



TIME MACHINE MINIATURES

" Figures From The Realms Of Time "



The TEUTOBURGER WALD



**USING MINIATURES TO TELL THE
STORY OF ONE OF THE MOST DECISIVE
BATTLES IN HISTORY**

BY

KEVIN TOWNSEND

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INTRODUCTION



Varus was worried. He had not expected the attack and his army was in no position to properly defend itself. Only a few short days ago he had led his army on the march from its summer bivouac back to winter quarters on the Rhine. The summer's encampment had been very successful and Germania was well on its way to becoming a Roman province. But yesterday word had been received of a revolt in the North. Varus had dealt with such things before and determined to make a brief detour to crush the rebels. The army had moved quickly. Arminius, Varus's friend and commander of the Germanic auxiliaries, had departed with his cavalry to scout the way ahead. Although a German, Arminius could be trusted. He had served Rome well and even attained Roman citizenship. But where was Arminius now, and why had Varus received no warning of this attack?

On this, the second day's march, the army had moved into an area of forested hill. The rough terrain, narrow pathways, and large numbers of accompanying civilians had combined to cause the column to become spread out. This had not seemed cause for concern since they were still in friendly territory. But it was at this vulnerable point that the German rebels attacked. They knew the woods well and their light equipment allowed them to move quickly. They struck, and then just as quickly disappeared into the forests to strike somewhere else. Casualties had been heavy.

While the column inched along and tried as best it could to defend itself Varus called his senior leaders together to organize a defense and develop a plan of action. Surrounded by the tribunes and centurions of his staff, and protected by hand-picked soldiers and cavalymen from each of his army's three legions – the XVII, XVIII, and XIX - he quickly reached a decision. Their best option was to press on to the nearest clearing. Once there they would build a defensive camp and reconsolidate the army. They would reestablish contact with Arminius and then strike out and destroy these irritating rebels.

But as the orders group was disbanding, the air was suddenly filled with Germanic war cries. From out of the forests on all sides rushed the warriors. Several legionaries and officers fell in the onslaught. One of the wagons carrying Varus's personnel baggage crashed down a hillside, the frightened draft animals bolting away into the swamps. The three sacred eagles, the very souls of the legions, were in danger of being lost. As the warriors

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charged into the scattered Romans Varus saw, up the hill on a prominent rock formation, the Germanic chieftain who was directing the assault. It was Arminius. Varus had been betrayed...

This time the Romans would beat off the attack. They would reach a clearing and build a fortified camp. But it would not save them. Such is the scene depicted in my Teutoburg diorama. While conjectural, it is in line with accounts of the battle written later by Roman historians.

In 9 AD, three Roman legions, supporting forces, and camp followers led by Publius Quinctilius Varus marched into the Teutoburg Forest never to emerge. This “army unexcelled” was destroyed in a four day running battle by Germanic warriors under the charismatic leadership of Arminius, a noble of the Cherusci Tribe. Various referred to as “The Battle of the Teutoburg Forest”, “The Varus Battle”, or the “Varusschlacht”, the battle began a war that within a few years established the Rhine as the boundary of the Roman Empire – a border that endured for nearly 400 years. The struggle was one of the most decisive in history and was instrumental in the development of Western Europe’s linguistic and cultural maps.

We know of the battle through the accounts of several ancient historians – some of which wrote within living memory of the event - Tacitus, Cassius Dio, Velleius Paterculus, and Publius Annus Florus. Unfortunately, we have no Germanic versions – all accounts are from a Roman point of view. We have the evidence of monuments and tombstones. In this case we are doubly blessed—we also have a portion of the battlefield. It is indeed a rare thing for archeologists to find and excavate the site of an ancient battle. This was no siege or fortress, but was a moving battle in the open. To be able to find and excavate at least a part of it is an unimaginable piece of luck. It has allowed us to corroborate – or not – surviving evidence from written and monumental sources. Despite the relative wealth of information compared to most other ancient battles, our knowledge of events is still sketchy and incomplete. In creating my narrative history many judgments and assumptions had to be made. It is important for the reader to remember that for almost every point there are varying and conflicting interpretations. I have followed what I believe to be the most likely scenario. In the interest of presenting a balanced account readers will find a brief discussion of some of the alternative theories on the battle at the end of this narrative.

This booklet was conceived as a companion piece to the wonderful line of model figures marketed by Time Machine Miniatures and for my diorama of the battle created with these figures. As such, it tells two stories. First, it tells the story of the battle including the discovery and excavation of the battlefield. This story was the inspiration for the kits. It also tells of Time Machine Miniatures, the creation of the Teutoburger Wald series of model kits, and the construction of the diorama itself.

I would like to thank Jim Corless, the owner/proprietor of Time Machine Miniatures, without whom none of this would be possible. His vision and ideas led to the design and creation of the figure kits. He also provided the kits and other parts and pieces and was a key coordinator throughout the project. His ideas and suggestions were invaluable in the composition of the diorama. What started as a hobby partnership has led to other joint projects and grew into a friendship over more than two years of work. I am better for knowing him. I also want to thank my lovely wife, Arden, for her seemingly limitless patience and support.

Kevin Townsend 2009

PART I: THE TEUTOBURGER WALD



THE TEUTOBURGER WALD

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PART I: THE TEUTOBURGER WALD

BACKGROUND

"I shall now relate the events which had taken place in Germania during this period... The Romans were holding portions of it - not entire regions, but merely such districts as happened to have been subdued, so that no record has been made of the fact- and soldiers of theirs were wintering there and cities were being founded. The barbarians were adapting themselves to Roman ways, were becoming accustomed to hold markets, and were meeting in peaceful assemblages. They had not, however, forgotten their ancestral habits, their native manners, their old life of independence, or the power derived from arms."

- Cassius Dio

By the summer of 9 AD, "Germania" was well on its way to becoming a Roman province. Roman armies had first crossed the Rhine more than three decades previously, ostensibly in response to German raiding. For nearly 20 years large areas of Germany between the Rhine and the Weser had seemingly been pacified. Roman forces had reached as far as the Elbe. Among the many signs of Romanization were towns springing up and supposedly pacified "barbarian" tribes being incorporated into the Roman army as auxiliaries.

By AD 5, the only area of Germany between the Rhine, Elbe, and Danube rivers remaining seemingly unconquered was the kingdom of the Marcomanni in modern day Bohemia. As the Romans prepared to move against them, a revolt in Pannonia erupted. Already stretched thin, Rome was forced to come to terms with the Marcomanni by this new circumstance, and Roman armies were occupied for three years in suppressing the Pannonian revolt.

Meanwhile in Germania, the new governor, Publius Quinctilius Varus, was having

Left: Arminius, a noble of the Cherusci tribe, earned the trust of Governor Varus while all the time plotting against him and Rome. A Tribune and Centurion lay at his feet.

Right: Varus, the Roman governor of Germania. His misplaced trust in Arminius, combined with Roman misperceptions about the state of affairs in Germania, led to one of the worst defeats ever suffered by Roman armies. We see him here, looking up the hill toward Arminius and perhaps finally realizing he has been betrayed.

Opposite: Varus, center, looks up at Arminius, top, while the battle rages around him.



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Time Machine Miniatures markets 18 miniature figure kits depicting events in the Teutoburger Wald battle. The kits include 65 figures, four horses, three mules, two oxen, one wagon, and one cart. The four figures show here are the first in the series. The diorama featured in this book was created by Kevin Townsend in coordination and cooperation with Jim Corless of Time Machine Miniatures. All the Time Machine kits were used with little or no modification. Jim also provided enough extra figures, parts and pieces to create an additional 19 figures, one horse, and one wagon. Extra figures were all converted to some degree. All figures were built and painted by Kevin Townsend.

some success in transforming the area into a normal province. Often blamed for the Teutoburg disaster, Varus is usually characterized as soft, weak, inept, and incompetent. This is possibly wisdom after the fact – hindsight allows us to see clearly what could have been invisible at the time. His past record was quite distinguished. He was an important senator, a personal friend of the emperor Augustus, had been elected consul, and had held governorships in both Africa and Syria. He had commanded legions and had effectively dealt with insurrections and revolts. He was seemingly the perfect choice to complete the process of Romanization in the new province. As both governor and military commander, he would certainly have had a clear understanding of the political objectives behind any military action and thus was ideally placed to know what was needed to achieve Rome's goals. While certainly not an inept incompetent, mistakes were made in AD 9. His misplaced trust in Arminius and his misjudgment of the true situation were key contributing factors in one of the worst defeats Rome ever suffered. The root cause of the disaster was, in all likelihood, a deep misunderstanding of the real political situation from the emperor Augustus on down: Rome had convinced itself that Germania was pacified.

The young Arminius, in his mid-twenties in AD 9, was a German noble of the Cherusci tribe. He also had attained Roman citizenship and the coveted status of an equestrian (knight or petty noble). He probably commanded a Cheruscan auxiliary unit serving with the Roman army, possibly fighting in the Pannonian wars before returning to Germany to command the Germanic forces under Varus. He gained the trust of Varus, while all the time plotting revolt against him and Rome. His reasons for revolt are unclear, but were probably not the nationalist ideals credited to him by later historians. Perhaps he resented Roman encroachment on his tribal lands, or perhaps he had political ambitions of his own. There may have been economic reasons as well: the wealthy nobility would have borne the brunt of Roman taxes. The move from client kingdom to province would also have entailed a loss in status for the German nobility. Whatever his reasons, his detailed knowledge of Roman military methods had taught him how to

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defeat the legions. He saw Rome stretched thin, meeting the manpower needs of the recent revolt only with difficulty. Additionally, the experience of the Marcomanni had shown him that subjugation was not inevitable.

“Hence, so long as they were unlearning these customs gradually and by the way, as one may say, under careful watching, they were not disturbed by the change in their manner of life, and were becoming different without knowing it. But when Quinctilius Varus became governor of the province of Germania, and in the discharge of his official duties was administering the affairs of these peoples also, he strove to change them more rapidly. Besides issuing orders to them as if they were actually slaves of the Romans, he exacted money as he would from subject nations. To this they were in no mood to submit, for the leaders longed for their former ascendancy and the masses preferred their accustomed condition to foreign domination”.

- Cassius Dio

Since it appeared the region between the Rhine and the Elbe had been conquered, Varus must have seen his duty as the introduction of Roman administration and the imposition of various taxes. If viewed in that light, his actions in AD 9 make perfect sense. Roman methods often resulted in revolts in new provinces, but Varus was prepared for such contingencies. He was backed up by a force of three legions, three cavalry units, and as many as six auxiliary cohorts. During the summer campaigning season Varus moved his forces from their bases near the Rhine to a camp near the Weser, probably near the modern city of Minden, where he settled disputes and imple-



Top left: A Centurion has gained the upper hand in a fight with a Germanic warrior. But he realizes, too late, that his thrusting sword can not protect him against another determined attacker to his flank.

Top right: a stunned and wounded cavalryman, just struggling back to his feet beside his dead mount, is about to meet his end at the hands of a spear-wielding Germanic warrior.

Left: According to ancient historians, many Germanic warriors were armed with nothing more than clubs. This warrior has expertly wielded his to strike down a Roman Tribune and a legionnaire. Each legion had five junior and one senior tribune officers. Purple stripes, or clavi, on their tunics identified them as members of the senatorial class.

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mented Roman legal and fiscal policies. Detachments of soldiers were scattered throughout the province collecting tribute, policing the tribes, escorting provisions, building infrastructure, and completing civil engineering projects. But it seems Varus operated with a heavy hand, fostering resentment among large parts of the population.

“Now they did not openly revolt, since they saw that there were many Roman troops near the Rhine and many within their own borders. Instead, they received Varus...and there by behaving in a most peaceful and friendly manner led him to believe that they would live submissively without the presence of soldiers. Consequently he did not keep his legions together...but distributed many of the soldiers to helpless communities which asked for them for the alleged purpose of guarding various points, arresting robbers, or escorting provision trains. Among those deepest in the conspiracy and leaders of the plot and of the war were Arminius and Segimer, who were his constant companions and often shared his mess. He accordingly became confident, and expecting no harm, not only refused to believe all those who suspected what was going on and advised him to be on his guard, but actually rebuked them for being needlessly excited and slandering his friends.”

- Cassius Dio

Taking advantage of Germanic outrage over what were considered harsh Roman measures, Arminius secretly forged an alliance of several Germanic tribes. Varus was actually warned of the plot by Segestes, also a Cheruscan noble and Arminius’s rival, but he ignored the warning. That is not as surprising as it seems. Arminius was both a Roman citizen and an equestrian – someone who supposedly could be trusted more than a tribal chieftan. Varus also understood how petty nobles could try to undermine each other’s position. He had successfully dealt with such things in his governorship in Syria and probably viewed this warning as more of the same. Varus’s failure then wasn’t one of intelligence – he had the information, he just failed to correctly interpret it.

“Then there came an uprising, first on the part of those who lived at a distance from him, deliberately so arranged, in order that Varus should march against them and so be more easily overpowered while proceeding through what was supposed to be friendly country”

- Cassius Dio

When time came to move the legions back to their Rhine winter camps, Arminius was ready to spring his trap.



Two servants or slaves, perhaps members of Varus’s household, watch in terror as Germanic warriors attack and loot the baggage train. But they are oblivious to the danger approaching them from behind.

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The Romans were marching southwest from their summer Bivouac to their bases on the Lippe River when word came of a revolt in the north. In dealing with insurrections, Roman policy was generally to strike quickly with whatever forces were at hand. It was believed that delay showed weakness and allowed the revolt to grow. The perception of force could be more important than its reality, and this case was no exception. Varus ordered his army to change direction and dutifully following the route recommended by Arminius.

“They begged to be excused from further attendance, in order, as they claimed, to assemble their allied forces, after which they would quickly come to his aid. Then they took charge of their own troops...and after the men in each community had put to death the detachments of Romans in their towns, they came upon Varus in the midst of forests...”

- Cassius Dio

Meanwhile, Arminius and his co-conspirators departed company with Varus on the pretext of gathering their tribal warriors to help suppress the revolt. Warriors throughout the region quietly eliminated the Roman detachments in their locales and quickly moved to assembly areas from which they could strike the main Roman army.

Unaware of these developments, the Romans moved toward the revolt. This army was not in a wartime posture. They were advancing through what they believed to be friendly territory. With them was a large baggage train and hundreds, perhaps thousands, of non-combatants including large numbers of women and children. Varus's intention was likely to proceed to the area of the revolt, establish the non-combatants and baggage in a camp under guard, and then strike out with the remainder of the army in fast, short expeditions to ravage the rebels' territory and bring their forces to battle. It was the tried and true Roman method. To protect the moving column from ambush or surprise attack, scouts ranged ahead, behind, and to the flanks. As these scouts were probably Germanic auxiliaries answerable to Arminius, it did little good. The Cheruscan had left nothing to chance.

Top: Roman Centurion. Each Century of 80 men was commanded by one of these officers.

Bottom: An Aquilifer, a standard bearer charged with carrying the legion's sacred eagle.



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Above: Carrying the standard of his cavalry unit, or turma, a trooper slashes his way forward surrounded by the carnage of dying men and animals.

Below: This legionnaire demonstrates Roman battle drill. His pilum has stuck in the shield of a Germanic warrior. The long thin shank was designed to bend on impact. This has forced the warrior to discard his now useless shield. The legionnaire punches with shield, knocking the warrior off balance, and prepares to stab around the shield's edge with his sword.



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THE ROMAN ARMY

"An army unexcelled in bravery, the first of the Roman armies in discipline, in energy, and in experience in the field, through the negligence of its general, the perfidy of the enemy, and unkindness of fortune was surrounded...Hemmed in by forests and ambushades, it was exterminated almost to a man by the very enemy whom it has always slaughtered like cattle."

- Velleius Paterculus



A cavalryman engages a Germanic warrior.

Timeline

BC

2nd Century: Rome's first major contact with Germanic people when the Cimbri and Teutones migrate into southern Europe, but are eventually defeated by a Roman army under Marius.

58-51: Julius Caesar's conquest in Gaul; Caesar conducts expeditions in Britain and Germany.

49-44: Civil War. Julius Caesar emerges victorious and named dictator for life. Caesar murdered by Brutus, Cassis and their co-conspirators acting for the Republicans.

42-27: Julius Caesar deified. Civil War. Octavian victorious and named "Augustus", Rome's first emperor.

13-9: Campaigns in Germany. Roman expeditions reach as far as the river Elbe.

AD

6-9: Pannonian revolt suppressed by Tiberius. Varus governor of Germany.

9-11: Roman army under Varus suffers overwhelming defeat in the Teutoburg Forest by Germanic tribes led by Arminius. Tiberius secures the Rhine frontier and launches punitive expeditions across the Rhine into Germany.

14: Death of Augustus and accession of Tiberius.

14-16: Germanicus leads campaigns in Germany. Arminius defeated at Idistaviso in AD 16. Recovery of two of the eagles lost in AD 9.

19: Arminius murdered by a member of his family

41: Third lost eagle recovered in campaign against the Chatti and Chauci tribes.

83-85: Punitive campaigns against the Chatti in western Germany; building of border fortifications (*limes*) in Germany along the line of the Rhine and Danube rivers.

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Above: the Optio, or chosen man, was the Centurion's second in command. In battle, he stood behind the line to prevent soldiers from falling out or running away.

Below: On the march, Roman soldiers carried their pack, mess gear, and other baggage on a forked stick called a furca. The shield was carried slung over the shoulder and protected by a leather cover. The furca was carried held in the hand and resting on the shoulder. The Roman army was caught by surprise on the march. Many of the shields still have their covers in place and several marching packs lie discarded on the ground.



It was military might that had allowed the fast and far-flung spread of the Roman Empire. Its army was arguably the most efficient fighting machine in the ancient world. Unlike most of its opponents whose armies were composed of part-time warriors, the Roman army was a professional standing-army of well trained, equipped, and drilled soldiers. Roman doctrine was primarily offensive. Even when on the defensive, they usually chose to attack. Roman warfare was always directed against a clear enemy and not just to take or hold territory for its own sake. Varus's actions in AD 9 were in perfect accord with Roman doctrine.

The core of the Roman army was the legions. At the time of the Teutoburg battle, during the reign of Augustus, only Roman citizens were eligible to serve in them. The building block of the legion was the Century of 80 men. Each Century was commanded by a Centurion. Centurions were probably identified by a transverse crest on their helmet. A vine staff, used to inflict corporal punishment, was their rank of office. The Centurions were usually long-serving and experienced professional soldiers with a proven record of bravery. The centurion's deputy was called an Optio, or "chosen man". In battle, he stood behind the formation to prevent soldiers from falling out or running away. A knob ended staff was his badge of rank. Other officers in the century were the Signifer (standard bearer), the Cornicen (trumpeter), and Tessarius (watch officer). Soldiers who were also skilled craftsmen or engineers were known as immunes and were exempt from most fatigue duties. A group of eight or ten soldiers who lived and dined together was the contubernium. These men shared a room in the barracks and a tent in the field. While many of the men had skills or trades, they were full time soldiers who were supposed to serve in the legions for 16 years followed by four more years in a veterans unit with lighter duties. Although this was the official duration of their enlistment, circumstances often interfered, and many soldiers served for a much longer period.

Six Centuries made a Cohort and ten Cohorts formed a Legion. The legion was commanded by an officer of senatorial rank called a Legate. He was assisted by six senatorial officers called Tribunes. Some centurions were possibly detailed to command cohorts or perform staff roles in their legion.

It is believed that each Legion also contained a force of 120 cavalrymen who acted as messengers or scouts. The total strength of a legion may have varied from region to region and from time to time, but most scholars estimate full strength at about 5,000-6,000 soldiers. A legion also contained a large number of slaves and servants.

The spirit of the legion was embodied in the standards. Each legion carried an Imperial Eagle, either of gilded silver or solid gold. Other standards included the symbol of the legion and the image of the emperor. The standard bearers wore an animal skin, such a wolf or bear, over their armor to distinguish themselves. Treated as religious objects, the standards were housed in a sacred place in every camp. Their loss was a great disgrace and could even be grounds for dissolving the legion.

The legions were assisted by the Auxilia. These units - infantry, cavalry, or mixed - were composed of non-citizens of the empire. They were generally organized into Cohorts (infantry) or Alae (cavalry) of 500 under Roman discipline. At the end of their service they were granted Roman citizenship. During the reign of Augustus this system was not yet fully formalized, and many auxiliary units were provided by allied kingdoms for the duration of a campaign under the terms of their agreement with Rome. These units retained their own weapons, equipment, officers, and

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Varus's army contained a large number of noncombatants including clerks, government officials, administrators, merchants, families, and other camp followers. Here a merchant and his wife stand by their cart of goods watching in terror as their slave attempts to protect them from an attacking Germanic warrior (top left of this picture).

Although not officially allowed to marry many soldiers took common-law wives and raised families. At the lower right of this picture we see a Germanic woman, the wife of a standard bearer, stroking the face of her dying husband. Above that couple (and also shown below) a soldier tries to shield his family from impending doom.

fighting methods.

As a professional force, weapons and equipment were issued by the state. Therefore, Roman soldiers were generally better equipped and more standardized than their enemies. Although new equipment was often developed and issued, older gear would remain in service as long as it was serviceable, so most Roman units were probably never completely standardized.

Each soldier was issued with armor, normally chain-mail, or lorica hamata. This was made up of thousands of tiny interlocking metal rings. Segmented armor, lorica segmentata, made of overlapping metal plates was beginning to be introduced at this time. Some soldiers were issued with scale armor, lorica squamata, made of tiny overlapping metal scales sewn onto a leather or cloth backing. All were issued helmets of bronze or iron with cheek pieces to protect the face and a projecting flange at the rear to protect the neck from downward blows. This last feature was not present on cavalry helmets as it could cause a rider to break his neck in a fall. A large curved shield, or scutum, provided additional protection for the infantry. Held by a horizontal hand-grip, the shield could also be used offensively to punch an opponent, knocking him off balance. Soldiers in the auxilia and the cavalry carried flat oval shields and possibly had simpler helmets.

Soldiers normally carried both a sword and a dagger, usually on separate military belts. The infantry sword, or gladius, was relatively short and ended in a tapered point. It was ideally used for thrusting, although it could also be used as a slashing weapon. Cavalry swords, spatha, were longer to allow needed reach for a mounted trooper. Soldiers also carried a missile weapon. For the



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legions, this was the pilum - a heavy javelin consisting of a long, thin iron shank set into a wooden staff. All the weight was concentrated behind a small point which gave it excellent penetrative abilities and made it difficult to remove. The long shank was designed to bend so the weapon could not be picked up and thrown back by the enemy. Auxiliary infantry and cavalrymen usually carried a heavier spear or lance, and cavalrymen often had a quiver of smaller javelins.

In addition to their weapons and armor soldiers carried their packs, mess kits, personal items and pioneer tools. Heavy items, such as tents, were carried on the mule assigned to each *conterburnium*. On their feet soldiers wore a military boot, open on top like a sandal, with large hobnails on the soles arranged not unlike a modern boot or athletic shoe.

The Roman soldier of this period was intensely trained, well drilled, and physically conditioned. The soldier had generally good morale and was led, for the most part, by competent officers. Soldiers were severely disciplined but were not mindless automations. Soldiers seem to have practiced individual initiative on and off the battlefield, made their feelings known to their officers, and often brought their battle trophies directly to their commanders. Roman soldiers were skilled in fighting as an integrated unit. They used well tested, effective, and flexible formations and battle drills. Their tactics were ideally suited to open or gently rolling terrain. A Roman legion generally formed up for battle in three lines. Gaps between cohorts allowed maneuver and prevented units from intermingling. They also had a method for relief-in-place of exhausted soldiers. Hand-to-hand fighting would have been tiring, soldiers probably only fighting a few minutes before exhaustion set in. Long battles must have had periods of calm between the advances and withdrawals. Most casualties probably occurred when one side turned to flee; this would have heartened their enemy and exposed their less armored side.

Unlike many of their opponents who attacked in a mass rush screaming battle cries, the Roman lines silently and steadily advanced, taking care to keep their good order and formation. Once at close range, probably within about 20 meters, they would hurl a volley of pila and advance with a yell on their opponents. Ideally, the pila barrage would cause disorder and casualties among the enemy. By sticking in a shield, a pilum would render the shield useless. If the enemy were still unbroken, then the lines would crash together. Here again, their unity, discipline and armor generally gave the Romans an advantage. Soldiers were trained to punch with their shields to force their enemy off balance and then to stab around the edge of the shield with the gladius. Arminius likely understood his warriors would be at a disadvantage in this kind of fight. Therefore, he contrived to hit the legions while they were spread out in marching column in terrain that would not allow the Romans to fight their kind of action.

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Identifiable units, a clear chain of command, and well trained forces gave the Roman army great flexibility in campaigns and battles. Roman organization and training allowed a general to effectively control and maneuver his forces. In battle, the general would normally stay just behind the lines where he could see what was happening and direct reserves but yet was close enough to personally influence the action at key points and times. Good command and control was another Roman advantage that was negated by Arminius's attack on a strung-out column.

Little is known of Roman logistics. There were several ways an army could be supplied in the field. Supplies could move by water. Soldiers could forage, or they could carry what they needed with them. The latter was probably the case with Varus's army. He was moving away from the rivers, and it probably wasn't "politically correct" to forage in friendly territory. Each soldier likely carried three days rations in their packs and the remainder was carried on pack animals and in wagons. This would have contributed to a large, vulnerable baggage train. At full strength, a legion may have had nearly 650 animals, over 50 carts, and about a dozen wagons.

A soldier's life was hard, but did provide stability and a steady paycheck. Retired soldiers were generally given a large cash payment or a plot of land. Pay was reasonable and was often supplemented by a share of any plunder or by bonuses. Punishments for infractions could be severe, including summary executions and the infamous (but rarely used) "decimation" where 10% of a unit was selected by lot for execution. Medals, decorations, and extra shares of bounty were commonly awarded to those who exhibited individual bravery. Although legally forbidden to marry, many, if not most, soldiers met and courted local women and raised unofficial families. Many of these families accompanied the armies on campaign and villages invariably sprung up outside Roman camps.

On the march the army would wake early. They would eat a quick breakfast, and while the main body was breaking down camp, the advance guard would begin moving. The rest of the army would follow. By early afternoon, the advance scouts would find a location for that day's marching camp and begin marking out the perimeter. As the rest of the army arrived, a ditch and wall would be built topped with a palisade made from pre-fabricated elements. Tents would be pitched. Its fortifications were not very strong, but there were few instances of a camp being successfully stormed unless the army had already been defeated in battle. Against an army with little or no skills in siege craft – such as the Germanic tribes - the defenses were formidable. Of course the camp also served to keep soldiers in; desertion was an ever present problem for Roman armies. A Roman army was capable of moving very fast indeed, but an army like Varus's, with its large baggage train, slow moving wagons, and unfavorable terrain, probably only moved 10-12 miles per day at most.

Above left: the large number of wagons with the Roman column was a key contributing factor to its length, lack of speed, and vulnerability. After the first attacks, Varus ordered most of the wagons burned. Here a warrior loots a wagon while another warrior is attacking a Greek doctor. A scroll case, or casket, lays near the doctor's feet. The scrolls, symbols of Roman administration and culture, lay scattered on the ground.

Each legion also had hundreds of pack animals. Every 8-10 man group of soldiers (known as a contubernium) had a mule to carry its tent and heavy gear.



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GERMANIC WARRIORS

"...the tribes of Germany are free from all taint of intermarriages with foreign nations, and that they appear as a distinct, unmixed race, like none but themselves...All have fierce blue eyes, red hair, huge frames...few use swords or long lances. They carry a spear (framea is their name for it), with a narrow and short head, but so sharp and easy to wield that the same weapon serves, according to circumstances, for close or distant conflict...the foot-soldiers also scatter showers of missiles each man having several and hurling them to an immense distance, and being naked or lightly clad with a little cloak...there is no display about their equipment; their shields alone are marked with very choice colors. A few only have corslets, and just one or two here and there a metal or leather helmet..."

They choose their kings by birth, their generals for merit. These kings have not unlimited or arbitrary power, and the generals do more by example than by authority. If they are energetic, if they are conspicuous, if they fight in the front, they lead because they are admired...When they go into battle, it is a disgrace for the chief to be surpassed in valor, a disgrace for his followers not to equal the valor of the chief...The chief fights for victory; his vassals fight for their chief. If their native state sinks into the sloth of prolonged peace and repose, many of its noble youths voluntarily seek those tribes which are waging some war, both because inaction is odious to their race, and because they win renown more readily in the midst of peril, and cannot maintain a numerous following except by violence and war."

-Tacitus



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Germany in AD 9 was more populous and cultivated than many sources would have us believe. Still, it was essentially tribal with no central political organization. There were no large urban centers, infrastructure or tribal capitols that could be targeted; only numerous villages and farms connected by age-old tracks. The tribes varied in size and power and were not unified. Many tribes followed Arminius in his uprising, but some stayed loyal to Rome. There were even factions within the individual tribes. Arminius' brother, Flavius, remained faithful to the Romans for example. The pro-Roman Segestes even tried to warn Varus of the plot.

Germans believed every man should be free to do as he pleased. Each tribe was made up of clans. While some of the more unified tribes may have had "kings" and tribal councils, most "government" was at the clan level. Clans were led by a monarch, nobles, and a council of all free men. It was this council that

Above: A Germanic spear has pierced both the shield and the armor of this legionnaire. Seriously wounded, and unable to defend himself, he makes a futile attempt to fend off a club-wielding warrior.

Right: According to Roman historians, Germanic dress consisted mostly of plain earth tone or dyed clothing. Archeology provides evidence that simple plaids or tartans were also worn. Unlike the Roman army with standardized designs and, probably colors, German shields were largely a matter of the owner's preference and were often painted in bright colors with elaborate designs. No two German shields in the diorama are the same.



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Flushed with victory, and numbed by the stress of combat, a German warrior stops for a moment to quench his thirst from a vessel looted from an overturned Roman wagon. He is oblivious to the axe-wielding Roman behind him.

made the important decisions and elected war leaders. There was no professional army. While all capable free men were warriors, most were also farmers, smiths, herders, and such. A few men were full-time soldiers serving in the war bands, or retinues, of successful noble warriors. The following such a leader gained, and his influence with others in war, was directly related to his prestige and success in battle. He could even attract warriors from other tribes. Still, a “general”, such as Arminius, did not exercise “command” in the same sense as Varus. It is probably more accurate to state that he simply exercised “influence” over other warriors and war bands. It is apparent that Varus did not believe the Germans were willing or able to pool their strength against him. He marched to his doom without ever realizing he was even in danger.

The Germanic warriors were perhaps the most feared of Rome’s adversaries and were known for their bravery, ferocity, and stature. Their appearance and blood-curdling war cries were intended to strengthen their own courage and intimidate their enemies. Germanic armies were not professional. While the retinues of nobles were more or less permanent forces, they were skilled as individual warriors, not as an integrated unit, but they did form a cadre around which an army could be built. Massing the army was time consuming and took men away from their normal occupations. With no trained soldiers or permanent organization, command and control was rudimentary at best. Maneuver would have been exceedingly difficult. A “general” did little more than mobilize his forces and deploy them on terrain where he wished to give battle. There was no system of logistics so it was not possible to keep an army in the field for any length of time. Such an army was not an effective weapon in a protracted campaign. It was most effective in a massed battle or ambush – exactly as Arminius wielded it.

Compared to the Roman soldiers, the Germanic warriors were lightly armed and armored. Helmets, armor, and perhaps even swords were quite rare, and limited only to the noble warriors and some of the permanent members of their bands. Most men carried a shield and a spear. Perhaps some only wielded a fire-hardened wooden club.

Germanic war bands and armies used stratagems and tricks, speed, and ambushes. They made use of swamps and forests where they could easily maneuver. They would feign retreats to draw their opponents out and then rally, turn around and strike. Against superior enemies they were masters of hit and run; striking hard and then disappearing before effective countermeasures could be taken.

Only a small proportion of their armies were composed of cavalry. Cavalry’s main tactic was the headlong

PART I: THE TEUTOBURGER WALD



Far left: A Roman optio has knocked a warrior to the ground and is preparing to finish him with his staff.



Left: A warrior engages two legionnaires.

charge. Infantry formed the core of any Germanic army. In the defense, the warriors could create the shield wall – a wall of overlapping shields with a projecting hedge of spear points. Attacks consisted of a high-speed rush in dense formations. The formation often took the form of a wedge. Whether this was intentional, or whether it formed naturally as braver warriors rushed toward the enemy and those less brave hung back, it resulted in an “arrowhead” shaped formation striking the enemy line. As the Germans did not make use of fortifications, they were not skilled at siege warfare and were not successful at storming Roman camps. After battles, it was common for the victorious army to sacrifice at least a portion of their prisoners and booty to the gods.

All this does not mean Germanic armies were simply armed mobs. They followed elected war leaders, were cohesive, presented a strong front to their enemies, and fought bravely and with purpose. Fighting at a time and place of their choosing they were very dangerous to a Roman army. The Germanic warriors probably could not have stood up to the Roman army in an open field. When they attempted to do so, the result was either indecisive or a Roman victory. The warriors were successful in the Teutoburg Forest because they were able to maximize their strengths, strike at Roman weak points, and achieve local superiority. By ambushing the marching legions in unfavorable terrain, using good tactics, surprise, mass, and other force multipliers, the Germans instantly gained the initiative and negated Roman advantages of discipline, organization, and command. In that fashion they were able to achieve a crushing victory using inferior numbers of lightly equipped and undisciplined warriors.



A charging warrior hurls his spear into the chest of a Roman legionnaire.

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Roman historical sources report that on the second day of the battle one of the legates, Numonius Vala, lost his nerve and rode off with the remains of the cavalry in the vain hope of reaching the Rhine River and other Roman forces. Most likely they were wiped out to a man by tribesmen poised in the hills and waiting for just such a move.

PART I: THE TEUTOBURGER WALD

What was the uniform color for the Roman Army?

The monumental, sculptural, and archeological records give us a very good idea of the appearance of the Roman soldier except for one very key point – color. The question is controversial. It is assumed (although there is little real evidence) that soldiers wore uniformly colored tunics. They may even have had different “uniforms” for parade, battle, and fatigues. The evidence of what these were is open to multiple interpretations. Some believe that soldiers wore red. Some believe they only wore red for battle. Soldiers may have worn undyed tunics (although Centurions and other officers may have worn red). Color may have varied from unit to unit, region to region, or even time to time. There was quite possibly no uniform at all except maybe for parades and perhaps combat. Captured clothing was seen as suitable booty and soldiers asked for clothing to be sent from home.

For this diorama, I have chosen to show most soldiers in plain undyed and unbleached tunics. A few soldiers, the Centurions and other officers wear red. Tribunes wear fine white tunics that display purple clavi, or stripes, appropriate to their rank. Even if red was the standard color for battle, it seems unlikely that an army marching in supposedly friendly territory would be dressed in such a matter, or that soldiers would have had time to change into the appropriate colored tunics after the ambush was sprung. Cloaks are mostly a yellowish-brown color, although officers wear finer cloaks of red, purple, or even other colors. For the cavalry, possibly auxiliaries, the colors are more varied. The colors are based on a possible interpretation of the scant evidence, but, because we just don't know, artistic license is necessary. This bit of artistic license allows the viewer to readily differentiate the legionaries from the officers, the Romans from the Germans, and see the greater uniformity of the Roman army as opposed to their enemies. As the diorama was designed in part as a teaching tool about the battle, I felt these distinctions were justified.



Caught by surprise, a Roman soldier fights back with a sod-cutting tool carried as part of his baggage. He wears a simple white tunic of plain, unbleached wool.

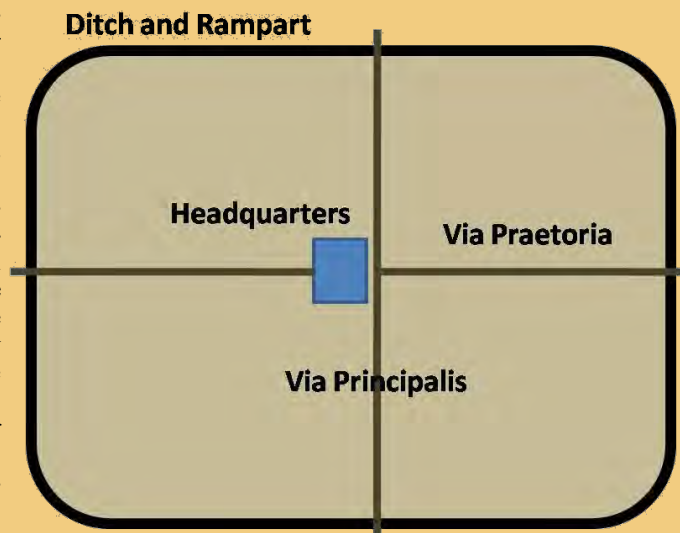
Roman Marching Camps:

Roman armies on the march constructed a temporary camp at the end of each day, the remains of which have been found all over Europe. The tactical value of these camps cannot be overestimated. While the defenses were not especially formidable, they were very effective against an opponent who had limited skills in siegecraft. The camps provided a secure base from which to launch both offensive and defensive operations.

The site for the day's camp was selected by trained personnel in the army's advance guard and was chosen with an eye toward defensibility, water supply, and forage for the animals. For the most part the layout of the camps was standardized, although the situation and terrain at each site may have called for alterations. The camps were usually shaped like a playing card – rectangular with rounded corners. Four gates were placed, one each near the center of each side of the camp. The main road, or Via Principalis, crossed the fort connecting the gates in the long sides. In the middle of the camp on the Via Principalis sat the headquarters. Another street, the Via Praetoria, ran from the Via Principalis at right angles and exited the camp via the main gate in one of the short sides. Marching camps were oriented so that the Via Praetoria ran out of the main gate towards the enemy. Troops were housed in leather tents.

A gap, some 60 feet wide, separated the tents from the camp perimeter to provide standoff protection against missile weapons. The perimeter itself consisted of a ditch and a rampart. The rampart was formed from the soil excavated from the ditch. On campaign each soldier carried two wooden stakes, pointed at each end. These stakes could be set into the rampart and lashed together to form a continuous palisade. Alternately (and possibly more likely), the stakes could be lashed together in groups of three to form a large spiked caltrop device. These caltrops could then be placed as a continuous hedge along the top of the rampart. This could be done very quickly. They could also be just as quickly dismantled when time came to break camp and continue the march.

In areas where the camps were occupied for extended periods of time, shanty towns of merchants and camp followers would spring up outside the perimeter. The camp would also be improved, with structures of wood or stone replacing earth and tents.



Sample layout of a Roman marching camp

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The Roman column was both slowed and lengthened by the large baggage train containing hundreds of draft animals, wagons, and carts. The length of the column coupled with the closed terrain made effective defense impossible. Once established in a temporary camp, Varus ordered most of the wagons and carts burned. This prudent move allowed the column to advance in a much more compact and speedy manner. It was not enough.



THE ROMAN COLUMN:

In order to comprehend what happened during the battle, we must have an understanding of more than just relative numbers of combatants and the equipment they carried. We must also understand the situation the Roman army found itself in. This was not a set-piece battle on open terrain. Rather it was an ambush of an army spread out in marching order.

The military might with Varus was significant – 10% of the entire Roman army. With him were three of Rome's 28 legions; the nineteenth, eighteenth, and, probably, the seventeenth. Also present were several auxiliary cohorts, probably as many as six, and three units of cavalry. If some of these auxiliary units were German they were probably part of Arminius's revolt and turned on their paymasters as soon as the battle began.

On paper this would have given Varus a substantial force of about twenty thousand soldiers, but it is very unlikely that his units were anywhere near full strength. Rome always seemed to suffer for adequate recruits and the legions fighting in Pannonia probably had priority. The few strength returns that have survived from the early empire show that units often operated at less than 50% strength present for duty at any one time. It is not unreasonable to assume that Varus's units began the campaign vastly under strength and would have been further reduced by detachments, perhaps even the equivalent of several cohorts per legion and significant amounts of auxiliaries. According to Dio, many of these detachments were slaughtered by the Germanic warriors at the beginning of the revolt. While we will likely never know for sure, an estimate of not more than 10,000 combatants, and quite possibly significantly less, is probably reasonable. As this was a peacetime force, it would also have been accompanied by a large number of noncombatants: common law wives and children, merchants, slaves, servants, and other camp followers.

If we assume an under strength Roman force of about 7-10,000 soldiers at most, then we might also assume a total number in the column of perhaps 12-15,000, give or take, the remainder being civil servants, merchants, slaves, common law wives, children, and other camp followers. There was also an extensive baggage train containing hundreds, perhaps thousands, of pack and draft animals and dozens – or hundreds - of wagons and carts. While these numbers are guesses and can't even pretend to be accurate, they do give an idea of the order of magnitude. In some respects the Roman force was more like a heavily-laden civilian column with a strong military escort than an army. The column could have stretched for miles on the narrow tracks. Troops would have been spread out in penny packets and were nowhere in large concentrations.

We do not know the order of march the Roman units were in. However, we can make a guess based on the situation and other, better documented, cases. Scouts moved to the front, rear, and flanks. A strong advance guard was followed by troops detailed from each unit to select the day's campsite and begin construction. Behind them were probably more soldiers and slaves tasked to create a suitable trail for the wagons. Next in line may have been

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The Roman column was also encumbered by a large number of civilians. In fact, it is possible they outnumbered the soldiers. Above, a Roman merchant and his wife stand by their cart and stare in bewildered disbelief as the Germanic tribesmen swirl around the helpless column. Below: A mortally wounded legionnaire gently strokes the neck of his dying mule.

Varus, his staff, personal baggage, and a picked bodyguard. This was possibly followed by the bulk of the legionary cavalry, all the senior officers, and the standards. Next would have come all the units of soldiers and the baggage followed by a strong rearguard.

The column's speed was slowed by the wagons and the need to improve the trail. At halts, each unit would have to wait for the unit in front to begin moving before it could start. This "accordion" effect would have further slowed the column. Its movement rate can not have been greater than two miles per hour at best and was often less. It would have been largely confined to the available trails and tracks.

In our modern era of instantaneous communication and rapid battlefield mobility, it's hard to imagine how difficult it would have been for the Romans. Once the column was spread out on the trail and in the woods, the Germans would have known all their possible routes and could predict Roman movement. Word of an attack on part of the column could have moved quickly via signaling horns, but orders and reinforcements could only have moved at the rate of a horse or a man on foot – and orders were subject to interception or misinterpretation. In the spread out column, soldiers on foot could have taken tens of minutes – or longer – to reinforce a threatened location. The lightly equipped Germans, familiar with all the trails, tracks, and shortcuts, could have moved very rapidly from point to point. It would have been easy for even relatively small numbers of Germanic warriors to concentrate enough force to have numerical superiority at any chosen point of attack. They would have done their damage and disappeared back into the forests before the Romans could mount an effective response. Groups of Roman soldiers could not have chased them far for fear of being cut-off and destroyed. As casualties mounted, cohesion and morale would have degenerated even further. German success would have convinced more and more warriors to join the revolt. Roman disintegration and Germanic reinforcements would have caused the odds to become increasingly lopsided. Arminius had effectively stripped the Roman army of all its advantages while maximizing his own. The remnant that reached the final battlefield at Kalkriese probably could not put up too much of a fight.



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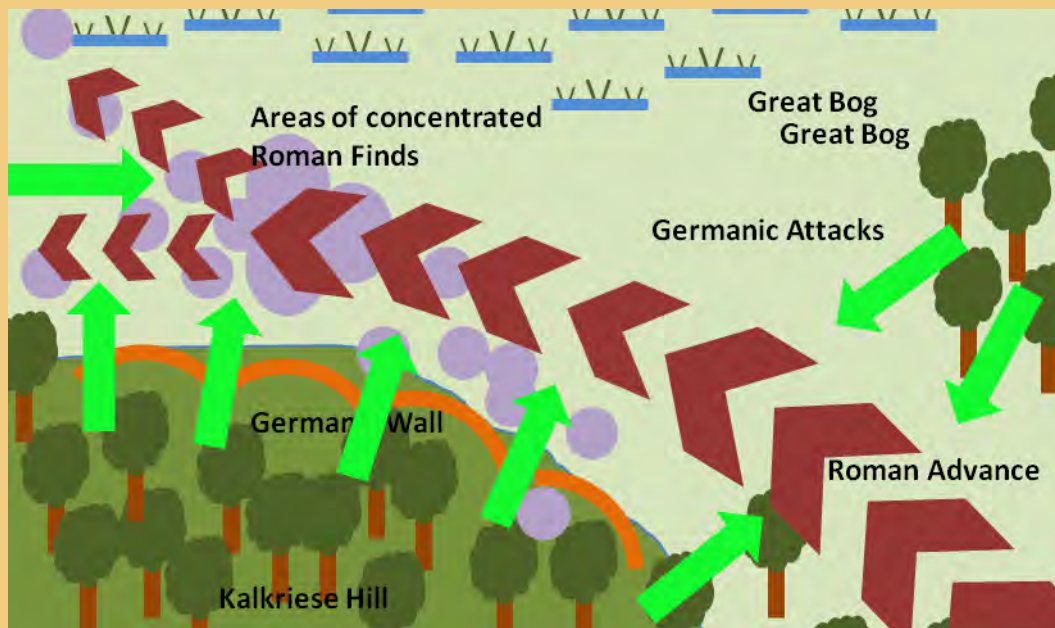


Germanic warriors smash through a thin screen of Roman soldiers and rush up a spur toward Varus's staff and the sacred eagle standards.

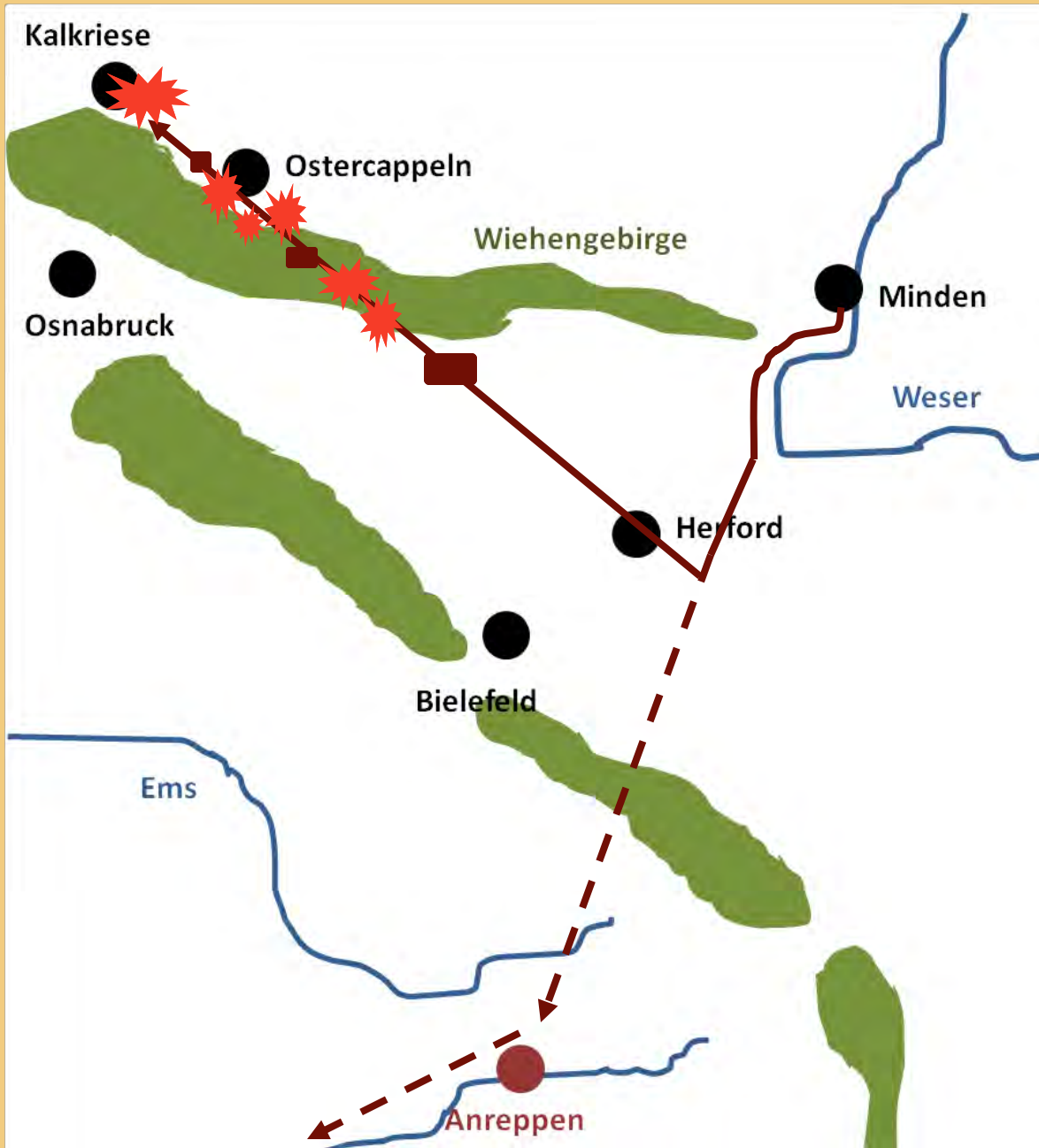
PART I: THE TEUTOBURGER WALD



Above is a map of Germania, circa AD 9, showing the approximate locations of major Germanic tribes and the location of Roman forts and fortresses. The red arrow marks a possible route Varus's army followed from its summer encampment on the Weser River, possibly near the modern city of Minden, to disaster at Kalkriese. Below: the final climax of the battle at Kalkriese.



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THE BATTLE OF THE TEUTOBURGER WALD
Map Key

- Modern Towns ●
- Planned Roman Route ← - - -
- Roman Fort/Fortress ●
- Roman March Route ←
- Heavily Forested Ridges
- Roman Camp ■
- Battle Sites ★

PART I: THE TEUTOBURGER WALD



A Germanic noble exhorts his warriors.

were acquainted with the paths. At first they hurled their volleys from a distance; then, as no one defended himself and many were wounded, they approached closer to them. For the Romans were not proceeding in any regular order, but were mixed in helter-skelter with the wagons and the unarmed, and so, being unable to form readily anywhere in a body, and being fewer at every point than their assailants, they suffered greatly and could offer no resistance at all."

-Cassius Dio

German auxiliaries deserted and turned on their former masters. Warriors, attacking from all sides, struck at the vulnerable supply train and isolated groups of soldiers. Showers of spears and javelins were followed by screaming Germanic warriors rushing at the column with spear, axe, sword, and club. If the Romans started to rally, they simply melted away into the forests and struck somewhere else. In these first attacks, casualties were likely heavy among the unprepared Romans.

If the number of Romans is problematic, the number of German attackers is nearly impossible to determine. In his book, "Rome's Greatest Defeat", Adrian Murdoch states Arminius could have raised 15,000 warriors. This is possible, but we have already seen that the Germanic warriors were not all united in their resistance to Rome. Some would have been mopping up scattered Roman detachments. Many would initially have held back, not committing themselves until after the initial successes. It is conceivable the first attacks were made with around 5,000 warriors.

The closed terrain, the stormy weather, and the wet, muddy tracks were no hindrance to the lightly equipped Germanic warriors, but were proving nearly insurmountable for the spread out Roman column. Unable to effectively fight, the Romans built a marching camp on the most open and clear spot they could find. This would have been difficult work, harassed as they

THE BATTLE:

At first the Roman march was peaceful and unmolested. The army advanced southwest from their assembly area on the Weser River, possibly in the Minden area. Once they reached the area of the modern city of Detmold, Arminius crossed his "Rubicon" and launched his plan. Word of the revolt was received and Varus changed direction, turning to the northeast to meet and destroy the rebels. At the end of that first day's march, they made camp, probably somewhere south of the Weißen Mountains.

The second day's march started out the same way. But as the army advanced into rougher terrain, the column probably started to get more spread out. An autumn storm made things worse, reducing visibility, dampening noise, and washing out portions of the track. It was then that the Germans struck.

"The mountains had an uneven surface broken by ravines, and the trees grew close together and very high. Hence the Romans, even before the enemy assailed them, were having a hard time of it felling trees, building roads, and bridging places that required it. They had with them many wagons and many beasts of burden as in time of peace; moreover, not a few women and children and a large retinue of servants were following them - one more reason for their advancing in scattered groups. Meanwhile a violent rain and wind came up that separated them still further, while the ground, that had become slippery around the roots and logs, made walking very treacherous for them, and the tops of the trees kept breaking off and falling down, causing much confusion. While the Romans were in such difficulties, the barbarians suddenly surrounded them on all sides at once, coming through the densest thickets, as they



A signifier fights hand-to-hand with warriors, swinging his standard as a weapon.

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A Centurion on Varus's staff prepares to rush to the defense of an Aquilifer as an enormous German, infused with super-human courage, breaks his way through the Roman line. His prize—the sacred eagle.

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Above: Germanic auxiliaries in the service of Rome turn on their former masters.

Below: With reinforcements not yet on the scene and with Germanic warriors viciously attacking from all directions, Varus stands, stunned to inactivity, flanked by an Aquilifer and a Centurion



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Above: Roman cavalry try to break out but find their path blocked by determined warriors.

Below: Caught by surprise, Roman infantry attempt to form a line of battle, but they are too few and time is too short.



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probably were by the Germans. Most of the soldiers would have had to provide security leaving few to build the camp. Consequently, probably only the defensive works were completed. The Romans spent an uncomfortable and cold night, remaining in their armor and fighting off constant German probing attacks. In a bid to reduce the length of the vulnerable Roman column and speed their movement, Varus had most of the remaining wagons burned. This act alone shows how desperate the situation was for the Romans.

The Roman leadership perhaps furiously debated what action to take. Some probably argued for staying in place and improving their fortified camp. They had taken casualties, but they were still strong. If the Germans could be induced to attack the Romans behind fortifications, enemy casualties would be heavy and perhaps Roman reinforcements would arrive. Victory, or at least survival, could be achieved. Others probably wanted to retreat south, but that would mean going back into the woods. Varus chose to try to break out to the north and west. Perhaps he still hoped to reach open ground, crush the revolt, and claim victory. Perhaps he intended to break out of the woods and then head west, toward the Rhine and safety.

“The next day they advanced in a little better order, and even reached open country, though they did not get off without loss. Upon setting out from there they plunged into the woods again, where they defended themselves against their assailants, but suffered their heaviest losses while doing so. For since they had to form their lines in a narrow space, in order that the cavalry and infantry together might run down the enemy, they collided frequently with one another and with the trees.”

- Cassius Dio

The army that left the marching camp on the third day was vastly different from the previous day's force. Gone were most of the cumbersome wagons, allowing the army to be faster and more compact. Varus may even have formed his army for battle in the clear space by the camp, but if he did so the Germans did not take the bait. Once again Arminius waited until the Romans were strung-out in column before he struck. The Romans managed to break out into the more open ground north of the Weißen Mountains, but they apparently suffered very heavy casualties while doing so. As their numbers sank, those of the Germans probably grew. Heartened by the success on the previous day, many warriors, war bands, and tribes which had before held back now joined

Below: A wounded Roman wielding a sword engages a Germanic warrior. Evidence indicates most warriors were armed with a combination of shield and spear.

Top right: like a flowing river, the Germans rush down on the surprised Romans.

Center right: A cornu, or signaling horn, lies discarded on the ground. Was the mortally wounded trooper lying beside it able to signal for help?

Bottom right: the vexillum of the XIX legion lies on the ground. The vexillum was a standard normally used by detachments of soldiers. Perhaps this standard was carried by soldiers of the XIX legion detached from their parent legion to form part of Varus's personal guard.



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the revolt wholeheartedly. More warriors poured into the area, eager for a share of the glory and spoils. The Romans had more difficulties than just escalating casualties and multiplying enemies. Their shields were waterlogged from the constant rain and nearly useless. In the closed terrain their cavalry was proving more of a hindrance than a help. They had many wounded and large numbers of helpless, terrified civilians in tow. They did, apparently, successfully fight off the Germans that day, but suffered severely in doing so. By the end of the day, the Roman army probably numbered only a couple thousand at most and was no longer combat effective.

Again the Romans made camp. It was probably just east of Kalkriese and would have been a small camp built by a desperate and beaten remnant of an army. There were no longer three legions and supporting auxiliaries to house. There were too few soldiers and they were too exhausted to build proper defenses. It would have been obvious to all, from Varus on down, that when the Germans struck in the morning, they would easily overrun the camp. The situation appeared hopeless.

“Numonius Vala, a lieutenant-general under Varus, who in other cases conducted himself as a modest and well-meaning man, was on this occasion guilty of abominable treachery; for, leaving the infantry uncovered by the cav-

PART I: THE TEUTOBURGER WALD



A Roman cavalryman finds himself surrounded by Germanic warriors. In the closed terrain of the Teutoburger Wald, the cavalry was of little or no tactical value. Arminius had expertly planned his assault to maximize German strengths and Roman weaknesses.

alry, he fled with the horse of the allies, and attempted to reach the Rhine. Fortune took vengeance on his misdeed; for he did not survive his deserted countrymen, but perished in the act of desertion”

- Velleius Paterculus

According to Velleius Paterculus, a cavalry officer and a contemporary of the battle, Numonius Vala, leading the cavalry forces, abandoned Varus and his army to their fate and cowardly tried to flee. This could be true, and there is no real reason to doubt Paterculus's story. It would not be the first or the last time Roman cavalry abandoned infantry to their fate in a lost battle. However, there is another possibility. Perhaps realizing the remains of the army could not defend itself against a concerted attack, Varus may have decided upon a desperate plan. The army would try to sneak past the Germanic forces and make a dash for safety while the cavalry provided a diversion. Mule bells excavated on the battlefield were stuffed with peas and grass, apparently to silence the clapper. This finding lends credence to the theory of a night-time break-out attempt. The wounded and sick were most likely left behind to the not-so-tender mercies of the Germanic warriors. Maybe the cavalry departed first, heading north, hoping to draw the Germans away and – just maybe – allowing the rest of the army to sneak out undetected. If the army could steal a march on their tormentors they may have a chance to survive.

It was not to be. The fleeing cavalry were caught and destroyed. The remnant had only succeeded in escaping from the frying pan right into the fire. Varus and his officers and done what they could to break out. But Arminius had all the advantages. As day dawned in the Kalkriese narrows, the Roman remnant saw they were trapped.

A Roman soldier takes aim with his pilum at a Germanic chieftain, but his throw is interrupted by a club-wielding warrior.



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THE CLIMAX AT KALKRIESE:

The Kalkriese narrows is an hour glass-shaped passage, some four miles long but only a half mile wide. To the north was the great bog and to the south the steeply wooden slopes of the Kalkriese hill. The ground was wet and sandy, broken by numerous streams. Only a thin strip on the southern edge, some 200 yards wide at most, afforded reasonably firm passage for an army. In this narrow channel, the Germans prepared their final ambush. A wall, 15 feet wide at the base and probably about three or four feet high, was built along the southern side of the pass for a distance of about 400 meters. Obviously built in advance, it begs the question of how the Germans knew the Romans would use that route. Perhaps it was the route Arminius started the Romans toward and there was no practical alternative for them. Perhaps the Germans used their previous attacks to “herd” the Romans in that direction. Perhaps ambush sites had been built along all likely Roman routes of advance. The Germans may simply have taken advantage of an existing wall built some time previously as a civil engineering project preventing water runoff down the hill from washing away the narrow track. It would not have been time-consuming or difficult to adapt such a wall into a field fortification once it became apparent the Roman army would have to move through the Kalkriese gap. Whatever the reason, the result was a perfect site for an ambush. The little wall would not have been an obstacle to the Roman army three days previously, but in their weakened state it was to be an insurmountable barrier.

Once in the narrows their fate was sealed. Germanic warriors struck from the hill and the wall. Others blocked the way ahead. More attacked from the swamps or blocked any retreat. By this point, the Germanic forces could have significantly outnumbered the surviving Romans. Even the weather was against the Romans as more storms lashed the region. Sheltered behind the wall the Germans rained javelins on the battered Romans and then attacked. It was a one-sided battle.

“They were still advancing when the fourth day dawned, and again a heavy downpour and violent wind assailed them, preventing them from going forward and even from standing securely, and moreover depriving them of the use of their weapons. For they could not handle their bows or their javelins with any success, nor, for that matter, their shields, which were thoroughly soaked. Their opponents, on the other hand, being for the most part lightly equipped, and able to approach and retire freely, suffered less from the storm. Furthermore, the enemy's forces had greatly increased, as many of those who had at first wavered joined them, largely in the hope of plunder, and thus they could more easily encircle and strike down the Romans, whose ranks were now thinned, many having

As the Roman army disintegrated, most soldiers were killed or captured. Some surrendered, but others tried to escape. Here, a Centurion and an Aquilifer try to save one of the eagles by fleeing into the marshes. The Aquilifer, too weak to continue, collapses into the swamp.

The Roman historian Florus tells of an Aquilifer who saved an eagle from capture by hiding it in a marsh. If true, it was a futile gesture. All three eagles were captured, and all three were subsequently returned or recaptured.



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Right: German warriors armed with missiles (an archer and a slinger) run through the woods to attack the Roman column

Below: The worried expression on the face of this Aquilifer is no doubt accurate.

perished in the earlier fighting...Varus, therefore, and all the more prominent officers, fearing that they should either be captured alive or be killed by their bitterest foes (for they had already been wounded), made bold to do a thing that was terrible yet unavoidable: they took their own lives...When news of this had spread, none of the rest, even if he had any strength left, defended himself any longer. Some imitated their leader, and others, casting aside their arms, allowed anybody who pleased to slay them; for to flee was impossible, however much one might desire to do so. Every man, therefore, and every horse was cut down without fear of resistance”

- Cassius Dio



Once caught in the trap and watching the remains of the army disintegrating around them, Varus and many of his officers made an impossible choice. Rather than face capture, death, or worse at the hands of the Germans they fell on their swords – a method of death Romans considered respectable. With the deaths of Varus and most senior officers, any remaining order and discipline dissolved. If Vala and any cavalry were still with the army at this point, they now attempted to flee. They failed. And so the last remnant of Varus’s army was slaughtered at Kalkriese. Most died in place. Many fought viciously, selling their lives dearly. Others fled into the bogs and marshes only to be hunted down. Many gave up or were captured, either for later torture, sacrifice, or slavery. Only a handful managed to make their way to safety.

The Roman historian Florus tells of a standard bearer who hid one of the eagle standards in a swamp to prevent it from falling into the hands of the Germans. If the story is true, it was a futile gesture. All three eagles fell into German hands. All three were eventually recovered by Rome; the first two in AD 15/16 during the campaigns of Germanicus, and the third in AD 41.



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Only a few survivors of the battle made their way to safety. Of those who had been taken by the Germans, many faced a lifetime of slavery. Many others were tortured and sacrificed to the Germanic gods in grisly rituals. The warriors collected their dead for burial. The Roman dead were left to rot. Many were beheaded. Taking the heads of fallen enemies was a common practice among Germanic and Celtic peoples. When Roman forces under Germanicus visited the battle site years later to bury the dead, he found many heads nailed to trees.

THE AFTERMATH

“Augustus, when he learned of the disaster to Varus, rent his garments, as some report, and mourned greatly, not only because of the soldiers who had been lost, but also because of his fear for the German and Gallic provinces, and particularly because he expected that the enemy would march against Italy and against Rome itself. For there were no citizens of military age left worth mentioning, and the allied forces that were of any value had suffered severely.”

- Cassius Dio

“In the center of the field were the whitening bones of men, as they had fled, or stood their ground, strewn everywhere or piled in heaps. Nearby lay fragments of weapons and limbs of horses, and also human heads, prominently nailed to trunks of trees. In the adjacent groves were the barbarous alters, on which they had immolated tribunes and first-rank centurions.”

- Tacitus

In the days following the battle, the Germanic forces, flushed with victory, swept toward the Rhine. Roman camps on the east side of the river were hurriedly abandoned. The defeat was a profound shock to the Roman people. Three entire legions, over ten percent of the army, had been lost. In Rome, news of the disaster resulted in unsurprising panic and a fear that the victorious Germans would sweep over Gaul and all the way to Rome. The emperor Augustus had a nervous breakdown, banging his head against the walls of his palace and repeatedly shouting “Quintilius Varus, give me back my legions!” The numbers of the lost legions – 17, 18, and 19 - were never used again.

Only a few survivors of the battle made their way to safety. Of those who had been taken by the Germans, many faced a lifetime of slavery. Many others were tortured and sacrificed to the Germanic gods in grisly rituals.

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In the closed terrain, the effectiveness of cavalry was greatly reduced. Confusion results as the horse try to move through a thin screen of legionnaires. The Germanic warriors are quick to take advantage of the situation and attack.

The warriors collected their dead for burial. The Roman dead were left to rot. For the Germans, the site became a shrine.

Augustus dies in AD 14 and Tiberius ascended to the throne. In AD 15 and 16 the new emperor's nephew, Germanicus, conducted several large campaigns east of the Rhine. Perhaps the campaigns were merely punitive to restore Rome's pride and prestige. Perhaps it was an attempt at reconquest. Tacitus describes Germanicus's visit to the battlefield and burial of the dead. During the campaigns there were several clashes and battles with Germanic forces, but none were decisive.

Germany had no tribal capitols or political centers. There was no unified tribal army which could be destroyed. To conquer Germany, the Romans would have had to reduce the tribes one by one by attacking villages, crops, and cattle. To cover any significant amount of territory, the Roman army would have to break down into small units, but this could not be safely done. The Varus defeat was not the end of the war as many historians have claimed – it was the beginning. It was the high cost in money, time, resources, and lives that finally brought the struggle to an end. For Rome, it proved too difficult and too costly for too little return and all hopes for permanent conquest were abandoned by the end of AD 16. Germanicus was recalled, and most territory east of the Rhine was evacuated. Despite occasional cross-river raids and incursions, the Rhine became the border of the Roman Empire.

Arminius did not long outlive his triumph. With the Roman threat gone the Germanic tribes began to fight among themselves. The rifts in the Cherusci tribe only grew larger as Arminius' power expanded, and some accused him of trying to become king. In AD 19, a chief of the Chatti proposed to the Roman Senate that he kill Arminius by poisoning. Rome declined the offer. Two years later Arminius was dead, killed by his own tribesmen. We don't know who, how, where, or why.

The Romans would have found it hard to accept they were outmaneuvered and outfought by mere barbarians. Someone must be to blame. In the years after the disaster Varus, being conveniently dead, was the scapegoat. But during the reign of Tiberius Varus's relatives tried to restore his name by accusing the soldiers of cowardice. Tiberius, a friend of Varus, was inclined to support this version. Others, however, such as Paterculus, who knew many of the officers and soldiers involved, was quick to remind his readers of the heroism of the soldiers:

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Victorious Germanic warriors busy themselves mopping up the last Roman resistance and looting the battlefield. Unlike the Roman army, which was a paid professional force, plunder and loot were the forms of income for Germanic warriors.

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Each legion had unique shield designs. These designs are unknown for the three legions involved in the Teutoburger Wald battle. Time Machine Miniatures have opted to put a “generic” Roman shield pattern on the shields.

As the army was not expecting battle, shields would have been protected by leather shield covers. Many of the shields in the diorama retain these covers in place.

“from all this, it is evident that Varus, who was, it must be confessed, a man of character and of good intentions, lost his life and his magnificent army more through lack of judgment in the commander than of valor in his soldiers.”

- Velleius Paterculus

As the centuries passed, the event was gradually forgotten. Even the Roman histories were lost in the chaos of the collapse of the Roman Empire. Memory was not restored until the Middle Ages when the annals of the Roman historian Tacitus were rediscovered. Discovery of other ancient histories followed. The effect was profound. Long assumed to be a product of the Roman Empire, Germany now had a history and a hero. It did not take long for German nationalists and idealists to adopt Arminius as their own and make him into something he probably never was – a German patriot bringing unity and fighting for freedom against an external oppressor.

The battle had far reaching consequences for not only Rome but for all of Western civilization. Germany remained independent – and Germanic. Had it become Roman, the great migrations that shaped Europe 400 years later may not have happened. Without the German victory in the Teutoburger Wald the Germanic languages may have passed from history and the English language would never have developed. The three German “Reichs” – Charlemagne, Bismark, and Hitler – may never have been. For better or worse, our world would likely have become a completely different place.

CONFLICTING THEORIES ON THE BATTLE

Although the account presented above is what I believe to be the most likely scenario, it isn't the only possible one. There is much uncertainty remaining. It is appropriate to mention some of the main areas where there is disagreement.

1) Kalkriese wasn't the battle site. The spectacular archaeological finds at Kalkriese, combined with the accounts of the Roman historians, leave few scholars in doubt that Kalkriese was a main engagement area in the Teutoburg Forest battle, probably its climax. There are those, however, who cling to alternate locations and believe Kalkriese to be something else—perhaps the site of one of Germanicus's battles in AD 16.

On the surface, this seems a reasonable possibility as Kalkriese fits the descriptions of a battle in that campaign, but there are several arguments against this theory. First, bones recovered at Kalkriese show evidence of having lain unburied for several years, just as the bones of Varus' force would have lain. Also, Germanicus' column in AD 15 was a fast moving military column with a bare minimum of baggage and probably few if any female camp followers. In contrast, archaeological finds at Kalkriese point to an army movement in peacetime. There is ample evidence of the presence of women and items of everyday use. Additionally, in order to launch a frontal

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attack on the wall, the Romans would have had to attack from out of the swamps. Finally, the lack of coins from the reign of Tiberius found at Kalkriese argues against such a late date.

Some have claimed the site marks the camp of one of Varus's detachments that were destroyed during the uprising. The fact that the wall is linear instead of an enclosure argues against this. Plus, it would not make sense to build a camp in a marshy flood plain.

All things considered, it seems Kalkriese is the location where at least a portion of Varus's main army was destroyed. Perhaps future finds will definitively prove—or disprove—this theory.

2) Kalkriese marks the beginning of the battle, not the end. It is quite possible that some parts of the Roman force fought their way out of the Kalkriese narrows and were eventually run down several hours later somewhat further west. Some go farther and claim that Kalkriese marks the site of the first ambush and that the battle continued in a westerly direction over the next two or three days. However, archeological findings (and lack of findings) *seem* to indicate the battle did not proceed, in any significant manner, in a westward direction. It should also be noted that the Germanic fortification at Kalkriese would not have been a significant obstacle to an intact and unbloodied Roman force. To an army already worn down and defeated it could prove decisive. Finally, the engagement area at Kalkriese is not large. It is a place for remnants, not an entire army.

3) The Romans approached from the east – from the direction of Minden, not from south of the Wiehen Mountains. This is probably the main area of disagreement and is quite possibly correct. An approach from the Detmold area, as presented in this booklet, would pass through terrain which matches Cassius Dio's account of dense forests. The route from Minden would have been via primarily open, agricultural terrain. Those who favor the easterly approach dismiss Dio's description of dense woods and deep ravines as just a stereotyped "edge of the world" view of Germany. But Paterculus, who served in Germany and wrote within memory of the event, also mentions forests and marshes. Archeology also argues against this theory as there have been no significant finds indicating fighting anywhere east of Ostercappelin. Also, Roman accounts say Varus was moving to quell an uprising in the north. This implies he was moving from south to north and not east to west. Finally, Dio mentions severe storms striking the flanks of the Roman column. Had they been moving from Minden, these storms would have been directly in their faces since the prevailing winds in that region are from west to east.

If we accept that Varus advanced from the southeast – from the direction of Detmold – a fair question to ask would be, "why did the Romans continue moving along such a route, north away from their bases, after having suffered ambushes and attacks earlier in the battle?". There are several possible reasons. Perhaps Roman losses were not yet decisive and Varus still believed a well-disciplined march could yield a successful campaign. It was characteristic of the Romans to refuse to admit defeat. We do not know at what point he realized what was happening. Perhaps he just wanted to avoid retreating through an area where he had already been attacked and believed the detour toward Kalkriese, while a longer route, would take him to friendly territory in the west via predominately open terrain where he could better defend himself. Perhaps the situation and the nature of the German attacks left him little choice.

4) The battle did not run over several days, it was over relatively quickly. This is the version championed by Peter Wells in his book, "The Battle That Stopped Rome". He argues that it is reasonable to assume the battle took the form of one quick, decisive ambush. I respectfully disagree. Not only does such a theory fly in the face of all the Roman accounts, it also must assume overwhelming force on the part of the Germanic tribes. It is easy to believe they could gather enough strength to hit and harass the Romans and wear them down over a series of days before a decisive clash. It is less plausible to assume they could generate enough force to quickly overwhelm a column several kilometers long. Such a force could not have fit into the relatively small area at Kalkriese.

There are, of course, many other possibilities. Perhaps Varus had intended to winter near the Weser and was not marching to put down a rebellion, but was running for his life in the face of the revolt? In the final analysis, we can only make assumptions and educated guesses based on the ancient histories and the archaeological findings. Regardless of the exact course of events there is no question as to the outcome. We know there was fighting at Kalkriese and probably many other areas as well. This fighting is what the diorama portrays. Perhaps other pieces of the puzzle still lie buried, patiently waiting to be found.

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Above left: At this trooper's feet, lies a cavalry helmet with a detached face mask. A similar mask was one of the most spectacular finds at the Kalkriese battlefield. (Mask photo from the Kalkriese Museum webpage)

THE DISCOVERY OF THE BATTLEFIELD

By the 19th Century Germans viewed the battle as the birth of their nation – symbolic of the eternal struggle between decadent Latin and pure German cultures. Roman histories had brought the battle back into the light, but the battlefield was lost. Citing Tacitus no less than 700 sites were put forward, but no real remains were ever found to support any of them. One historian, Theodore Mommsen, actually proposed the Kalkriese area as the site of the battle on the basis of a collection of Roman coins that had been accumulated by the resident landowners. The vast majority of the coins were consistent with a possible dating of 9 AD. However, Mommsen had no further evidence and his idea did not gain support. Eventually, the followers of a theory arguing that the battle occurred on a long wooded ridge around Bielefeld – 50 miles from Kalkriese - prevailed. This area was renamed the Teutoburg Forest and became the site of the Detmold Memorial, a massive statue of Arminius built on a hilltop.

Beginning in 1987 Tony Clunn, a British army officer and amateur archeologist armed with a metal detector, made several significant finds at Kalkriese. He had been fascinated by the mystery, and after being transferred to the Osnabruck area he began his own search. His first step was meeting with the county archaeologist, Dr Wolfgang Schuler, to obtain permission to conduct his surveys. He studied Mommsen's theory and noted a feature on old maps called the "Old Military Road". Although the topography had changed significantly, Clunn determined the most likely routes people may have used in ancient times. With a military appreciation for terrain he chose a promising site, and within a couple weeks found nearly 100 Roman coins. The coins bore a close similarity to those Mommsen had studied. Subsequent finds by Clunn included numerous coins dating from the period. In 1988, Clunn's discovery of three sling stones provided a military link to Kalkriese. One of the most crucial finds came in July 1989 when Clunn discovered a Roman coin bearing what appeared to be Varus's personal mint mark.

This was enough evidence to prompt German authorities to begin formal surveys in the area. Since then the digs have unearthed more than 5,500 artifacts including the spectacular cavalry mask that has become the symbol of the site and the museum. In 1994 the first of several burial pits was discovered. The bones show evidence of having lain unburied on the surface for several years. The finds have revealed battle debris along a corridor almost 15 miles long but little more than a mile wide. The finds fan out from the center of the battlefield at Kalkriese painting a picture of people fleeing in all directions.

While only a portion of the battlefield has been discovered, and archaeological work still continues, what has

PART I: THE TEUTOBURGER WALD



The coin purse of a dead soldier has spilled on the ground. It was the finding of large numbers of Roman coins in the Kalkriese region which led the historian Theodore Mommsen to propose the location as the site of the battle. Coins discovered by Major Tony Clunn in the same area eventually led to discovery of the battlefield.

been found is truly remarkable and provides a good deal of evidence for the climax of the battle at Kalkriese. Future finds may, of course, add to or alter our understanding of the battle. Nearly all finds are Roman and most are of a military nature. Evidence of all types of Roman weapons, including swords, daggers, pila, javelins, sling stones, arrows, and even catapult ammunition have been discovered. Fragments of helmets, chain mail and segmented plate armor have also been found. A pair of fasteners is even inscribed with the owner's name, Marcus Aius, his unit, Cohort I, and his Centurion's name, Fabricus. Other military items include cloak clasps, belts, hobnails from boots, and military awards and decorations. Other finds include surgical items, construction equipment, and pieces of animal harness. A large number of personal items have also been unearthed. These include rings, game pieces, toiletries, oil lamps, seal boxes, keys, drinking cups, cooking items, and eating utensils. A disk brooch, along with hairpins and other jewelry, point to the presence of women.

Today Kalkriese is one of the most significant archaeological sites in Europe. Opened in 2002, the Varus Battle Museum and Kalkriese Park occupy the site. On display are approximately 3,000 of the nearly 6,000 artifacts unearthed to date. An observation tower allows visitors to get an overview of the battle site. The park has numerous trails and outdoor exhibits including a recreation of part of the earthen wall. Three pavilions, one each dedicated to seeing, listening, and understanding, are intended to help the visitor get a feel for the events that transpired during the battle. A children's exhibit in an old farmhouse offers kids an opportunity for hands-on learning and enjoyment. Near the park are hiking and biking paths, hotels and guesthouses, and even the 18-hole "Golfclub Varus". Other historical sites, both from the Roman period and other eras, are within easy driving distance of the park.



Left: Part of the reconstructed wall at the Kalkriese Park. The gaps in the wall allowed the Germans to attack. Above: A selection of coins excavated on the battlefield. (Photos from the Kalkriese Museum webpage)

PART II: THE DIORAMA

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TIME MACHINE MINIATURES AND THE TEUTOBURGER WALD SERIES

Time Machine Miniatures is a one man operation producing quality historical miniature kits. For its owner, Jim Corless, it's a labor of love. In the late 1980s, while researching the battle, the desire to recreate the fight became an obsession for Jim, but the difficulties of portraying the events in a concise and realistic manner were daunting. Working with an accomplished figure sculptor, Chris Tubb, the concept eventually came to life resulting in the creation of 18 kits comprising both single figures and groupings of Romans, Germans, mounted figures, wagons, and civilians. Many of the kits are inspired directly by archeological finds at the battlefield or by passages from Tony Clunn's book on the battle.

A main goal was to create a system of figures allowing flexibility and story telling capability. The figures are fairly simple, suitable for novice modelers and professionals alike. This allows even the relatively inexperienced modeler to create a wonderful diorama using only kit components, or to easily make a unique diorama by simply recombining or rearranging the stock kits or by making basic conversions. My diorama is an example of all these options. Each kit in the series tells its own story and can be built as an individual, stand-alone creation. Each kit also comes with a detailed piece of resin groundwork to hold the figures and other elements. These groundwork bases are designed so that they interlock to form a larger diorama. In addition to the larger, interlocking bases, each figure also has a small, individual base the modeler can use if so desired. This adds even more flexibility to the kits, giving them utility for wargamers and toy soldier collectors. Historical notes and painting instructions are included with each kit.

The Roman army probably never had the uniform appearance the Hollywood epics have conditioned us to expect. As new gear was introduced, older equipment remained in use as long as it was serviceable. Therefore, a variety of armor types and helmet styles are in evidence on the figures. The Germans are largely bare-chested, bearded, and sporting



Above: an axe wielding warrior charges out of the woods—his targets: a merchant and his wife. The Merchant's slave has grabbed a pick-axe and moved to position himself between his master and the threat.

Below: Parts and pieces included in one of Time Machine's kits, DS-TW 1 (pictured complete on page 4). This kit is representative of offerings in the excellent Time Machine line.



PART II: THE DIORAMA

Suebian knot hairstyles. Their appearance and their simple equipment clearly differentiate them from the Romans and emphasize their barbarian strength and valor.

CREATING THE DIORAMA

Since the earliest release of the kits by Time Machine in the 1990s, I have been interested in creating a diorama of the Teutoburger Wald battle, and in 2007 Jim and I began a two and a half year partnership to do just that. Jim provided the kits. He also provided enough extra figures, both complete and partial, and dozens of spare parts. This allowed me to create over 20 additional figures unique to my diorama. The diorama showcases the versatility of the Time Machine creations. Most kits are built absolutely stock or with very minor alterations. In most cases, I used the kit provided groundwork as the basis to build my groundwork upon. A few of the bases are interlocked as designed, but many are arranged according to my own compositional ideas. Not only did the project give me the opportunity to make a unique once-in-a-lifetime creation, but through my constant communication with Jim throughout the project, I gained a new friend as well—a friendship that has led to other projects and partnerships.

I believe that, from an artistic perspective, rather than create an exact scene highlighting a specific portion of the battle, it was most important to present the *impression* of the battle in a way that a person unschooled in history could understand. While the individual figures and figure groupings were created and painted in a historically accurate manner, the overall composition of the diorama is somewhat more abstract. Within the composition, figures and elements are clustered together into easily digestible vignettes, or “snapshots” within the single large diorama. There are literally dozens of these stories, based on archeological finds or stories from Tony Clunn’s book about the battle. Arminius stands on a hillside overlooking the entire battle. Varus makes eye contact with Arminius, realizing perhaps for the first time he has mistakenly placed his trust in the German. A Centurion thrusts his sword at a warrior, realizing, too late, he is vulnerable to another warrior attacking from a flank. A Roman soldier tries to protect his family from attacking tribesmen. An Aquilifer and a large warrior engage in a deadly struggle for a legionary eagle. A soldier prepares to hurl his pilum at

THE TEN COMMANDMENTS OF EFFECTIVE COMPOSITION:

Composition is key to story telling. Effective composition is more than placing a figures on a base. It requires careful planning. It is important that the viewer immediately grasp what is going on. If not, the work has failed at some level.

The “commandments” are a guide to planning dioramas. They are not carved in stone, and do not apply to every situation. They are tools to help transfer what I imagine into a finished work. They do not stand alone, but work conjunction with one another. Most importantly, they are not restrictive and do not take the place of imagination.

1) **HAVE A SINGLE MAIN POINT.** There can be several things going on at once, but like scenes in a movie, they should all tell the same single story.

2) **SHOW ACTION AND INTERACTION.** Action is more appealing than static, but action must be purposeful. Multiple elements should interact in a meaningful way.

3) **USE A TIGHT COMPOSITION.** Tight compositions are visually more appealing than loose, open ones. They are better at conveying drama.

4) **DIRECT THE VIEWER’S EYE.** People view as they read—left to right. Arrange elements so viewers “read” the story in the proper order. Prominent things catch their attention. Action moving against the grain (right to left) causes them to pause.

5) **HAVE BALANCE.** Balanced compositions look better. Elements or action on one side of the composition should be offset – or balanced – by elements or action on the other side. Balance does NOT mean symmetry.

6) **USE ALL ELEMENTS.** The composition and overall effect is influenced by more than just figures. Other elements such as the base, nameplates, groundwork, and such are important, too.

7) **ELIMINATE DEAD SPACE.** Empty and unoccupied space is boring, and detracts from – or deadens – the final result.

8) **USE SHAPES AND ELEVATIONS.** The size and shape of the base, groundwork, and composition can compliment and enhance the composition, help direct the viewers’ eye, and provide balance and symmetry.

9) **ARTISTIC LICENSE IS OK.** Use artistic license to fill gaps in knowledge, create a more visually appealing piece, or simply due to style. Use it to assists in recreating the feel, emotion, and drama of an event – to capture the impression rather than just the look.

10) **PLAY WITH IT:** Try numerous variations of the theme. Look at different placement of elements. Find what looks the best.

PART II: THE DIORAMA



PART II: THE DIORAMA

Left: These photos show the overall composition of the diorama.

Top: Arminius is in a dominant location and is one of the first elements a viewer notices. Next is Varus, along with a Centurion and an Aquilier, positioned in the center of the diorama. The composition is designed to reinforce this. The slope of the ground, areas of main combat action, and trees and fallen logs are arranged to point to Arminius like the spokes of a “wagon wheel” point to the “hub”.

Bottom: If the diorama is a “book” telling of the battle, then it is composed of “chapters” which each tell part of the story. In purple, the battle begins as Germanic auxiliaries turn on their masters. Red shows attacks on the baggage train. The yellow area depicts the attempted flight of the cavalry. Blue shows Roman soldiers trying to organize a defense against attacks. In white, Germans mop up remaining Romans as survivors flee into the swamps. The Green area contains the two commanders—Arminius directed the assault and Varus realizing just what the true situation is.

Right: each “chapter” in the “book” is made up of many “verses”, “paragraphs”, and “sentences” composed of individual figures and vignettes. Shown here (part of the white outlined area in the photo at left), a cavalryman tries to fight his way to safety, a downed cavalryman is finished off by a warrior, a warrior takes the head of a fallen foe, and another warrior plunders an overturned wagon—oblivious to the Roman behind him.

a Germanic chieftain, but is attacked by a club-wielding warrior before he can strike. An Aquilifer, too weak to carry on, collapses in a swamp and tries to save his eagle from capture by secreting it in a marsh. There are many, many others. Taken as whole, the diorama can easily represent an event from the initial parts of the battle. We see Germanic warriors attacking the portion of the column containing Varus, his staff, and his personal baggage.

Like chapters in a book or scenes in a play, everything works together to tell the story of the battle. It was important that the diorama not just be a collection of figures. The orientation of the figures to each other - their glances and gestures - had to be completely worked out before the diorama was assembled. All actions had to be purposeful and geared toward telling the story. Maximum usage was made of the stories contained in Time Machine’s vignettes. Within each scene, the composition of the figures and other elements was kept as tight as possible. Tight compositions are visually more appealing than loose, open ones and help to enhance the sense of drama and stress. But space was left between the figure groupings and vignettes: if all the vignettes were clustered tightly together, the diorama would just be a big ball of confusion. Additionally, the very terrain itself serves more of a purpose than just to recreate a portion of the battlefield. Elevations, trees and brush, streams, and rocks visually separate the various vignettes, form a backdrop, and help direct the viewer’s eye through the composition. Dead, or unused, space was kept to a minimum. The terrain elevations and the space left between the vignettes also served to make the diorama easier to photograph. While not normally an important consideration, here it adds to the versatility of the diorama, making it possible to create a photographic slide show useful as a teaching tool. The photos used in this booklet are a prime example.

When designing a diorama, it is important to consider how it will be viewed. Since we read left to right, we normally view things in that order as well. Since our eye stops on the right, the right side of the presentation is normally the visually strongest. Additionally, things moving “against the grain” of viewing (in other words things moving right to left) cause us to pause our eye movement. Consider the diorama. As a viewer approaches, he or she takes in the entire scene. The first thing likely noticed is the main focus of the diorama – Arminius. He stands toward the center rear on the highest ground. Ground slopes up to him in all directions. He is framed by trees and even a fallen tree trunk points toward him. Following his gaze takes the viewer to Varus – almost exactly in the center of the diorama on a



PART II: THE DIORAMA

CONSTRUCTING MINIATURE FIGURES



The Time Machine kits are relatively simple and require only basic modeling tools to build. Their construction requires no special skills.

1) Basic tools include a hobby knife, a pin drill, and sanding sticks and/or steel wool.

2-3) Clean any mold lines or other imperfections from the castings. The mold lines can be sanded away or carefully scraped off the soft resin castings with a hobby knife. Scrape backwards and use care not to damage the soft resin. Metal parts can be cleaned the same way. Parts can be smoothed and polished with steel wool. For metal parts, I often use a wire brush in my Dremel Motor Tool. Again, use care to avoid damaging fine details.

4) Test-fit the parts to ensure proper fit. The fit of the kits is excellent for the most part, but there are a few instances where slight gaps may exist or a bit of work is required to ensure a perfect fit.

5) For additional strength, I always drill mating surfaces for large or weight-bearing parts and reinforce the join with a metal pin. Paper clip wire works well for figures in this scale. The wire pins were also used to mount the figure to the diorama base

6) Parts are glued together. As the parts are resin and metal, normal model glue will not work. I use a two-part epoxy glue for most parts. For small non weight-bearing parts superglue works well.

7) Any remaining gaps or imperfections are filled with a modeling putty, or two-part epoxy putty and sanded smooth.

PART II: THE DIORAMA

PAINTING MINIATURE FIGURES



Many types of paint can be used to paint the figures. I use water-based acrylic paints available at the local craft store such as Delta Ceramcoat, Folk Art, or Apple Barrel.

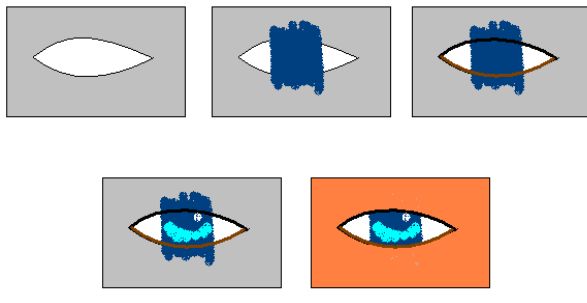
Colors are built up in layers. While there are variations used to recreate different materials or textures, the photos at left show the basic procedure.

1) The primary base color is applied. I use multiple thin layers to ensure good even coverage.

2-4) Highlights are gradually built up using thinned paint applied in semi-transparent “glazes” of color. Progressively lighter glazes are added to progressively smaller areas. I highlight and shade figures as if the light is coming from above.

5-6) After highlights, shadows are gradually built up using the same glazing process.

As shown below, flesh areas are painted using the same basic process. When painting faces, I always paint eyes first.



Left: I paint the eyes prior to painting the rest of the face. The whites are painted first, followed by a line of color for the iris. The eye is outlined using black for the top lid and dark red-brown for the bottom. Highlights are added and then the flesh is painted.

Right: good brushes are vital. A good point is the most important aspect for detail painting, not the number of bristles or the size of the brush.



PART II: THE DIORAMA

CREATING GROUNDWORK



After the foam form was fashioned and the Time Machine vignette bases glued in place, the groundwork was created. In areas where there are cliff faces, plaster rocks (cast in a rubber mold intended for model railroad terrain) were glued in place and painted. Then the rest of the ground was created using the process shown.

1) Basic groundwork was created with Celluclay. This product is basically an instant paper-mache. It was mixed with water, a bit of glue, and various colors of browns and

grey paints.

2) Rocks were glued in place. Larger rocks are pieces of gravel from my driveway. Smaller rocks are bits of kitty litter or sand.

3) Grasses were then glued in place. Static grass (a kind of fiber flocking) for model railroads was used for most of the grass. Longer grasses and other plants are bits of field grass (another model railroad product), unraveled rope, bits of dried seaweed, or other natural or artificial materials. For example, ferns are laser-cut paper products.

4-5) The groundwork was then painted. First, the bare ground and rocky areas was given a very dark wash of color to provide shading and definition. A wash is an application of very thin paint. The entire ground—rocky, bare, and grassy areas—was painted appropriate colors using a technique known as dry-brushing. In this technique, a soft flat brush is used. Most of the paint is wiped off the brush leaving only enough to deposit paint on the highest surfaces as the brush is dragged across ground. Note the difference between the unpainted ground in photo 3 and the painted ground in photo 5.

PART II: THE DIORAMA

MAKING TREES



Trees were easily made as shown. Different types of trees can be modeled by varying the basic form, bark designs and colors, and type of foliage.

- 1) The basic form was fashioned with pieces of dowel rod.
- 2) Bark is created by coating the form with epoxy putty. The putty is textured as appropriate.
- 3) The tree is then painted.
- 4) Foliage is created by adding dried floral material.



Other plants are made in the same fashion. Cattails were created by putting a blob of putty on a piece of wire. The leaves are dried floral material.

PART II: THE DIORAMA



Throughout the compositional process, elements were arranged and rearranged on a Styrofoam mock-up of the ground until I determined the combination that worked best. During the process, everything was scrutinized—not just the arrangement of figure and vignettes, but also terrain and even the size and shape of the base. Once the composition was determined, it was transferred to the final base.

small area of prominent ground higher than all surrounding terrain. Next, the viewer will tend to look at the individual scenes from left to right. Since the figures move against the grain, the viewer will pause to take in each one. The eye will stop on the right side where the terrain is most severe. The slope of the ground and the direction of the figures will then draw the viewer back into the scene. Along the way the viewer will catch many of the key elements of the Teutoburger Wald story. In fact, in an abstract way, when viewed from the left to right the diorama tells the story of the battle. At the left rear, auxiliaries turn on their former masters. To the right comes attacks on the baggage train. At the front left, Romans are holding their own or even winning. The cavalry, being of little tactical value in the closed terrain is trying to break out. In the center the fighting is fierce and the outcome is in doubt, although the Germanic

Below: two examples showing the versatility of the Time Machine kits. The figure on the right in each picture is built stock, straight from the box as the manufacturer intended. The figures on the left in each picture are conversions made from the same kits. The changes are quite simple and require little skill or effort.



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tribesmen seem to have the upper hand. Across the front of the diorama in an arc from front left to middle right the Romans are trying to form in a line of battle. Their Centurion and Signifer are near the center and the Optio forms the right of the line. But they are too few and time is too short. On the right, the Germanic warriors have largely won and just mopping up, taking spoils, and desecrating bodies. On the front right, survivors try to save themselves by fleeing into the swamps.

All these compositional ideas were worked out after I had built and painted most of the Time Machine figures and vignettes. A mock-up of the ground was built using Styrofoam and the figures and other main elements were placed. Keeping all the ideas discussed above in mind, the elements were arranged and rearranged until I finally found the composition that worked best. Once happy with arrangements, a box was built to hold the diorama and the basic shapes and elevations of the groundwork were created from Styrofoam. The bases from the Time Machine kits were attached to this form and then the diorama was built and figures attached one segment at a time.

The Roman historian Tacitus wrote about Germanicus's visit to the battlefield to pay respect and bury the dead. He concluded his story of that visit with these words, "...to pay their last respects and then leave the site, letting the mists of time cloud its very existence." It was indeed lost to the "mists of time" for centuries until it was eventually rediscovered. As this booklet is written in the fall of 2009, the battle's 2,000th anniversary is being remembered in Germany.

For Jim Corless and I it seems somehow fitting that the diorama was finished in this year. From start to finish, the project took 754 days, or approximately 1,300 hours. It was certainly one of the most enjoyable model projects I have worked on. The diorama's final "home" is not yet determined, but it is my hope that it will reside somewhere the public can view it. I remember visits to battlefield museums as a child, and it was always the models and dioramas that fascinated me. These creations fueled my interest in both history and modeling. Nothing would make me happier than to have my work plant a seed of interest in someone else.



Above left: a wooden box was created to hold the diorama.

Above right: the box was given an attractive finish

Below left: the groundwork forms were built up using Styrofoam

Below right: The Time Machine bases were attached to the form

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The “spread” of the diorama across the base. It was built in small easy to work segments.



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THE END

Kevin Townsend retired from the Air Force in January 2006 after 22 ½ years of honorable service. He currently works as a civilian for the United States Air Force performing antiterrorism, resource protection, and physical security functions. Kevin began building and painting figures while in middle school in the 1970s. His work has won numerous awards including Bronze, Silver, and Gold medals in addition to special awards such as the “St Petersburg Medal”, “Most Popular Award”, and “Best In Show”. He has been married for 26 years and has two adult children. He currently lives in New Jersey with his wife and their dogs.



Kevin runs on the Jersey Shore with his “babies”

The diorama featured in this book was built and painted by Kevin Townsend. To access an e-book explaining his methods containing more than 500 pages and over 1800 illustrations and photos, visit his Yahoo Group at:

http://groups.yahoo.com/group/kevins_historical_miniatures

You must be a group member to access the files therein. Joining is quick, easy, and free. You may also contact Kevin directly at: kevin_townsend1961@yahoo.com

As of this writing, TIME MACHINE MINIATURES can be found at: www.timemachineminatures.com or at: US 001 201 387-7889

Many thanks to Jim Corless of Time Machine Miniatures for providing all the Time Machine kits, figures, and parts used in the creation of this diorama and for his encouragement and support during its construction.



“Quintilius Varus, give me back my legions!”

- Augustus Caesar

In 9 AD, three Roman legions, supporting forces, and camp followers led by Publius Quinctilius Varus marched into the Teutoburg Forest never to emerge. This “army unexcelled” was destroyed in a four day running battle by Germanic warriors under the charismatic leadership of Arminius, a noble of the Cherusci Tribe. Various referred to as “The Battle of the Teutoburg Forest”, “The Varus Battle”, or the “Varusschlacht”, the battle began a war that within a few years established the Rhine as the boundary of the Roman Empire – a border that endured for nearly 400 years. The struggle was one of the most decisive in history and was instrumental in the development of Western Europe’s linguistic and cultural maps.

This booklet was conceived as a companion piece to the wonderful line of model figures marketed by Time Machine Miniatures. For over a decade the owner of Time Machine, Jim Corless, diligently worked to turn his dream of recreating the battle as a series of miniature figure kits into a reality. Using those kits, Kevin Townsend created the diorama featured on these pages. The booklet tells two stories. First, it tells the story of the battle including the recent discovery and excavation of the battlefield. This story was the inspiration for the kits. It also tells of Time Machine Miniatures, the creation of the Teutoburger Wald series of model kits, and the construction of the diorama itself.



TIME MACHINE MINIATURES

" Figures From The Realms Of Time "