled the key central sector of the Esdraelon Plain but not the lands to the west or the south. Thutmose III knew that in such a war, with people dispersed in a wide area that had many settlements, an army need have no permanent base at all. All that it required to operate was the ability to draw military supplies (in particular food) either behind it by river or by land on clearly defined and well-worn roads. The troops could feed on the produce of the friendly districts through which they marched. All that the Egyptians required to win was discipline, drill, and a belief in themselves. The Pharaoh could supply all three.

Nowhere is it stated whether the army rested at a town between Gaza and Yehem. Because the king was traveling in friendly territory we can suppose that he took advantage of any possibility of a halt, especially when his troops could be supplied. Here we see one of the historical imponderables that occurs owing to the limited nature of the information. In fact, it is identical to the situation of pictorial representation. The king can be shown leaving Egypt at Sile as, for example, we see in the battle reliefs of Seti I.¹¹ But the next phase of his war concentrates upon the actual battles or deeds that were significant enough to be carved; the rest was ignored.

In an identical fashion the military narratives leave off any occurrence that was ancillary to the focus of attention. In the Kadesh Bulletin of Ramesses II the conflict between the Egyptians and the Hittites opens when the king is in Asia. The first major occurrence is his arrival at Shabtuna, an important site, because it was there the Egyptians received news from two Shasu Bedouin who claimed to have defected from the Hittites. The more detailed Poem reports that Ramesses II left the border post of Sile. The following halt at a royal fortress in the Lebanon Valley bypasses a great amount of

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time. The same may be said for shorter military accounts such as those of Amunhotep II. By and large, the departure from Sile appears to have been the required narrative beginning for lengthy war records, and even Seti I, in pictorial style, follows this practice. But thereafter, the precise stages of the Egyptian advance are left aside until a memorable event occurred. The reason why Yehem, an insignificant town, was mentioned in Thutmose's account is revealed by the narrative. It was there that the war council took place and conflicting plans were brought forward concerning the way to move upon Megiddo.¹²

Let us now return to some presuppositions already mentioned in this study. Did the king leave Egypt with his entire army or were preparations already in place allowing him to augment his troops further? Most certainly, the Pharaoh would have had to arrange his progress northward. The requisite procuring and rationing of supplies must have been enacted at an earlier time. I also feel that some war material must have been demanded or else already in place through previous deliveries. After all, so long as the Egyptians were in lands loyal to them they could depend upon a series of bases (the towns) at which to stop, refresh, and garner more equipment. The greater the size of the royal army, the more likely it would have been that massive war plans had been put in place. We cannot rely upon the overtly personalized accounts in which the Pharaoh, all by himself, accomplished the work of war. For this reason I feel that Gaza was more important as a rest halt and procurement center at this time than as a city of tactical importance. After all, the king stayed there for one mere day, enough time to reinvigorate his troops.

One useful point for a more exacting calculation occurs near the end of the narrative. Before the battle took place the Egyptian army came out of the narrow Aruna Pass, thereby performing a feat that the enemy did not expect.¹³ The inscription states: "Now when the leading detachments came forth upon this road, then the shadow turned." Parker was correct to see the use of a shadow clock to determine the time of day.¹⁴ If we follow him, then the king reached the south of Megiddo on the bank of the Qina Brook when the seventh hour of the day had turned. This was an important position because Thutmose could water his horses at this site and refresh his tired soldiers, who also had need of water. The time would have been in the very early afternoon. This means that somewhat over one hour had passed for the soldiers to reach their fixed position. The army was led through the pass by the king who then waited for the final portion of his rearguard to debouch before he went to the front to command his forces. The pass of Aruna is about 13.4 km long.¹⁵ It is about .8 km from the exit of that pass to the Qina Brook. The distance from Yehem to Aruna is 21 km, about one day's journey, and from Aruna to the end of the pass about 15.3 km.

How big would have been the camp? We know that for a Roman legion of 6,000 men an area of 60 acres would be occupied.¹⁶ This is

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approximately .24 km². On a campaign the camps were probably smaller, but it has been noted that this dimension is still found in armies at the end of the nineteenth century: 10 acres were used to bivouac 1,000 men. This large figure is impossible given the topography of the region around Megiddo. For 6,000 men the area would have had a side of approximately one half of a kilometer. The topographic nature of the locality indicates that this also would have been too great, indeed more than the area of the mound upon which the ancient city of Megiddo lay. The physical layout permits the possibility of the smaller number. Once more, the result indicates a moderate-sized Egyptian force instead of a very great one.

The army assembled in the plain at the mouth of the Aruna Pass and then moved on. Parker is right to conclude that it reached its desired position in about 80 minutes or so. We can therefore conclude that at about noon the rearguard finally left the pass. At this time the army was not operating in the near single-file system that it had to endure when it traversed the pass. There, it is said that the first troops in the fore were leaving the pass when the last were entering it.

Four facts, therefore, are of prime importance:

- 1 It took 80 minutes or so for a partially or completely assembled army to march for .8 km. I assume that after the rearguard left the pass, Thutmose then went to the front and soon thereafter ordered the advance to Qina. In other words, the troops at the end would have had enough time to assemble for the march.
- 2 The same army, traveling Indian style, would cover 15.3 km from front to rear. In this case we have to include soldiers, pack animals, and the horses. All of this would have to have been arranged before departing from Yehem. Because the Egyptians remained at that town for three days, there was more than enough time to prepare for the arduous journey.
- 3 The account indicates that the horses followed each other in Indian style, but nothing specific is revealed concerning the march of the soldiers.
- 4 Two men in a chariot drawn by two horses occupy the same road space as 12 infantrymen. We can increase this figure by two owing to the small chariots of the day.¹⁷ As the horses were also smaller, the ratio may be retained. Moreover, the chariots were probably dismantled and carried by the horses if not also by other pack animals.

Before we enter into the calculations we must take into consideration the width of a marching column. How many were there before Qina? The breadth of a file of two or more men is approximately 3 paces or .91 m and the width of a man at the shoulders is only .46 m.¹⁸ The depth varies somewhat, dependent upon the type of march (close order or relaxed).

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We might assume .91 m per man for the march through the Aruna Pass. Now the file breadth is an estimate based upon the intervals of Roman legionaries as well as that between lines of Greek hoplites. Actually, this is an overestimate by today's standards because those ancient peoples allowed a greater distance between files in order to allow the free use of weapons. When marching, of course, the files would be closed up. (I prefer .84 m per man in an army at this time.) This might seem too large for the arduous task of filing one by one through the pass, but two useful data can be brought into the discussion. A pre World War I brigade of British infantry occupied a space with .806 m per man plus interval; men with spears would require a greater distance. The contemporary German marching order required only .76 m. Considering the expertise of drill and military preparedness in this earlier epoch, we can set upon .84 m as the maximal unit per man.

Finally, I assume that this march would have had the foot soldiers proceed four abreast *at most*. If they advanced in a single file, then the number of troops must be significantly decreased. (The account only states that the horses followed one another and did not advance side by side.) Ancient roads were narrow, passes even more so, and always it was necessary to keep section of a path, on the left or right, open for communication and rearrangement. The Egyptians usually knew the types of roads that they would encounter. For example, the Kadesh Poem of Ramesses II claims that "His majesty's army traveled on the narrow paths as if on the roads of Egypt," thereby indicating that, once off the main arterial routes, the army was faced with less traveled paths that were not as easy on which to march and were small in width.¹⁹

The army awoke around sunrise on day nineteen of the first month of the harvest season (*shemu*). The rearguard of the army came out into the valley at noon. We can assume that Thutmose III with the vanguard entered the Aruna Pass at approximately 6.00 a.m. or slightly later. Sunrise actually represented the beginning of the second hour of the day, a fact proved by the ancient shadow clocks in employ at this time. The whole army therefore took about 6 hours to traverse the pass, not a very long time, especially when we consider that it was strung along with one man following another and one horse following its companion. Perhaps we might assume as well that some men sat on the horses; this, however, is unclear. For the sake of argument, let us suppose that only pack animals and horses made the journey. We arrive at a maximal number of 16,720.²⁰ This figure excludes any soldiers as I have allowed only the king. If there were only soldiers, the maximal limit of troops comes to about 18,240. These gross integers provide the upper limits for the forces.

Now taking into consideration a ratio of 1:3 for troop followers:combatants, we can reduce the combat troops to around 13,680 without any animals.²¹ But if we allow for at least 2,500 active warriors, they would have covered

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2.1 km, leaving the remainder of the distance to be traversed by 4,811 animals. But the total number of men would have been about 3,333, leaving 4,554 horses and pack animals. Finally, we have to deal with the animals that were not engaged in the actual battle; i.e., donkeys, possibly oxen (which the Hittites brought to the Battle of Kadesh in Dynasty XIX), and the like. In this case, I feel that an approximate figure of 4,000 horses can be argued, with the maximum being not too much greater than 4,200. This means around 2,000 chariots. One additional point has to be mentioned here. Climbing up and around difficult terrain such as that in a pass extends the battle line. This is why I have taken the most conservative estimates for the length of a man plus the space behind him and the length of an animal in the same fashion.²²

As we shall see, the Asiatic coalition was able to muster at least 924 chariots. This implies that if all were used for chariot warfare then the enemy would have had around 2,000 or so horses. A little over that number were captured (2,041 to be precise), and hence we can regard the enemy's chariot force as having been the sum of those abandoned vehicles. It should be pointed out that all of these war vehicles were left on the battlefield after the victory of the Egyptians because the narrative explicitly states that the enemy had abandoned their horses and chariots. The men had to be hauled up on the ramparts of Megiddo. But owing to the number of enemy chariots, I feel it most probable that the Egyptians had more than that number in order to win. The tentative figures given in the last paragraph fit reasonably. In fact, from this rough analysis we can see that the army of Thutmose III was by no means grand by our standards, much less those of ancient Rome or even Assyria. Redford's assumption of 10,000 (or so) warriors ought to be reduced by some factor.

Final points concerning the size of the Egyptian army may now be approximated. Thutmose's account expressly indicates that he arrived with his vanguard at Qina. Then a camp was prepared, probably being set into place during the arrival of the lagging troops. Rations and provisions were only handed out when the entire army had reached its destination, but we do not know when, exactly, this occurred. Parker's calculations for nightfall in 1468 BC may be followed.²³ Thus the maximal time for the arrival of the king and the dispositions for the night runs from ca. 1.20 p.m. to ca. 6.30 p.m. (sunset), only a bit over 5 hours. Taking into account the camp preparations, food distribution, and preparedness, we should not go far wrong and conclude that all was ready at 4 p.m. at the latest. More importantly, it took 1 hour and 20 minutes for the king to arrive at Qina.

There are now problems concerning the date of the battle. Modern scholarship has returned to the earlier position that two days elapsed between the departure from the pass and the actual combat in the morning of the twenty-first.²⁴ What occurred in between? If there is no error, then

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day twenty would have seen the tactical dispositions of the army's wings: one was stationed northwest of Megiddo and a second at a hill south of the Qina Brook. But the narrative specifically indicates that in the late afternoon of day nineteen the king told his troops to expect battle in the morning of the following day. Moreover, the account reads as if Thutmose III only just had divided his army into three parts, with the major force placed logically in the center. Yet there was no surprise attack. The enemy later established its position outside of Megiddo as well. Evidently, not only the place of battle but also the timing was prearranged. The two enemies were in sight of one another, and modern topographical analysis indicates that the Egyptian troops were originally at most one mile (1.6 km) from Megiddo. Subsequently, we can assume that the melee occurred close to the city owing to the rapidity by which the fleeing enemy, on foot, was able to reach the walls.

It has been argued that the enemy force was caught while still deploying.²⁵ There is no evidence for this. They were simply overwhelmed by the Egyptian success. I prefer to view the battle as one in which the arrangements for defense and offense could have been seen by either protagonist. In many ways the Battle of Megiddo resembles a set piece, a chess game in which both participants could view their foe and rely upon their own strength. One further point can be argued. We do not know who attacked first. The account, as all Egyptian reports, views the success from one side, and is a very nationalistic one. Yet it remains impossible to ascertain the reasons for the Egyptian success except to emphasize the qualities of leadership, the numerical superiority of men and weapons, and the morale of the Egyptian army. The subsequent delay among the Egyptian troops owing to their plundering of the enemy camp is another thing, although it reveals that the enemy had set up their equipment and tents outside of Megiddo before the battle ensued. Thutmose and his army could have observed this as well.

Thus either the Egyptian allowed their foe to prepare for battle some time before the day of combat (the twenty-first) or else the enemy was already encamped outside of Megiddo when the king reached the Qina Brook. Do we opt for the second for these reasons: (1) a battle took place outside of the city; and (2) the enemy expected to win there? These two points are very simple to explain. The first implies that Thutmose hoped to avoid a lengthy siege. Indeed, he later railed against his soldiers for allowing the plundering before they reached the citadel. His men had wasted time and energy in the foe's camp. The second point indicates that the battle was fought where his opponents wished, and not too far from the resisting city.

Thutmose surprised the enemy coalition by choosing the Aruna Pass. No major defense was prepared against him at the all-important exit. The enemy, in fact, was not around. Nor were they on day nineteen at the Qina

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Brook some .81 km distant. Did Thutmose allow his opponent the privilege of preparing his troops on the battlefield for combat on the subsequent day? However we interpret the text, it is clear that philological analysis cannot explain all of what happened. The topography, on the other hand, provides some useful evidence. None of the distances in this region were large. The Pharaoh wisely divided his troops, sending some of his chariot divisions north and south. (Foot soldiers would have marched too slowly.) By doing this he hemmed in the enemy's divisions between three points, all of which were located at key locations, and one of which was at a hill. (His chariots would, of course, have been at the base and not at the top.) From the ground plans we can see that the northern wing had to have been placed within a narrow vale surrounded by the city to the east and the chain of steep hills to the left. Perhaps it is useful to point out that none of the two other sections of the Egyptian army are said to have come into play on the battlefield. Nevertheless, owing to the limited nature of the Egyptian written presentation, this interpretation can be countered.

But the problem of day twenty still remains. In the text the singular mention of the feast of the Egyptian first lunar day coinciding with day twenty-one may, in fact, provide additional support to follow the wise principle of non-emendation. At dawn the king's messengers reported that his two wings had already been in their places. This, as well, had to have taken place on day nineteen. But some type of conflict had already taken place. Not in the pass, for the account is explicit. In that area the Egyptian army faced no "single enemy." And when the king arrived safely at the exit, it is reported that the southern wing of the enemy was at Taanach and the other one at the north side of the Qina Valley. This makes perfect sense. The coalition of Asiatics had expected the Pharaoh either to take the southern route to Taanach or else the northern one, the road of Djefi. Therefore, they had prepared for a possible conflict in either of these two cases, but they did not expect the Pharaoh to choose the middle way, the pass of Aruna. Yet a fragmentary portion of the narrative indicates that Thutmose met some resistance, although it was feeble. I follow most scholars and interpret this passage as indicating that a skirmish took place when Thutmose left the pass.²⁶ To leave unprotected any entrance to the land of Megiddo would have been rank foolhardiness, even though the enemy did not expect the Egyptians to take the most difficult road.

One later account on a stela from Armant indicates that "all countries were mustered, standing ready at its mouth." That is to say, the enemy troops were already prepared to resist the king outside of the city when he left the pass. In so far as this inscription presents a vaguer and more generalized account of the battle than the official narrative at Karnak, we may consider its report to be highly condensed. What is crucial, however, is the timing. From the Megiddo report only two possibilities are left open: (1) either the battle took place on day twenty and an emendation is

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necessary; or (2) it occurred on the twenty-first with the intervening day left for final preparations for combat during which the protagonists allowed themselves time to set up the place of combat. The second hypothesis implies a situation in which military encounters are announced publicly, such as is assumed during the Late Medieval phase of warfare between nobles or knights.²⁷

Moving beyond the problems of chronology for the moment, a look at the booty captured in the enemy camp is rewarding. Horses and chariots were taken, including those of the princes in the coalition. Even the tent of the prince of Megiddo was ransacked. It is as if we were at the battle of Grandson between Charles the Bold of Burgundy and the Swiss coalition. But it is clear that the costly war booty was taken from the enemy who fled from the field. The plundering occurred soon after the flight of the defeated troops who hastened back to the city walls of Megiddo on foot, only to be hauled up by the inhabitants. In this case we cannot presuppose that the Egyptian infantry remained on the battlefield (and then plundered the enemy's camp) while their chariotry pursued their opponents. Otherwise, many of the foes would not have reached Megiddo.

On the other hand, we do not read of any confusion within the Egyptian army despite the sacking of the camp.²⁸ Had order to be restored when the soldiers felt that the booty belonged to he who took it? We do not know. Yet the rebuke given by Thutmose to his army may, in fact, hide the true situation. As I have indicated, if the chariots had sped after the fleeing Asiatics, many of the enemy would not have managed to reach the city. Looting on a large scale occurred, and this prevented the fall of Megiddo, exactly as the Pharaoh states. The fault, however, was one of discipline, and this must be charged to Thutmose and no one else.

The booty list includes the following items: 340 live enemy, 83 hands (from counting the dead after the victory), 2,041 horses, 191 foals, 6 stallions, and an unknown number of colts. In addition, we read of 1 chariot of the prince of Megiddo, 30 of his allied chiefs, and 892 of the charioteers. The total was 924. Coats of mail were thrown aside by the fleeing enemy, and they include one belonging to the prince of Kadesh and another to the ruler of Megiddo. Finally, an additional 200 leather corselets were found discarded by the troops. The captured cattle included goats, sheep, and cows, all of which were still outside of Megiddo when the battle took place.

This summary list presents interesting data. Because the opponents of Thutmose fled after defeat, they left all of their heavy armaments and war material on the field. Some of the horses must have been killed while others had run away. Still, the total number of military items is not high. The 924 chariots indicate 1,848 men, and they belonged to the local princes as well as the two chiefs of Megiddo and Kadesh. The 2,041 horses indicate about half that number in chariots. Thus the figure of 924 coincides rather well

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with that of 2,041. Because these vehicles were eventually abandoned, there apparently were 193 horses not tethered to their chariots. The 340 living prisoners plus 83 hands come to 423. Does this mean that 1,525 men are missing (1,848 minus 423)? I believe so, but where were they? Could all of them have fled to the walls of Megiddo and have been pulled up? That is too large a number to have been rescued in a small amount of time, unless we regard the camp plundering far more seriously than at first supposed, and also assume that a lengthy period of time had passed. Furthermore, it would have been a remarkable feat for the inhabitants of Megiddo to let down enough ropes to drag up such a large body of men.

Another restrictive limit must be placed, but only with respect to the horses and chariots of the coalition. Foals most surely were not employed, and colts are not useful for chariots. I assume that a portion of the equids was not assigned to any of the war vehicles. Some of them could have been employed for scouts and messengers, of course. The total number of prisoners plus hands indicates a small force. Eighty-three is not at all an impressive figure, but neither is 340 or 423. If many of the enemy ran away on foot, surely they would have been captured later, although one might hypothesize that the booty list reflects only the people and items actually acquired from the battle and not any later picked up by Thutmose's soldiers. Our calculations cannot allow for a very large Egyptian army, although I suspect that the victory was due to the extra chariots that Thutmose had with him. His army must have been at least twice the size of the enemy.

But why did this victory occur? Simple numerical superiority in manpower is not enough. In fact, the Pharaoh had already split up his forces before the melee outside of Megiddo. The account supplies the answer, albeit with some ambiguities owing to the fragmentary nature of the text at this point. The southern wing of the enemy was at Taanach, and the northern at an unknown locality. Lichtheim has proposed that it lay on the northern side of the Qina Valley, and I believe that this interpretation better explains the tactical dispositions of the enemy coalition.²⁹ To locate a central reserve somewhere along the northwest-southeast road leading south from Megiddo (and hence south of the Qina Brook) makes little sense. Of the two routes that Thutmose was expected to choose, one lay to about 13.4 km to the north of Megiddo and the other 16 km distant. It would take somewhat over one day's normal march for the Egyptian army to reach the desired locality, whichever of these two roads was chosen.

The report further indicates that the core of the enemy was caught between two wings. The opposing Asiatic force was stationed outside of Megiddo with its right wing to the north and its left to the south. How many troops were sent away from the center is unknown. Can we hypothesize that they were a large number? Both roads leading from the north and south to Megiddo cut through hills. If the Egyptians went from Yehem in either direction they could have been trapped by a relatively small number of

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enemy forces. Thutmose countered this expectation. He chose the more difficult route because he thought, correctly as it turned out, that the enemy would not expect such a risky venture. After all, the Egyptians had to march single-file through the Aruna Pass, but if the army had gone on either of the other two, this dangerous undertaking would have been spared.

One result of this success was the reordering of Egyptian control over Palestine. Possibly during the siege, but more probably subsequently, Thutmose III placed economic demands upon three peripheral cities that were dependent upon Megiddo: Yeno'am (at the border of Palestine with Trans-Jordan); Harenkal (an unknown town); and possibly Neges (a still problematic area).³⁰ After the fall of Megiddo, the elite Asiatic *maryannu* warriors were taken as well as the children of the princes who were allied to the local ruler. A relative large number of slaves, males and females, including their children, were brought back as well; 1,096 are recorded. Non-combatants are also mentioned, and they numbered 1,003. (The total came to 2,503.)

The harvest of Megiddo was assigned henceforth to the administrators of the king's house in order to control the reaping.³¹ The text reckons the importance of that undertaking as 207,300 Egyptian *oipes* of wheat; i.e., 3,984,306 liters (dry measure). To transport the grain would have required about 22,613 animals to transport the wheat on land. This appears impossible.

We know that the workmen at the royal tombs of Thebes received a monthly wage of 4 *khar* of emmer wheat.³² This amount, 300 liters, served for the man's whole family of about 10 members. Given the previous figures, we end up with a monthly amount that could take care of 13,281 Egyptian Theban families, or 132,810 people/month. Is this number roughly equivalent to the entire population of that region? Considering the size of Late Bronze Age cities of Palestine, and taking into consideration the size and importance of Megiddo, I doubt the result.³³ Yet the grain could be considered to be the total amount necessary to feed the inhabitants of the region plus a surplus. If the population was around 50,000 then there would have been a surplus of two-thirds of the total produce. Although this might appear reasonable, there remains the problem of transport.

I am very reluctant to take these figures on face value. If the figures are reckoned in simple *hekats* (1/4 of an *oipe*), then the results are 517,341 kg, 5,653 animals, and 3,320 families fed/month or 33,320 people/month. This is more reasonable, and the result may not contradict the reading of the grain measure. Nonetheless, the number of animals in the supply train is still large. Perhaps a portion of the corn was sent to the local cities or even the Egyptian garrisons in Asia. However we wish to interpret these numbers, there remains the strong possibility that the original contains a fault. At any rate, the account of Thutmose III nonetheless reveals the immense economic reorganization that took place after the victorious Megiddo campaign.

EXCURSUS

1. Because the so-called “Annals” of Thutmose III provide our major contemporary source for the Megiddo campaign, it is necessary to list three studies concerned with their historiographic content and organization. The two early ones are Martin North, “Die Annalen Thutmosis III. als Geschichtsquelle,” *Zeitschrift des deutschen Palästina-Vereins* 66 (1943), 156–74; and Hermann Grapow, *Studien zu den Annalen Thutmosis des Dritten und zu ihnen verwandten historischen Berichten des Neuen Reiches*, Akademie Verlag, Berlin (1947). I later returned to their work in *Aspects of the Military Documents of the Ancient Egyptians*, 134–42. By and large, the “Annals” tend to follow the official daybook (ephemerides) account when the editor (author) refers to a specific location, especially a city or town.

There is a key problem in the account concerning the events of day twenty, one that I have discussed in this chapter. The study of Goedicke referred to in note 1 does not solve the chronological quandary whereas Redford’s work, *The Wars in Syria and Palestine of Thutmose III*, is far more exacting and accurate.

2. In order to estimate food intake in calories, especially of grain (wheat and barley), it is necessary to know the exact volumes. Fortunately, the capacities of the various Egyptian grain measures are relatively secure. For a helpful summary, see Janssen, *Commodity Prices from the Ramessid Period*, 109–11. Part of this material has already been discussed in the excursus to chapter 2.

For soldiers in other pre-modern societies, Janssen (*ibid.*, 463 n. 51) refers to the daily intake of 680 g of wheat bread/day in addition to 1.5 liters of beer, 225 g of butter, as well as cheese and beef or mutton. Clearly, the caloric intake was far greater than in Pharaonic Egypt. On the other hand, the research of Richard Duncan-Jones, “An Epigraphic Survey of Costs in Roman Italy,” *Papers of the British School at Rome* 33 (1965), 223, emphasizes that the average adult male ration of corn from the end of the Republic and onwards was 5 modii/month (43.76 liters/month). As Duncan-Jones remarks, the 5 modii/month approximate 3,000–4,000 calories/day, a very reasonable figure. (NB, this author places the theoretical idea of 3,300 calories/day for male adults.)

Additional data will be found in the study of K. J. Carpenter, “Man’s Dietary Needs,” in Sir Joseph Hutschinson, *Population and Food Supply*, University Press, Cambridge (1969), 61–74. As we have seen, Engels, *Alexander the Great*, 18, places a minimum ration for each adult soldier on the expedition to be 1.36 kg of grain per day “or its nutritional equivalent” and at least 2.2 liters of water per day.

3. The population situation in Palestine is of paramount consideration when one reflects upon the ability of the Egyptians to wage war in this area as well as to administer it. The following studies (in chronological order), kindly brought to my attention by Alexander H. Joffe, are the most recent significant articles.

Ram Gophna, “The Settlement of Landscape of Palestine in the Early Bronze Age II–III and Middle Bronze Age II,” *Israel Exploration Journal* 34 (1984),

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24–31. Although the orientation of the author is upon an earlier period of time, this analysis, partly superseded by the following studies, is quite useful.

Rikva Gonen, “Urban Canaan in the Late Bronze Period,” *Bulletin of the American Schools of Oriental Research* 253 (1984), 61–73.

Magen Broshi and Ram Gophna, “The Settlements and Population of Palestine During the Early Bronze Age,” *Bulletin of the American Schools of Oriental Research* 253 (1984), 41–53. The methodological considerations discussed by the two scholars are important.

Broshi and Gophna, “Middle Bronze Age II Palestine: Its Settlements and Population,” *Bulletin of the American Schools of Oriental Research* 261 (1986), 73–90.

Ram Gophna and Juval Portugali, “Settlement and Demographic Processes in Israel’s Coastal Plain from the Chalcolithic to the Middle Bronze Age,” *Bulletin of the American Schools of Oriental Research* 269 (1988), 11–28. This study is useful for comparative purposes.

Magen Broshi and Israel Finkelstein, “The Population of Palestine in Iron Age II,” *Bulletin of the American Schools of Oriental Research* 287 (1992), 47–60. The authors discuss the later population of Palestine in the eighth century BC.

Gloria Anne London, “Tells: City Center or Home?,” *Eretz-Israel* 23 (1992), 71*–9*. Her conclusion is that in “ancient Israel” the “vast majority of people lived in rural towns and villages close to where they worked the land” (p. 77*). She also places emphasis upon the “small size of ancient sites in Israel,” leading to the conclusion “that large tells were home to the rulers, their extended family, servants, and some military personnel” (p. 77*). The population is reduced from the figures presented in the aforementioned articles.

A reasonable estimate is to set the population of Canaan (Palestine) ca. 60,000–70,000 ca. 1200 BC, a decline from ca. 160,000 at 1600 BC, following Broshi and Finkelstein.

Liverani (*Prestige and Interest*, 147) briefly discusses assumed population of 89,600 of the eastern territories (re-)conquered by Amunhotep II. We shall turn to this problem in chapter 9.

Last, the estimates given above directly affect the scholarly dispute between Dever and Na’aman concerning the “devastation” of Palestine in the transition between the Middle to the Late Bronze Age. See note 7 to chapter 3.

NOTES

- 1 The text, which is often referred to as the “Annals,” is available in the excellent English translation of Miriam Lichtheim, *Ancient Egyptian Literature* II, 29–35; the text will be found in Sethe, *Urkunden der 18. Dynastie*, 647–67.

The study of Harold Hayden Nelson, *The Battle of Megiddo*, University of Chicago Libraries, Chicago (1913), is still of great use, especially because his detailed topographic maps are inestimable for logistic analysis. Faulkner’s “The Battle of Megiddo,” *Journal of Egyptian Archaeology* 28 (1942), 2–15, covers

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the events from the time of the war council to the actual clash of arms outside the city of Megiddo. Hans Goedicke's volume, *The Battle of Megiddo*, Halgo, Baltimore (2000), can be cited in this context. However, the recent study of Redford, *The Wars in Syria and Palestine of Thutmose III*, is presently the most valuable and up-to-date analysis.

Anson F. Rainey, "The Military Camp Ground at Taanach by the Waters of Megiddo," *Eretz-Israel* 15 (1981), 61*–6*, presents too many assumptions concerning the tactical positioning of the enemies.

- 2 Donald B. Redford, "The Historical Retrospective at the Beginning of Thutmose III's Annals," in *Festschrift Elmar Edel*, 338–41.
- 3 For a useful geographic background to the historical-geographical nature of Palestine at this time, see Yohanan Aharoni, *The Land of the Bible*², A. F. Rainey, ed. and trs., Westminster Press, Philadelphia (1979).
- 4 See Nadav Na'aman, "The Hurrians and the End of the Middle Bronze Age in Palestine," *Levant* 26 (1994), 183, for an important discussion of the Hurrian influence in Palestine at this time. He states that "Mitanni gained supremacy in northern Syria and apparently operated in the Canaanite areas through the center of Kadesh." This study has to be read in the context of the Dever–Na'aman dispute discussed in note 7 to chapter 3.
- 5 On Gaza at this time: Redford, *History and Chronology of the Eighteenth Dynasty of Egypt*, 60 n. 27.
- 6 Karl Butzer has presented an extremely important analysis of the Pharaonic agricultural schedule in the Nile floodplain in *Early Hydraulic Civilization in Egypt*, University of Chicago Press, Chicago and London (1976), 48–51.
- 7 On pp. 17–19 of his *The Battle of Megiddo*, Nelson attempts to explain the military backdrop of the campaign. Once more Redford has provided pertinent historical reasons connected to the lengthy preparations of war by Thutmose III during the last months of the life of Hatshepsut: *History and Chronology of the Eighteenth Dynasty of Egypt*, 86–7; see as well Helck, *Geschichte des alten Ägypten*, E. J. Brill, Leiden and Cologne (1981), 157.
- 8 See note 22 below.
- 9 In the account of the "Annals," Thutmose III is first placed at Sile: Sethe, *Urkunden der 18. Dynastie*, 647.12.
- 10 For the time frame, see Murnane, *The Road to Kadesh*, appendix 1. See as well the other sources referred to in note 1 to chapter 2.
- 11 See Murnane's comments cited in the previous note.
- 12 This portion of the narrative has been used as a key example of the *Königsnovelle* or King's Novel: see our comments in note 3 to chapter 1.
- 13 For the difficulties associated with mountain passes, see Delbrück, *Warfare in Antiquity*, 93. He points out the key situation: "the tactical theory requires you to take a position with your concentrated forces opposite the defile, or on one of the defiles, from which the enemy is about to debouch." This was not done by the Pharaoh's opponents. Because they had expected him elsewhere (south or north of the Aruna pass), they sent their troops to those two areas.

However, there was a skirmish at the mouth of the pass: Faulkner, "The Battle of Megiddo," *Journal of Egyptian Archaeology* 28 (1942), 7–8.

Redford, *The Wars in Syria and Palestine of Thutmose III*, 27–9, attempts to explain the problems with the missing "day twenty" in the official account. He

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concludes (objecting to Parker's analysis in the following note concerning the phrase "when seven hours had turned in the day"), that a calendric notation for day twenty is missing in the account.

- 14 Richard A. Parker, "Some reflections on the lunar dates of Thutmose III and Ramesses II," in William Kelly Simpson and Whitney M. Davis., eds., *Studies in Ancient Egypt, the Aegean, and the Sudan. Essays in honor of Dows Dunham on the occasion of his 90th birthday, June 1, 1980*, Museum of Fine Arts, Boston (1981), 146–7. He follows the accession date of Thutmose III as 1290 BC. A change to 1279 BC, as presently argued by Egyptologists, does not alter the timing present here to any appreciable degree.
- 15 The distances used here are taken from the maps in Nelson, *The Battle of Megiddo*.
- 16 J. F. Verbruggen, *The Art of Warfare in Western Europe during the Middle Ages: From the Eighth Century to 1340*, Sumner Willard and S. C. M. Southern, trs., North-Holland Publishing Company, Amsterdam, New York and Oxford (1977), 10, for this fact and the following one.
- 17 On the size of Egyptian chariots, see Littauer-Crouwel, *Wheeled Vehicles and Ridden Animals in the Ancient Near East*, 75–7, and their later study, *Chariots and Related Equipment from the Reign of Tut'ankhamun*, Griffith Institute, Oxford (1985), 96–104.
- 18 For the data concerning these calculations, see excursus 3 to chapter 2.
- 19 The account is in P 33: Gardiner, *The Kadesh Inscriptions of Ramesses II*, 8.
- 20 For these calculations, see note 24 to chapter 2. I follow 2.8–3.2 m/animal as the common interval in marching order in difficult terrain. On flat ground I would opt for about 2.77 m.
- 21 This is the average figure that is assumed by most military historians, including Delbrück. Engels, *Alexander the Great*, 12, indicates that there was an overall rate of one servant per every four combatants in the armies of Philip of Macedon. With Alexander the Great until the battle of Gaugemala the ratio of 1:3 is maintained (p. 13).
- 22 Redford, *The Wars in Syria and Palestine of Thutmose III*, 197, feels that around 10,000 men were with Thutmose. My calculations indicate that this figure is too high if we consider only the able-bodied military men. I would reduce it by four to five thousand.
- 23 See his study and my comments cited in note 14 above.
- 24 A summary of this position will be found in Rolf Krauss, *Sothis- und Monddaten. Studien zur astronomischen und technischen Chronologie Altägyptens*, Gerstenberg Verlag, Hildesheim (1985), 121–3. See the most recent analysis of Redford discussed in the following note.
- 25 Faulkner, "The Battle of Megiddo," *Journal of Egyptian Archaeology* 38 (1942), 13, assumes such a maneuver. His analysis also depends upon the enemy's counter-moves, which are seen to have been incomplete at the time that Thutmose attacked. His argumentation at this point appears to me to be a reasonable explanation for the subsequent panic of the coalition forces, although it is open to criticism.

Redford, *The Wars in Syria and Palestine of Thutmose III*, 27–9, on the other hand, feels that the account of Thutmose lacks an entry for day twenty. Hence, he argues, "the king and an advance guard must, against all logic, have returned to camp or remained in the pass overnight" (p. 28). This fresh interpretation,

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- however, remains open to dispute. A further possibility is envisaged on p. 29. Namely, “the report issued to the king on the morning of that day [= the 20th] indicated the field was clear: the enemy had not yet redeployed.” But this hypothesis requires a conclusion that passes beyond the official account.
- 26 See note 13 above.
- 27 Redford’s series of possibilities avoids this somewhat precarious interpretation.
- 28 The problems with unexpected war booty are neatly covered by Machiavelli in his *The Art of War*, Christopher Lynch, trs., 109 (Book V 97–8).
- 29 *Ancient Egyptian Literature* II, 36 n. 6 (to the text on p. 31).
- 30 Na’aman, “Yeno’am,” *Tel Aviv* 4 (1977), 168–77. For the siege of Megiddo, one must keep in mind that if an attack on the battlefield can set up a blockade, and at the same time prevent needed supplies from entering the locality, then starvation and disease will decimate the local population, thereby reducing the number of opposing troops: Harry Holbert Turney-High, *The Military. The Theory of Land Warfare as Behavioral Science*, Christopher Publishing House, West Hanover (1981), 186–7. In addition, the defense’s ammunition will slowly be reduced.
- 31 See the commentary of Breasted, *Ancient Records of Egypt* II, 189 with note a; the text is in Sethe, *Urkunden der 18. Dynastie*, 667.14. I am assuming that the amount is recorded in *oipes* rather than the Egyptian bushel, the *khar*, owing to its smaller capacity. There remains the possibility that the measure is the Egyptian *bekat* (1/4 of an *oipe*). Although the reading does not support this contention, a fourfold reduction is very reasonable. The number of Egyptian bushels, or *khar*, come to 51,825. The number of modern bushels is 113,065. (A bushel of wheat weighs about 18 kg.) Finally, we can assume a 90 kg load per pack animal.
- 32 Jac. J. Janssen, *Commodity Prices from the Ramessid Period*, 455–71. Four *khar* = 16 *oipe*.
- 33 The population of Late Bronze Age Palestine is discussed in the excursus to this chapter. The importance of this data for analyzing the New Kingdom Egyptian military in this region will be covered later.