Tenth-Century Byzantine Field Armies - Overview

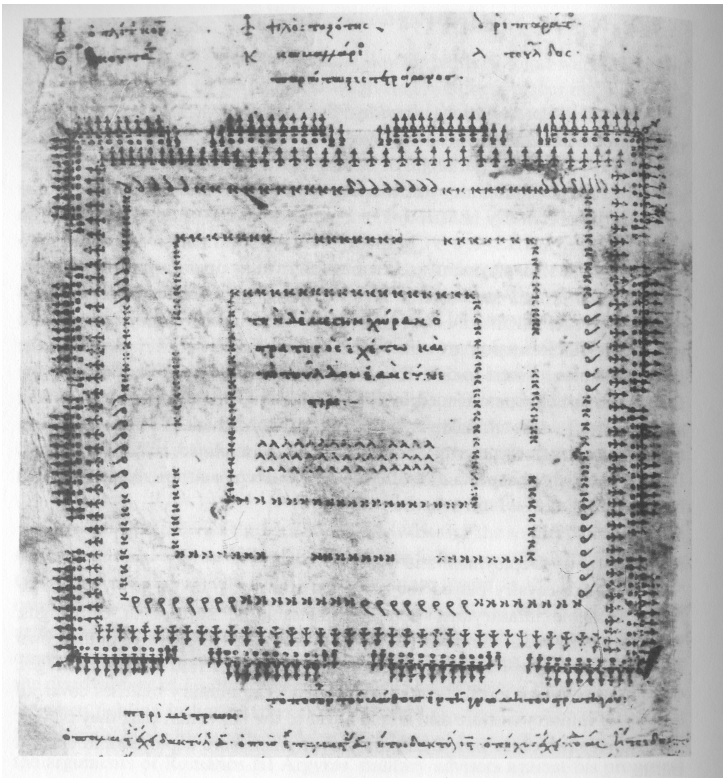
The tenth century saw one of Byzantium's rare aggressive phases. Military doctrine was revised to support large armies capable of carrying out wars of conquest. In the latter part of that century, Byzantium expanded into lands formerly held by Moslems to the south and east, and by Bulgarians to the north and west. This article presents an overview of the units and formations prescribed in two Byzantine manuals of that time.

An idealized tenth-century expeditionary army of 25,000 soldiers consists of:

- 12000 infantry, organized into 12 *taxiarchies* of 1000 men each: 400 heavy infantry, 300 archers, 200 light infantry, and 100 *menavlotoi*.
- Another 5200 heavy infantry and 1200 archers.
- 500 light cavalry (*prokoursatores*).
- 500 heavy cavalry (*kataphraktoi*).
- 5500 regular cavalry, including about 2000 archers.
- Supernumeraries (e.g., mule drivers, servants).

Numbers – especially those showing the army to consist primarily of infantry – may deceive: This is a medieval army (albeit a larger, better-organized, and better-trained one than most), and its striking arm is cavalry. The infantry is there to support the cavalry.

The diagram below, taken from yet another tenth-century manual, shows an idealized defensive field formation:



Most of the infantry is arranged around the perimeter in twelve *taxiarchies* of a thousand men each. Each block is a strong defensive formation, and the gaps between the blocks are wide enough for a dozen or so horses at a time to sally out or retreat in.

The army does everything with variants of this formation: The infantry marches in this formation, fights in this formation, and camps in this formation. On the march, the infantry maintains the square and the cavalry rides alongside to guard and ahead to scout. On the field, this formation is designed to enclose the cavalry when the army is on the defensive and to allow the cavalry to ride ahead when it is on the offensive. The army camps in a variant of this formation, with two gaps left open on each side instead of three.

The basic tactic is for the army to play turtle – with infantry serving as the shell – until a good opportunity arises to win a major cavalry battle.

References: The diagram is from an 11th-century manuscript that reprints a 10th-century Byzantine military manual (*Syntaxis armatorum quadrata*). I copied it from Eric McGeer's "Sowing the Dragon's Teeth", about which more later.

Tenth-Century Byzantine Field Armies - Infantry

The grand formation described in the previous section consisted of a dozen *taxiarchies* of a thousand infantry each, forming a square with three intervals on each side through which cavalry could ride. The purpose of the cavalry was to win battles. The purpose of the infantry was to protect the cavalry – and keep from losing battles. This section takes a closer look at the infantry formations

Each taxiarchy is arrayed in seven lines of hundred soldiers. (The width of the line may change as circumstances dictate, but geometry prevents it from varying too much: The primary purpose of the square is to provide space and shelter for the rest of the army.) The first two ranks and the last two consist of heavy infantry. (The ones in the back are needed if an enemy breaks through.) The middle three ranks consist of archers. There are three hundred men in reserve, including light infantry (guarding the intervals) and heavy pikes.

Heavy infantry are primarily armed with spears, though they are expected to carry backup weapons. They also carry shields. (Manuscripts refer to various types of shields, and to very long spears, but illustrations typically show Byzantine soldiers carrying long one-handed spears and long, narrow (oval) shields about four or five feet long.) The 'heavy' in heavy infantry refers to the weapons; the soldiers have no armor. Byzantine manuals emphasize drilling and training, but doctrine for infantry is simple (stay in formation, get back in formation, widen or narrow the gap, reinforce the front line), which suggests that the army didn't actually have much time to train its foot soldiers.

The archers carry good bows – composite recurves with a range (not necessarily accurate) of over three hundred yards. It is recommended that each archer carry a quiver of 60 arrows and a quiver of 40 arrows, with another 50 arrows to be supplied by the army. That means that the army was carrying 720,000 arrows for the recommended 4800 archers! (A later manuscript recommends that the archers carry 50 arrows and that the army supply another 50 – or 100 if it can – which may be more realistic.) A group of four archers could have three shooting and one shuttling arrows and supplies.

Light infantry are skirmishers, carrying javelins or slings. (All infantry were instructed to carry slings as backup weapons, but the skirmishers were specialists.) Their job is to wait behind the intervals and attack any enemies that get through. If enemy cavalry charges and engages the spears, they are supposed to go through those intervals and help. Light infantry is the most mobile arm. They are frequently Rus mercenaries. (Varangians haven't been invented quite yet.)

Menavlotoi have very-heavy pikes and are designed to stop heavy cavalry. Basically, they are to carry the heaviest pikes they can handle (small trunks, for practical purposes). These are probably braced against the ground like early-modern pikes. *Menavlotoi* are stationed in the back, and come out front when an enemy cavalry charge appears likely. Earlier manuals placed the pikes well forward of the square, but apparently this didn't work too well, because the later manuals bring them closer in, where they are better-supported. Earlier and later Byzantine armies

did not field *menavlotoi*; they represent a temporary innovation in the arms race between cavalry and pikes.

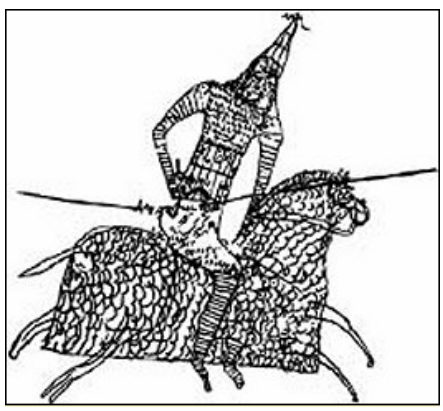
References to be collected at the end of this series of articles.

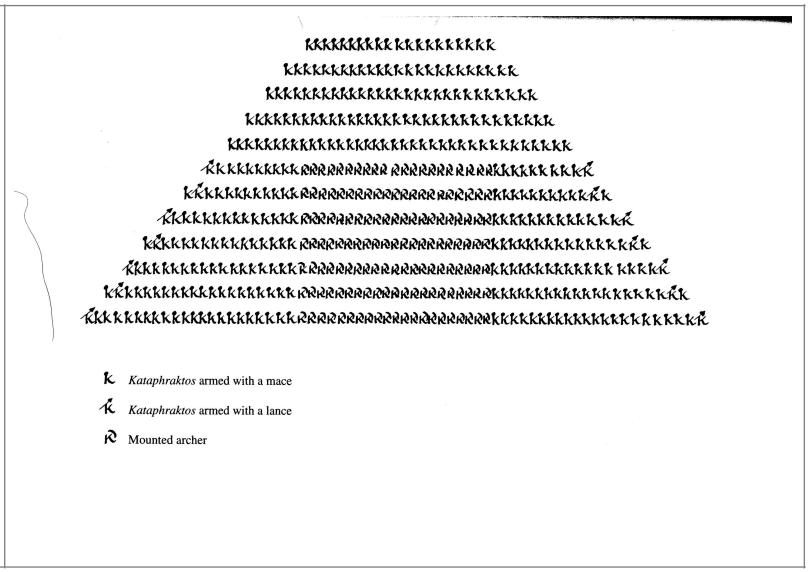
Tenth-Century Byzantine Field Armies - Cavalry

The striking arm of the 25,000-man army described in the *Praecepta militaria* and the *Taktika* was the cavalry – about 6500 horsemen divided into

- 500 *prokoursatores* – light cavalry – scouts and skirmishers.
- 5500 regular (thematic, provincial) cavalry, of which 2000 were mounted archers.
- 500 *kataphraktoi.*

The *kataphraktoi* are particularly interesting. They are horridly-expensive elite heavy cavalry (tagmatic, based at the capital) mounted on armored[1] warhorses.





The diagram on the right illustrates the formation of the cataphract wedge. Their job was to make a single charge against the enemy line – and break it. They would form into a wedge twelve ranks deep and twenty horses wide at the head (increasing by four horses per rank), and charge the part of the line that included the enemy leader – at a trot. One charge, because they were unlikely to be able to reform in the heat of battle. At a trot, because charging in formation at high speed apparently wasn't practical – or so we infer from the fact that early manuals recommended high-speed charges and later manuals recommended a slower approach.

The Byzantine army was not looking for a fair fight. Manuals stress that open battles are to be avoided until the enemy has been whittled down. The manuals also stress caution: If the enemy breaks, only the front rank of regular cavalry is to pursue them, with the back ranks not joining while there is any chance the enemy will regroup or effect an ambush or counter-attack. (The manuals also stress that the pursuing cavalry must not stop to loot. They stress it often enough that we may take it for granted that it was happening.)

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[1] The diagram on the left is not only anachronistic, dating as it does to the third century, but it is Persian rather than Byzantine. I include it because it is the best sharable picture I could find of eastern horse armor such as Byzantium used – which resembles a metal blanket more than the form-fitting armor used further west.

The manuals also enjoin the Byzantine cavalry – again and again – not to bother chasing Bedouin cavalry. The Bedouins have much faster and more-agile horses, and will lead the pursuers into trouble.

References:
The graffito is 3rdC Parthian, from Dura Europos, and the image comes from http://antiquity.ac.uk/ProjGall/Pre2003/McCarthy/mccarthy.html. See also http://www.allempires.com/article/index.php?q=cataphracts. (As noted, it's not Byzantine, but it depicts "full-skirt" horse armor of the sort they used.) The diagram is McGeer's.

Tenth-Century Byzantine Field Armies - Logistics

Fielding – and feeding – a 25,000-man expeditionary army was difficult. This was to Byzantium's advantage when it was on the defensive: The frontiers towards the Balkans and towards the Middle East were mountainous, and most of the Byzantine standing army, typically around a quarter million soldiers, was used to fortify the approaches. (The provinces were divided into military districts – themes – whose soldiers, especially cavalry, received land for military service.) It was difficult for enemies to get large armies through those mountains, so warfare was more often a matter of large-scale raiding than of pitched battles between armies.

The Byzantine system was adaptable to expeditionary armies. The army would go through the frontier provinces and levy food and supplies from the inhabitants – in exchange for IOUs. The recipients of the IOUs then got to try to collect reimbursements (or at least tax relief) from corrupt officials.

The nature of the terrain meant that the food and supplies thus levied had to be carried by the army on mule back. Tenth-century Byzantium was able to supply large armies in the field, but this was a logistical feat at the limits of medieval organization.

(Tenth-century manuals call for a mule for every two soldiers. Other sources call for a mule for every sixteen soldiers, with wagons following more slowly. Some rough computations may be instructive: Oxen can live on fodder (in the right season), but they move slowly, and pull a cart that requires a reasonable road or path. A horse or mule can carry 200 pounds, and requires about 5 pounds of grain and 15 pounds of fodder per day. Heavy warhorses required triple rations of grain, and soldiers required about 3 pounds of grain a day. Byzantine doctrine calls for the army to carry 24 days' food, but it works out that – in the absence of forage – an army with one mule for every two people can carry enough food for about half that time.)

References:

McGeer, Eric, "Sowing the Dragon's Teeth", Dumbarton Oaks, 1995. This is the main source, containing two treatises in Greek and in translation, as well as notes. The treatises are the *Praecepta militaria*, by Emperor Nikephoros II Phokas (c. 965) and the *Taktika*, by Nikephoros Ouranos (c. 1000).

Haldon, John, "Warfare, State and Society in the Byzantine World, 565-1204", University of Birmingham, 1999. Haldon also wrote a short, popularized book titled "Byzantium at War, AD 600-1453", Routledge, London, 2002.

Hyland, Ann, "The Medieval Warhorse", Combined Books, 1996.